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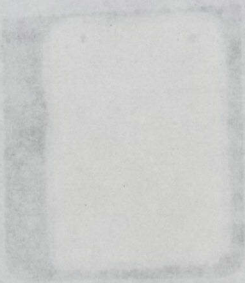
REPORT ON THE COLOMBIAN

TELECOMMUNICATIONS AND ADVANCED TECHNOLOGY SECTOR

Prepared by: The Canadian Embassy
Commercial Division
Calle 76 N° 11-52
Apartado Aéreo 53531
Santafé de Bogotá, Colombia
Telephone (57-1) 217-5555
Fax 310-4509
Telex 44568 Dmca Co

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Department of External Affairs
The Hon. Minister for External Affairs
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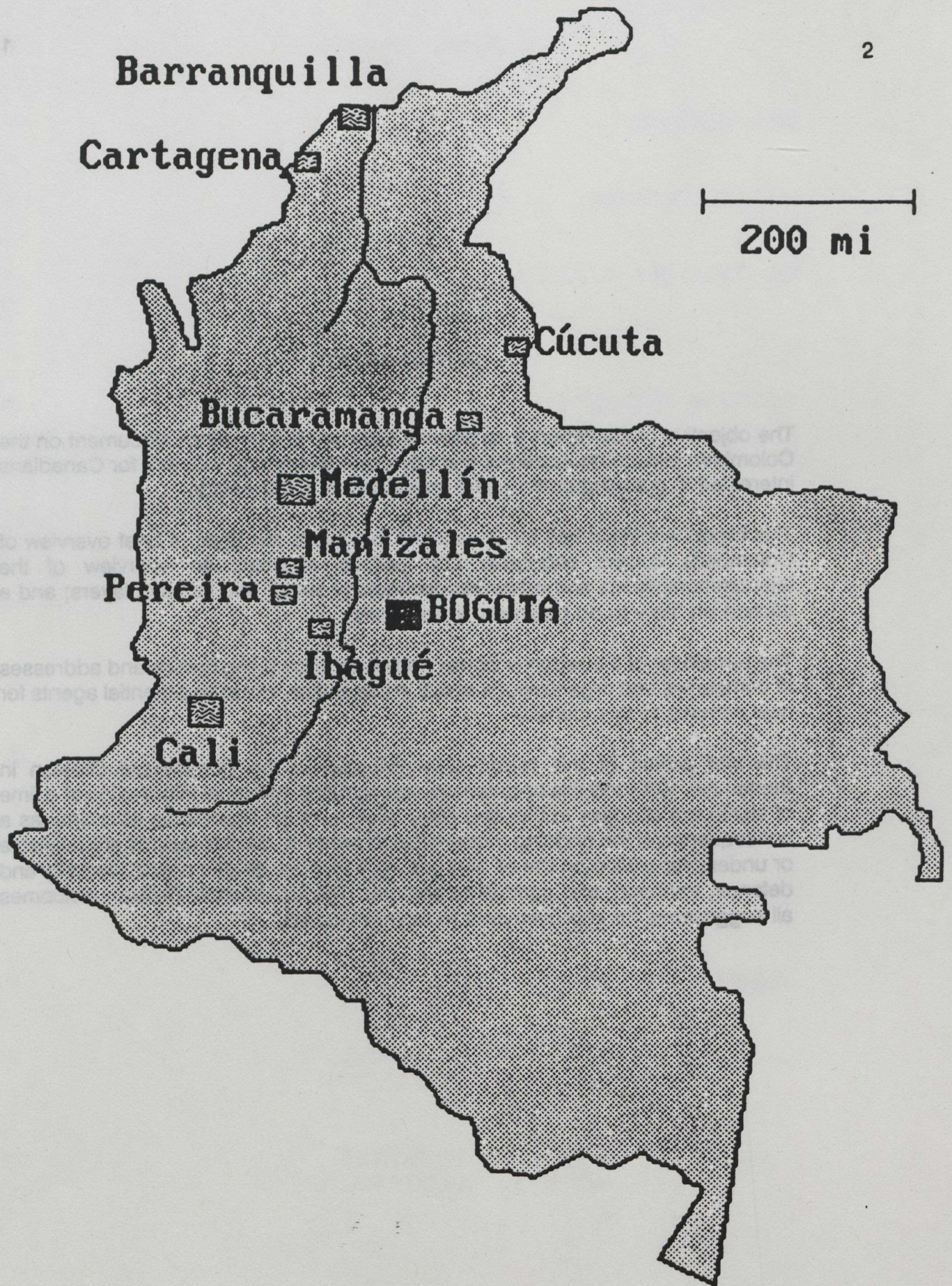
INTRODUCTION

The objective of this report is to provide a convenient reference document on the Colombian telecommunications and advanced technology industry for Canadians interested in pursuing commercial opportunities in this sector.

This report is divided into three sections to achieve this goal: a brief overview of Colombia's current economic and political situation; an overview of the telecommunications and advanced technology sector and its key players; and a section on "how to do business" in this sector.

The remainder of the report is comprised of annexes listing names and addresses of companies and organizations active in this sector, including potential agents for new entrants to this market.

The first edition of this report was prepared in the Commercial Division in September 1989 and this updated version contains additional information at a time of significant changes in this and other sectors of the Colombian economy as a consequence of the ongoing modernization process. Similar reports are available or under preparation on the oil and gas, mining, coal, electric power, security and defence, transport, and agriculture sectors. The Commercial Division welcomes all suggestions for improvements to future revisions.



Barranquilla

Cartagena

200 mi

Cúcuta

Bucaramanga

Medellín

Manizales

Pereira

BOGOTA

Ibagué

Cali

COLOMBIA IN A NUTSHELL

GEOGRAPHY

Colombia is the fourth largest country in Latin America after Brazil, Argentina and Mexico and occupies a land area of 1.14 million square kms., slightly larger than Ontario. It is located at the northwestern tip of South America and thus has extensive coastlines on both the Pacific Ocean and the Caribbean Sea. Upon entering Colombia the Andes mountains break into three separate ranges running south to north. As a result of this rugged topography the climate ranges from tropical lowlands and jungle to temperate altiplanos and snow-capped mountains.

Most of Colombia's 34 million people live on the mountain slopes, in the fertile valleys between the ranges, and on the savannah (altiplano) of Santafé de Bogotá. Life expectancy at birth averages 67 years and the adult literacy rate is 88%.

The major cities are the capital, Santafé de Bogotá, with a population of six million, Medellín, 2.5 million; Cali, 1.6 million; and Barranquilla, 1 million. For administrative purposes Colombia is divided into 31 departments (provinces); plus the Special District of Santafé de Bogotá.

POLITICS

The Republic of Colombia won its independence from Spain in 1810. It has a presidential form of government with a division of powers among the executive, legislative and judicial branches similar to that of the United States.

The Executive Branch is headed by a President elected by popular vote for a four-year term. Immediate reelection is constitutionally prohibited. The President appoints Cabinet Ministers. President César Gaviria's term of office expires in August 1994.

The Legislative Branch is made up of a bicameral Congress of 102 Senators and 161 members of the Chamber of Representatives. There are two main political parties, the Liberals and the Social Conservatives. A small third party, the leftist Alianza Democrática M-19 was formed following peace talks between the Government and guerrilla groups in 1987.

Colombia has the oldest history of continuous guerrilla activity in the western hemisphere. Nevertheless, the country seems to have adapted to levels of violence which would be considered unusual elsewhere and its democracy has been relatively stable since the last military government left office in 1956.

ECONOMY

After growing by 3.4% and 4.1% in 1989 and 1990 respectively, the Colombian economy expanded by only 2.3% in 1991, as the government tightened its fiscal and monetary policies to contain inflation, which reached an annual rate of 26.8% at the end of the year. Colombia remains the only major Latin American economy not to have rescheduled its external debt (approximately US\$ 17.0 billion at end 1991) although access to new foreign commercial bank loans has become increasingly difficult.

Basic Economic Indicators:

Gross Domestic Product 1991	US\$ 41.7 bn
Per Capita Gross Domestic Product	US\$ 1,245
Annual Inflation Rate 1991	26.8%
International Reserves, December 1991	US\$ 6.0 bn

ORIGINS OF GDP 1991

Agriculture	17.4%
Mining	7.5%
Manufacturing	19.7%
Construction	4.6%
Commerce	14.8%
Transport/Communications	9.1%
Electricity/gas/water	3.0%
Government	8.5%
Total including others	100.0%

COMPONENTS OF GDP 1991

Private consumption	66.0%
Government consumption	10.6%
Gross fixed investment	14.7%
Change in stocks	0.5%
Exports	21.1%
Imports	-13.0%
GDP at market prices	100.0%

PRINCIPAL EXPORTS 1991

	US\$ mn fob
Oil and derivatives	1,466
Coffee	1,328
Coal	143
Gold	408
Ferronickel	143
Total including others	7,685

PRINCIPAL IMPORTS 1991

	US\$ mn cif
Intermediate goods	2,530
Capital goods	1,575
Consumer goods	619
Fuel	270
Total including unclassified goods	5,000

MAIN EXPORT DESTINATIONS 1991

USA	38.5%
Latin America	21.6%
Germany	7.5%
Netherlands	4.3%
Japan	3.2%

MAIN ORIGINS OF IMPORTS 1991

USA	37.1%
Latin America	25.5%
Japan	9.5%
Germany	6.6%
France	3.5%

SECTORAL OVERVIEW

TELECOMMUNICATIONS

Colombia's first telephone lines were installed in Santafé de Bogotá in 1884. In August 1943 the Colombian Congress approved a law to purchase Marconi Wireless Telegraph Co., established twenty years earlier, and to combine it with "Radio Nacional" to form the National Radiocommunications Company.

In May 1947 this company was renamed the National Telecommunications Company -TELECOM, and given a monopoly of long-distance telephone service. The Ministry of Mail and Telegraphs and the All America Cables and Radio Company continued delivering national and international telegraph services.

In 1948 Santafé de Bogotá's local telephone network was automated, and in 1949 the national government began to promote interconnection of local and long-distance telephone networks.

The year 1954 marked the establishment of the first telex offices in Medellín and Santafé de Bogotá, and the first television transmission in Colombia. A second TV channel began operation in Santafé de Bogotá in 1964.

By 1958 Empresas Públicas de Medellín initiated automatic telephone service with neighbouring municipalities, becoming the first metropolitan area with common rates and numbering and the first to inaugurate a TANDEM switch.

The All America Cables and Radio Company left the country in 1960 and as a result, the ownership of all national and international telecommunications was in Colombian hands for the first time. With this increased responsibility came a recognition of the need for highly-trained personnel, and the following year TELECOM created the Electronics and Communications Technical Institute -ITEC to train technicians.

In 1964 the responsibility for the telex system (Colombia had 8,000 telex subscribers in 1991) was transferred from the Ministry of Communications to TELECOM and in 1965 TELECOM joined INTELSAT (the International Satellite Communications Consortium).

The first stage of a high capacity national microwave network was inaugurated in 1968, and in the same year TELECOM telephone and telegraph networks were connected with Ecuador and Venezuela.

Telecom launched an experimental service in 1983 called DAPAQ to provide access to data banks from several countries. The success of this service led to

the opening of a tender for construction of a national data network called COLDAPAQ, won by Siemens, in 1986. This network entered into service at the end of 1988.

The current telecommunications system in Colombia has four components:

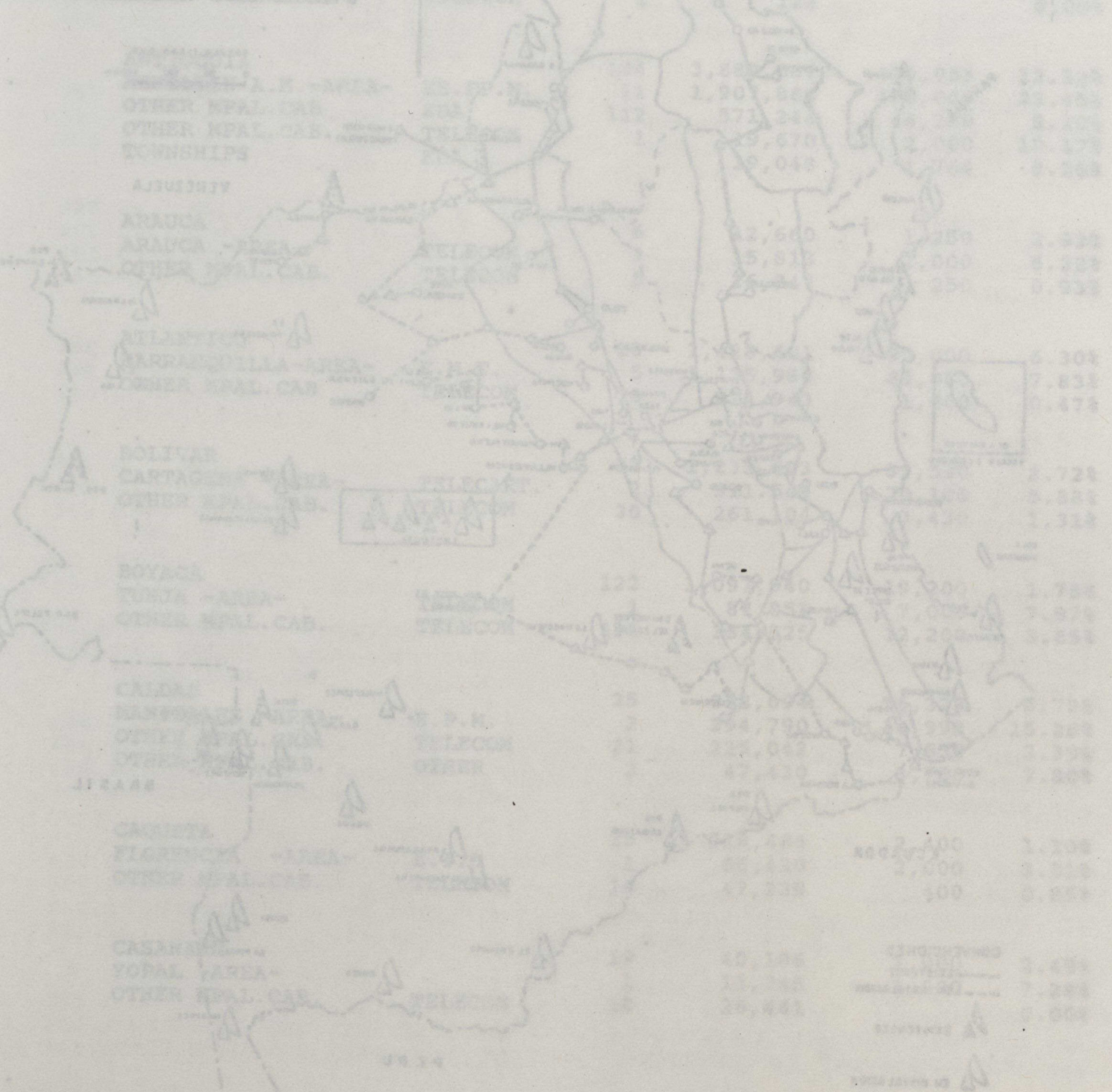
- The local telephone service operated autonomously in the major cities by a total of 22 municipal enterprises.
- The long distance domestic and international telephone and telex services operated by TELECOM, the state company. In addition TELECOM has developed a nationwide rural telephone network servicing isolated and remote towns via several strategically located earth satellite tracking antennas.
- The colour television network operated nationwide by INRAVISION, a state enterprise which through a public bidding process periodically awards time on two of the nation's three existing channels. Programming on these two channels is thus developed by several private commercial TV companies, while the third channel presents cultural programming created directly by INRAVISION.
- The radio broadcasting system which is based mainly on the operation of a number of private radio stations licensed by the government. INRAVISION also directly maintains a radio station for cultural programs.

The Ministry of Communications supervises the operation of the telecommunications system, acting as Chairman of the Board of Directors of TELECOM and INRAVISION.

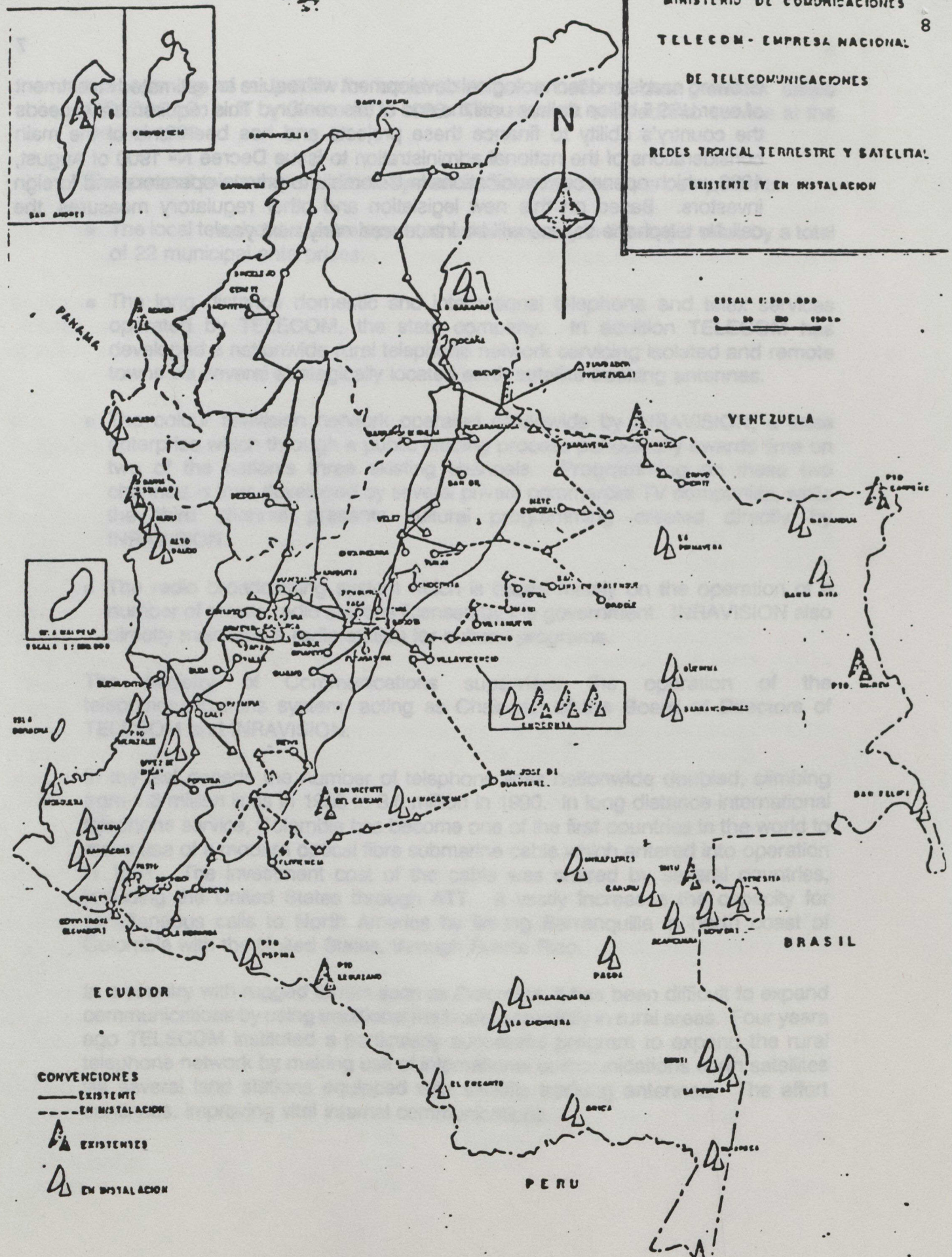
In the last decade the number of telephone lines nationwide doubled, climbing from 1.3 million lines in 1980 to 3.6 million in 1990. In long distance international telephone service, Colombia has become one of the first countries in the world to make use of a modern optical fibre submarine cable which entered into operation in 1991. The investment cost of the cable was shared by several countries, including the United States through ATT. It vastly increases the capacity for simultaneous calls to North America by linking Barranquilla in north coast of Colombia with the United States, through Puerto Rico.

In a country with rugged terrain such as Colombia, it has been difficult to expand communications by using traditional methods, especially in rural areas. Four years ago TELECOM instituted a particularly successful program to expand the rural telephone network by making use of international communications earth satellites via several land stations equipped with satellite tracking antennas. The effort continues, improving vital internal communications.

Growing needs and technological development will require an estimated investment of over US\$ 5 billion dollars until the end of this century. This requirement exceeds the country's ability to finance these projects and has been one of the main considerations of the national administration to issue Decree N° 1900 of August, 1990, which opens communications in Colombia to private operators and foreign investors. Based on this new legislation and other regulatory measures, the cellular telephone service will be introduced early next year.



REDES TERRESTRE Y SATELITAL
 EXISTENTE Y EN INSTALACION



- CONVENCIONES**
- EXISTENTE
 - - - EN INSTALACION
 - ▲ EXISTENTES
 - ▲/ EN INSTALACION

TELEPHONE SERVICE STATISTICS

DEPARTMENT	OPERATOR	LOCATIONS	POPULATION	LINES	DENSITY
AMAZONAS		2	14,422	1,000	6.93%
LETICIA -AREA-	TELECOM	1	14,298	1,000	6.99%
OTHER MPAL.CAB.	TELECOM	1	124		0.00%
ANTIOQUIA		124	3,888,067	479,053	12.32%
MEDELLIN A.M.-AREA-	EE.PP.M.	11	1,907,884	429,000	22.49%
OTHER MPAL.CAB	EDA	112	571,244	46,289	8.10%
OTHER MPAL.CAB.	TELECOM	1	19,670	2,000	10.17%
TOWNSHIPS	EDA		19,048	1,764	9.26%
ARAUCA		6	42,660	1,250	2.93%
ARAUCA -AREA-	TELECOM	1	15,813	1,000	6.32%
OTHER MPAL.CAB.	TELECOM	5	26,847	250	0.93%
ATLANTICO		23	1,428,601	90,000	6.30%
BARRANQUILLA-AREA-	E.M.T.	5	1,135,986	89,000	7.83%
OTHER MPAL.CAB	TELECOM	18	214,943	1,000	0.47%
BOLIVAR		32	1,233,623	33,530	2.72%
CARTAGENA -AREA-	TELECART.	2	511,549	30,100	5.88%
OTHER MPAL.CAB.	TELECOM	30	261,104	3,430	1,31%
BOYACA		122	1,097,940	19,200	1.75%
TUNJA -AREA-	TELECOM	1	87,851	7,000	7.97%
OTHER MPAL.CAB.	TELECOM	121	334,525	12,200	3.65%
CALDAS		25	838,094	56,322	6.72%
MANIZALES -AREA-	E.P.M.	2	294,790	44,992	15.26%
OTHER MPAL.CAB.	TELECOM	21	225,042	7,630	3.39%
OTHER MPAL.CAB.	OTHER	2	47,430	3,700	7.80%
CAQUETA		15	218,485	2,400	1.10%
FLORENCIA -AREA-	E.T.C	1	66,430	2,000	3.01%
OTHER MPAL.CAB.	TELECOM	14	47,239	400	0.85%
CASANARE		19	40,186	1,000	2.49%
YOPAL -AREA-		1	13,745	1,000	7.28%
OTHER MPAL.CAB.	TELECOM	18	26,441		0.00%

DEPARTMENT	OPERATOR	LOCATIONS	POPULATION	LINES	DENSITY
CAUCA		36	795,838	11,650	1.46%
POPAYAN -AREA-	E.T.P.	1	141,964	9,000	6.34%
OTHER MPAL.CAB.	TELECOM	35	142,617	2,650	1.86%
CESAR		24	584,631	10,350	1.77%
VALLEDUPAR -AREA-	TELECOM	1	142,771	4,800	3.36%
OTHER MPAL.CAB.	TELECOM	23	200,215	5,550	2.77%
CORDOBA		26	913,636	10,250	1.12%
MONTERIA -AREA-	TELECOM	1	157,453	5,200	3.30%
OTHER MPAL.CAB	TELECOM	25	240,138	5,050	2.10%
CUNDINAMARCA		115	5,356,851	982,200	18.34%
BOGOTA D.E. -AREA-	E.T.B.	8	3,974,813	945,000	23.77%
OTHER MPAL.CAB.	TELECOM	105	632,652	20,200	3.19%
OTHER MPAL.CAB.	OTHER***	2	83,975	17,000	20.24%
CHOCO		19	242,768	864	0.36%
QUIBDO -AREA-	TELECOM	1	47,963	500	1.04%
OTHER MPAL.CAB.	TELECOM	18	34,493	364	1.06%
GUAINIA		1	3,568	100	2.80%
INIRIDA -AREA-	TELECOM	1	3,406	100	2.94%
OTHER MPAL.CAB.	TELECOM		132		0.00%
GUAVIARE		1	12,729	400	3.14%
S.J. DEL GUAVIARE					
-AREA	TELECOM	1	11,164	400	3.58%
OTHER MPAL.CAB	TELECOM		1,165		0.00%
GUAJIRA		9	255,310	4,760	1.86%
RIOHACHA -AREA-	TELECOM	1	46,667	2,000	4.29%
OTHER MPAL.CAB.	TELECOM	7	64,825	1,060	1.64%
OTHER MPAL.CAB	OTHERS	1	46,033	1,700	3.69%
HUILA		37	647,756	24,000	3.71%
NEIVA -AREA-	TELEHUILA	2	205,234	20,100	9.79%
OTHER MPAL. CAB.	TELECOM	34	154,657	1,900	1.23%
OTHER MPAL. CAB.	OTHERS	1	19,685	2,000	10.16%
MAGDALENA		21	769,141	10,900	1.42%
SANTA MARIA -AREA-	E.T.S.M.	1	177,922	7,200	4.05%
OTHER MPAL.CAB	TELECOM	20	223,503	3,700	1.66%

DEPARTMENT	OPERATOR	LOCATIONS	POPULATION	LINES	DENSITY
META		24	412,312	12,050	2.92%
VILLAVICENCIO-AREA	TELECOM	1	161,166	10,100	6.27%
OTHER MPAL.CAB	TELECOM	23	101,566	1,950	1.92%
NARIÑO		56	1,019,098	13,750	1.35%
PASTO -AREA	E.T.N.	1	244,700	10,000	4.09%
OTHER MPAL.CAB.	TELECOM	54	216,737	1,750	0.81%
OTHER MPAL.CAB	OTHERS	1	45,419	2,000	4.40%
NORTE DE SANTANDER		37	883,884	35,700	4.04%
CUCUTA -AREA	TELECOM	2	375,311	22,000	5.86%
OTHER MPAL.CAB.	TELECOM	35	207,854	13,700	6.59%
PUTUMAYO		9	40,482	700	1.73%
MOCOA -AREA	TELECOM	1	7,714	300	3.89%
OTHER MPAL.CAB.	TELECOM	8	32,768	400	1.22%
QUINDIO		12	377,860	25,700	6.80%
ARMENIA	TELEARMENIA	1	180,221	17,000	9.43%
OTHER MPAL.CAB.	TELECOM	10	125,672	4,100	3.26%
OTHER MPAL.CAB	OTHER	1	37,679	4,600	12.21%
RISARALDA		14	625,451	45,520	7.28%
PEREIRA -AREA-	E.P.P.	2	326,829	40,500	12.39%
OTHER MPAL.CAB.	TELECOM	11	107,276	2,520	2.35%
OTHER MPAL.CAB.	OTHERS	1	37,112	2,500	6.74%
SAN ANDRES Y PROVIDENCIA		1	26,852	3,200	11.92%
SAN ANDRES -AREA-	TELECOM	1	23,325	3,000	12.86%
OTHER MPAL.CAB.	TELECOM		3,527	200	5.67%
SANTANDER		86	1,438,226	91,200	6.34%
BUCARAMANGA	E.P.B.	1	341,513	71,000	20.79%
OTHER MPAL.CAB.	TELECOM	85	528,119	20,200	3.82%
SUCRE		24	529,059	3,800	0.72%
SINCELEJO -AREA-	TELECOM	1	120,537	2,600	2.16%
OTHER MPAL.CAB.	TELECOM	23	165,199	1,200	0.73%
TOLIMA		46	1,022,458	33,840	3.13%
IBAGUE -AREA-	TELETOLIMA	1	269,495	22,000	8.16%
OTHER MPAL.CAB.	TELECOM	44	296,657	9,440	3.18%
OTHER MPAL.CAB.	OTHERS	1	37,563	2,400	6.39%

DEPARTMENT	OPERATOR	LOCATIONS	POPULATION	LINES	DENSITY
VALLE		42	2,847,087	285,475	10.03%
CALI -AREA-	E.M.C.	3	1,388,622	233,200	16.79%
OTHER MPAL.CAB.	TELECOM	35	970,023	17,275	1.78%
OTHR MPAL.CAB	OTHERS	4	450,423	34,400	7.64%
VAUPES		1	4,758	100	2.10%
MITU -AREA-	TELECOM		3,425	100	2.92%
OTHER MPAL.CAB.	TELECOM		133		0.00%
VICHADA		2	3,712	200	5.39%
PTO. CARREÑO -AREA-	TELECOM	1	3,324	200	6.02%
OTHER MPAL.CAB	TELECOM		388		0.00%
TOTAL		1,011	27,615,545	2,290,464	7.26%
OTHER MPAL.CAB. NO CAPITALS SERVED BY TELECOM		330			
OTHER MPAL.CAB. NO CAPITALS NON-SERVED BY TELECOM		495			

COMPUTER EQUIPMENT AND SERVICES

The process of modernization and liberalization of the Colombian economy has brought about a fast growth in the implementation and use of high technology and equipment.

The current computer population at the end of 1992 is estimated at 314.813 units of which 80% are microcomputers, 19% minicomputers and 1% main frames. Compared with the previous year while the number of main frames stayed at the same proportion, the minicomputers were increased by 349% and microcomputers by 132%.

Market share

Mainframes: Although IBM is still the leader by a scarce margin, Unisys and NCR have gained a substantial share in the past three years.

Minicomputers: The model IBM AS/400 became the most used, followed closely by Digital, Unisys, NCR and Wang.

Microcomputers: DTK has lost a significant share and now accounts for 15% followed by Samsung 14%, Apple 12%, Compaq 11%, IBM 10%, NCR 10%, Everex 9%, Goldstar 9% and others 10%. The peripherals which make up a standard configuration in the microcomputers, are hard disks of the following brands: Seagate 67%, Quantum 18%. Monochromatic monitors 65% shared by Samsung, Taiché, Goldstar and Wyse. The drives are 39% 3 1/2" and 61% 5 1/4". The printer most used is Epson with 86%.

Market Distribution: The Colombian market for computing products and services is concentrated 47% in Santafé de Bogotá, 30% in Medellín and 12% in Cali.

Computer Use: The government sector is no longer the main user of computer equipment and accounts only for 24%, led now by personal and small business users with 31% and followed by the services sector 18%, industry 16% and commerce 11%.

Software: Despite the improvement reached in locally developed software, there are still excellent opportunities for foreign suppliers of specialized application software.

Multimedia: The introduction of multimedia technologies integrating communications and information systems, constitutes an excellent opportunity for companies specializing in this area.

Marketing strategies: A brand name is no longer a determining factor in a purchasing decision. Colombian potential buyers are increasingly more technically prepared, have greater knowledge and are better advised.

At present, the price of the product and the reliability of the supplier are of prime concern in the general purchasing behaviour.

The general demand for electronic data processing equipment and supplies has, thus, the following characteristics:

- a. High sensitivity towards the price.
- b. Medium sensitivity towards the reliability, stability and seriousness of the supplier.
- c. Low consideration to product quality based only on brand name identification.

KEY PLAYERS

MINISTRY OF COMMUNICATIONS

The ministry establishes overall policies for planning developments and control of Colombian telecommunications. It is currently under a reorganization process looking to adapt its structure to the new reality of sectoral modernization and privatization.

NATIONAL FUND FOR DEVELOPING PROJECTS - FONADE

This government institution, responsible to the National Planning Department - DNP, promotes and finances research and studies for projects of national interest. International and national companies interested in contracting consulting services with state entities must register with FONADE to be eligible.

NATIONAL TELECOMMUNICATIONS COMPANY - TELECOM

TELECOM holds a monopoly over long-distance telephone service within Colombia and with the rest of the world, which provides 53% of its revenues. Thanks to these revenues it has consistently been profitable, and must transfer portions of its surplus to the central government. With 15,000 employees it is the largest employer in Colombia.

Associated companies and percentage of TELECOM ownership:

Telecartagena	60%
Telehuila	86%
Telenariño	81%
Teletolima	70%
Teletuluá	55%
Telearmenia	70%
Telesantamarta	70%
Telecalarcá	82%

INSTITUTO TECNOLOGICO DE ELECTRONICA Y COMUNICACIONES - ITEC

ITEC is a training institute established by and reporting to TELECOM. It signed a five-year, US\$ 2.5 million agreement with the United Nations Development Program in 1987 to provide training and laboratory equipment.

EMPRESA DE TELECOMUNICACIONES DE SANTAFE DE BOGOTA - ETB

ETB is the municipal telecommunications utility servicing approximately one million telephone lines in Santafé de Bogotá and surrounding municipalities and reporting to the city government. Although the company is heavily indebted its plans include installing close to 100,000 lines per year in addition to upgrading of existing technical infrastructure.

EMPRESAS PUBLICAS DE MEDELLIN - EPM

EPM was created by the city of Medellín with approval of the national government in 1955 to administer the city's electricity, water, sewerage and telephone services. Each of these is looked after by an autonomous branch within the company. The telephone division operates over 500,000 lines.

EMPRESAS DEPARTAMENTALES DE ANTIOQUIA - EDA

Telephone service in the Department of Antioquia originated with a regional railway company, which developed the service as an offshoot of its telegraph network. EDA was created in 1969 to assume these and other responsibilities, and currently operates nearly 50,000 lines. It established the first cellular telecommunication network in Antioquia in September 1984.

EMPRESAS MUNICIPALES DE CALI - EMCALI

Emcali is an integrated municipal utility serving Cali, Yumbo and Jamundí. Its telephone division services close to 300,000 lines.

SOCIEDAD COLOMBIANA DE TELEFONIA CELULAR S. A. - CELULAR S. A.

A mixed public-private consortium integrated by Empresa Nacional de Telecomunicaciones - TELECOM, Empresa de Telecomunicaciones de Santafé de Bogotá - ETB, a small number of regional telephone companies and BCE Telecom International Inc. It will be one of the cellular telephone operators serving Santafé de Bogotá and the western area of the country.

AGUSTIN CODAZZI GEOGRAPHIC INSTITUTE - IGAC

The IGAC is responsible for all Colombian mapping and cadastral matters as well as related scientific investigation and training and reports to the Ministry of Finance.

INRAVISION

Inravisión is the National Radio and Television Institute created in 1954 and which currently operates three TV channels (two general and one public interest). INRAVISION auctions airtime to private sector production companies, which recoup their investment in programming by selling advertising space.

REGIONAL TELEVISION STATIONS

The Government of President Betancur (1982-1986) took the decision to licence entrepreneurs to establish and operate regional television facilities.

TELEANTIOQUIA is the first of the regional television stations to be authorized and began operations in 1987.

TELECARIBE serves the region of the Northern Coast of Colombia.

TELEPACIFICO serves the city of Cali and its area of influence.

TELECAFE was approved in 1989 for the coffee-growing Departments of Caldas, Quindío and Risaralda.

COLCIENCIAS

COLCIENCIAS, officially known as the Colombian Fund for Scientific Research and Special Projects, is a government organization reporting to the Ministry of Education. It seeks to promote and stimulate the creation of new technologies and their application in Colombia.

NATIONAL STATISTICS ADMINISTRATIVE DEPARTMENT - DANE

DANE maintains the National Register of Informatics Goods and Services Suppliers and, in theory, must be consulted by all national government agencies prior to the acquisition of computer equipment.

DEPARTAMENTO ADMINISTRATIVO DE AERONAUTICA CIVIL - DAAC

The DAAC regulates all aspects of civil aviation including planning and installation of communication services and serial navigation aids in Colombian airports. Like TELECOM, it also has a specialized training division, in this case known as the Centre for Aeronautical Studies, which has purchased Canadian laboratory training equipment.

INRAVISION

InraVision is the National Radio and Television Institute which currently operates three TV channels (two general and one public interest). InraVision's activities are divided into two main areas: television and radio. InraVision is a public institution with a budget of 100,000 million pesos.

REGIONAL TELEVISION STATIONS

The Government of Medellin (1982-1985) took the initiative to finance the establishment of regional television facilities. The Department of Television and Radio (DTR) is the national television authority and is responsible for the regulation and supervision of the regional television stations. The DTR has a budget of 100,000 million pesos.

TELEPACIFICO

TELEPACIFICO serves the city of Cali and its area of influence. It was established in 1989 for the coffee-growing Department of Cauca. It has a budget of 100,000 million pesos.

COLCENCIAS

COLCENCIAS is a government agency for Scientific Research and Special Projects. It is a government agency for Scientific Research and Special Projects. It is a government agency for Scientific Research and Special Projects. It is a government agency for Scientific Research and Special Projects.

NATIONAL STATISTICS ADMINISTRATIVE DEPARTMENT - DANE

DANE maintains the National Register of Informatics Goods and Services Suppliers and, in theory, must be consulted by all national government agencies prior to the acquisition of computer equipment.

ASSOCIATIONS

On occasion it may prove useful to contact associations, whether it be for insights into the state of a particular sector of Colombian industry, for assistance to locate potential clients and agents, or for referrals to qualified Colombian technicians.

ASSOCIATION OF COLOMBIAN COMPUTER USERS - ACUC

Created in 1970 to stimulate and defend the interest of computer users, it currently has a membership of over 300 companies. It belongs to the Latin-American Informatics Federation.

ASSOCIATION OF COLOMBIAN SYSTEM ENGINEERS - ACIS

Founded in 1976, ACIS currently has a membership of close to 1,000 and serves as a channel for professional and technological upgrading for its members. ACIS is also involved in the organization of the annual Colombian computer fair - COMPUExPO and an annual academic meeting, the "Salón de Informática".

ASSOCIATION OF ELECTRICAL, MECHANICAL AND ELECTRONIC ENGINEERS - ACIEM

This is an important professional organization created to stimulate the local industry and provide services to its members.

ASSOCIATION OF ELECTRONIC SECTOR ENTITIES - ASESEL

ASESEL is a recently-formed organization of Colombian manufacturers and representatives of foreign suppliers of electronic equipment and services.

COLOMBIAN INFORMATICS ASSOCIATION - ACCIO

ACCIO is a relatively recent organization constituted to generate new uses for informatics and related technologies in Colombia.

PROJECTS AND OTHER EXPORT OPPORTUNITIES

TELECOMMUNICATIONS GROSS CAPITAL INVESTMENT PROGRAM 1992 - 1995

<i>Service</i>	<i>US\$ Millions</i>
Basic telephone lines - programmed	2,429.36
Basic telephone lines - objective	6,637.60
Long distance - national	151.50
Long distance - international	23.49
Cellular telephony	<u>700.00</u>
TOTAL	9,941.95

Source: National Planning Department - DNP

CELLULAR TELEPHONY PROJECT

A multimillion dollar project with national coverage will shortly introduce the cellular telephony service in Colombia.

A recent regulatory law, Law 37 of January 6, 1993 and Decree No. 741 of April 20, 1993 establish that the cellular telephony service will be performed by two competing operators in three different areas in which the country was divided for this purpose.

The eastern area based in Santafé de Bogotá and Bucaramanga will serve these two cities and their region of influence, the western area located in Medellín and Cali and their neighbouring departments (provinces) and municipalities, including those of the coffee growing centres, the area of the northern coast, conformed by the centres of Barranquilla, Cartagena and Santa Marta and the municipalities and locations under their influence .

As stated previously, the regulatory law anticipates that for each area there will be two competing operators, one a public or mixed utility and one a private concern duly qualified.

There is already one mixed utility conformed for each region which practically have assured the right to establish the public network system. Eight private concerns conformed by world suppliers of technology and by local financial organizations, will compete in the prequalification and bidding process for a private network

system. A time table set by colombian authorities foresees that the bidding process will be opened in August 1993 among prequalified contenders and the contract will be granted by the end of the year so that the service can be introduced by mid 1994.

URBAN TELEPHONE EXPANSION

Ongoing programs in all major cities foresee the installation of close to 600,000 lines in 1994 which will demand an investment of US\$554.8 million dollars which will be financed partially by public utilities and the remainder by private investors. This plan will increase the installed capacity to 3.5 million telephone lines to reach a density of 11.3 telephone sets for every one hundred people.

TELECOM - NORTHERN TELECOM CONCESSION PROJECT

The state communications company - TELECOM and Northern Telecom have signed a joint venture agreement to install and operate close to 206,000 lines at an investment cost of US\$ 160 million dollars in the Colombian Departments (Provinces) of Boyaca, Cauca, Cesar, Guajira, Nariño, Santander, San Andres and Valle. Northern Telecom expects to recover its investment and make a profit in 10 year period through a revenue sharing plan with Telecom following which, ownership of the installed equipment will revert to Telecom.

SPECTRUM MANAGEMENT AND MONITORING PROJECT

The Ministry of Communications modernization program includes a project to reorganize the electromagnetic spectrum. The project, at a cost of US\$13 million dollars will include a preliminary analysis concerning national topographic digitalization, frequencies planning and control, digitalization of existing data, supplying of monitoring equipment, training and commissioning of the management model.

INRAVISION CHANNEL THREE EXPANSION PROJECT

Inravisión, the national organization responsible for television in Colombia is currently planning to upgrade and expand the services of CHANNEL THREE which require an estimated investment of US\$20 million dollars in restructuring the current infrastructure and supplying VHF and UHF television transmitters. A strong competitor in this project is the French company Thompson who has offered concessional financing.

RURAL TELECOMMUNICATIONS PROGRAM

Telecom is currently implementing a rural telecommunications program to introduce a digital multiplex radio service in close to 4.000 isolated locations of the national territory; this project initiated in 1989 will span until 1995 demanding a total investment of US\$400 million dollars and will serve over 6 million users.

Other projects by independent communications network operators (i.e. the Army, the police, the state oil company - ECOPETROL and foreign oil operators) will offer excellent opportunities to suppliers of related equipment and technology and, we very much encourage Canadian manufacturers and suppliers interested in offering their products and services in this market to keep in communication with the trade section of our Embassy for market intelligence and advice.

PROMOTIONAL ACTIVITIES

COMPUEXPO

Is a computer/informatics technology fair and exhibition organized annually (usually in October) in Santafé de Bogotá, by the Fairs and Exhibitions Corporation- CORFERIAS with the support of computer technology organizations.

TELEXPO

The process of liberalization and modernization of the Colombian communications infrastructure initiated under the current administration, was the origin of this fair and exhibition, organized along with COMPUEXPO by the Fairs and Exhibitions Corporation - CORFERIAS and the active participation of the national, regional and municipal communications utilities and leading world equipment manufacturers and suppliers.

THE NATIONAL COMMUNICATIONS CONGRESS

A TELEXPO concurrent technical symposium which usually features themes of relevant interest in technology and business opportunities with the participation of national and international organizations and qualified speakers.

HOW TO DO BUSINESS IN COLOMBIA

STEP A: EXPLORING THE MARKET

Canadian telecommunications goods and services enjoy a favourable reputation as Colombian professionals become more familiar with Canadian technologies and visit Canadian facilities. Other advanced technology products and services are not as well-known.

First-hand marketing trips to uncover and evaluate sales opportunities in Colombia are indispensable. A wide variety of personal contacts are of prime importance in this sector and can only be established after several visits. It is important to touch base regularly with your contacts as many smaller projects (particularly studies) may not be widely advertised before going to tender.

STEP B: CHOOSING A RELIABLE LOCAL AGENT

Foreign companies are required to have a legal representative or local agent, whose name, address and telephone number must be stated when registering (see below) with each parastatal.

The Commercial Division of the Canadian Embassy in Bogota maintains regular contact with a variety of agents in this sector and may be able to suggest candidates. A preliminary list of potential agents is provided at the end of this report.

STEP C: REGISTRATION WITH STATE ENTITIES

In accordance with Colombian Law (Decree 222 of 1983), any firm interested in supplying equipment and/or services to state entities must be registered in the appropriate supplier and/or contractor index. Normally only registered companies will receive specifications and invitations to bid. Companies interested in offering consulting services must be registered with FONADE.

Companies that decide to register should note the following:

The registration form should be fully completed and the financial information requested must be stated in Colombian pesos.

The balance sheet must be signed by a certified public accountant and his signature attested by a public notary.

The legal documents requested for registration such as a Canadian Chamber of Commerce Certificate must be accompanied by a Spanish translation and certified by a Colombian Consul in Canada, by the Colombian Ministry of External Affairs in Bogota, and by the Colombian agent or legal representative of the Canadian company.

Bona fide certificates from existing customers are required.

A company interested in registering as a contractor must furnish a complete profile of the firm including professional and technical staff (engineers and technicians) with proof of their degrees and professional skills.

Each registration is valid only for a two-year term and subsequently must be renewed.

STEP D: FOLLOW-UP AND PERSISTENCE

The Colombian telecommunications and advanced technology market cannot be penetrated overnight. Competitors from Japan, France, Italy, Sweden, Spain, West Germany and the United States are deeply entrenched and difficult to displace. Patience and a long-term commitment to this market are essential prerequisites for success.

Your agent should receive appropriate support to promote your products or services on your behalf. It is not unusual for a first sale to come only after several years of sustained promotion and repeated visits to potential clients. Inform yourself about financing support available from the Export Development Corporation.

You should also keep government contacts (including the Canadian Embassy Commercial Division, the local International Trade Centre, and provincial government trade development officers) informed of your interests and sales strategy so they can support you to the maximum with sectoral intelligence and by inviting your firm to participate in marketing programs such as missions, incoming visits, etc.

All avenues to enter the market should be explored. These include joint ventures and technology transfer agreements, for which you may be eligible for support from the Canadian International Development Agency Industrial Cooperation Program.

ANNEX A: SECTORAL CONTACTS**MINISTERIO DE COMUNICACIONES**

Street Address	Edificio Murillo Toro Carrera 7ª Calle 12 Santafé de Bogotá, Colombia
Telephone	286-6911
Telefax	286-1185
Minister	William Jaramillo Gómez
Planning Director	Antonio Niño

EMPRESA NACIONAL DE TELECOMUNICACIONES - TELECOM

Street Address	Calle 23 N° 13-49, Piso 14 Santafé de Bogotá, Colombia
Telephones	283-2571, 234-3723, 283-4400
Telefax	281-6310
President	Clara Elsa Villalba de Sandoval
Secretary General	Carmen Cecilia Angarita
VP Technical	Francisco Sáenz
VP Telephone Integration	Jairo Bustillo
VP Finance	Jorge Robayo
VP Operations	Jorge Cortázar García
VP Rural Telecommunications	Jorge Peña
Director, Office of Int'l Relations	Jairo Gómez
Director, Planning	Germán Cárdenas
Assistant, Planning Office	Efraín González

INSTITUTO TECNOLOGICO DE ELECTRONICA Y COMUNICACIONES - ITEC

Street Address	Transversal 49 N° 105-84 Santafé de Bogotá, Colombia
Telephone	253-6600
Telefax	253-6266
Director	Victoria Kairuz M.

EMPRESA DE TELECOMUNICACIONES DE SANTAFE DE BOGOTA - ETB

Street Address Carrera 7ª N° 20-37, Piso 7
Santafé de Bogotá, Colombia

Telephone 286-8888

Telefax 283-6366

Manager Antonio Galán Sarmiento

Planning Director Hernando Santacruz

Secretary Libia Parada de Quiroga

SOCIEDAD COLOMBIANA DE TELEFONIA CELULAR S. A. - CELULAR S. A.

Street Address Carrera 7ª N° 37-25, Oficina 401
Santafé de Bogotá, Colombia

Telephones 232-7154, 232-7156, 232-8009

Telefax 287-0766

President Carlos R. Camacho

Executive Director Pierre Brosseau

VP Administrative and Finance César Torrente

VP Technical Lucio Muñoz

EMPRESAS PUBLICAS DE MEDELLIN

Street Address Carrera 64A N° 48-20
Medellín, Colombia

Telephone 260-2020

Telefax 251-0581

Manager Diego Uribe

Finance Manager Darío Arango

Manager Telecommunications Luis Alberto Vásquez

Planning Director Luis Fernando Múnera

EMPRESAS DEPARTAMENTALES DE ANTIOQUIA - EDA

Street Address Calle 41 N° 52-28
Medellín, Colombia

Telephone 262-2233

Telefax 262-1414

Manager Luz A. Tirado

Telecommunications Assistant Manager Arturo Escobar G.

EMPRESAS MUNICIPALES DE CALI - EMCALI

Street Address	Avenida 3 Norte N° 53N-11, Piso 3 Cali, Colombia
Telephone	644-004
Telefax	830-279, 648-373
General Manager	Jorge E. Holguín
Financial Manager	Diego Reyes Meléndez
Manager, Telephones Division	Adolfo León-Gómez

INSTITUTO GEOGRAFICO AGUSTIN CODAZZI - IGAC

Street Address	Carrera 30 N° 48-51 Santafé de Bogotá, Colombia
Telephones	268-0700, 268-0054, 268-0300
Telefax	269-4146
General Director	Gloria Cecilia Barney

INSTITUTO NACIONAL DE RADIO Y TELEVISION - INRAVISION

Street Address	Avenida Eldorado - CAN Santafé de Bogotá, Colombia
Telephones	222-0700, 222-1155, 221-1543
Telefax	222-0080
Director	Luis Guillermo Angel
Technical and Operations Manager	Lilia Inés Pinzón

COLCIENCIAS

Street Address	Transversal 9A N° 133-28 Santafé de Bogotá, Colombia
Telephone	216-9800
Telefax	625-1788
General Director	Pedro José Amaya Pulido

DEPARTAMENTO ADMINISTRATIVO NACIONAL DE ESTADISTICA - DANE

Street Address Centro Administrativo Nacional
Santafé de Bogotá, Colombia
Telephone 222-1100
Telefax 222-2107

General Director Rodolfo Uribe

DEPARTAMENTO ADMINISTRATIVO DE AERONAUTICA CIVIL - DAAC

Dirección General de Telecomunicaciones y Ayudas a la Navegación Aérea

Street Address Aeropuerto Eldorado
Santafé de Bogotá, Colombia
Telephones 266-2224, 413-8272, 268-4241
Telefax 263-9723

Director Juan N. Granados
Assistant Hugo Martínez

MINISTRY OF NATIONAL DEFENCE

Street Address Avenida Eldorado CAN
Santafé de Bogotá, Colombia
Telephone 222-4125
Telex 46261 Brteij-Co

Minister of National Defence Rafael Pardo
Dir. Communications and Electronics Colonel Germán Afanador

ASOCIACION COLOMBIANA DE USUARIOS DE COMPUTADORES - ACUC

Street Address Calle 39A N° 14-58
Santafé de Bogotá, Colombia
Telephone 285-3391
Telefax 283-3920

Executive Director César Augusto Salazar

ASOCIACION COLOMBIANA DE INGENIEROS DE SISTEMAS - ACIS

Street Address Calle 93 N° 13-32, Oficina 102
Santafé de Bogotá, Colombia
Telephones 610-4842, 616-1407
Telefax 616-1409

ASOCIACION COLOMBIANA DE INGENIEROS ELECTRICISTAS, MECANICOS, ELECTRONICOS Y AFINES - ACIEM

Street Address Calle 39A N° 14-32
Santafé de Bogotá, Colombia
Telephones 288-4623, 288-0916
Telex 44680 Cma-Co

ASOCIACION DE ENTIDADES DEL SECTOR ELECTRONIC - ASESEL

Street Address Calle 46 N° 19-09, Oficina 401
Santafé de Bogotá, Colombia
Telephone 285-6506
Telefax 245-6873

Executive Director José V. García

ASOCIACION COLOMBIANA DE INFORMATICA - ACCIO

Street Address Carrera 50 N° 27-70, Bloque C. Mod.
5, Nivel 8
Santafé de Bogotá, Colombia
Telephones 221-9505, 221-8630

ANNEX B: POTENTIAL REPRESENTATIVES

TELECOMMUNICATIONS SECTOR

ANDITEL LTDA.

Street Address

Carrera 19 N° 93-74

Santafé de Bogotá, Colombia

617-0717

Telephone

Telefax

617-0889

Manager

Germán Jaramillo

COMPAÑÍA COMERCIAL CURACAO DE COLOMBIA S. A.

Street Address

Carrera 13A N° 93-41

Santafé de Bogotá, Colombia

616-3814

Telephone

Telefax

257-3521

Manager Technical Department

Carlos A. Cuadros

GONTELCOM LTDA.

Street Address

Calle 93 N° 14-20, Oficina 308

Santafé de Bogotá, Colombia

218-8470

Telephone

Telefax

256-5040

Manager

Augusto Góngora

RADIAR COMUNICACIONES LTDA.

Street Address

Carrera 18 N° 79-22

Santafé de Bogotá, Colombia

257-9299

Telephone

Telefax

610-3751

Manager

Antonio Pizarro

MULTITEL GTE DE LA SABANA LTDA.

Street Address Calle 22C N° 44-35
Santafé de Bogotá, Colombia

Telephone 268-5477
Telefax 269-9404

Manager Rodrigo Echeverri

PLESCOM LTDA.

Street Address Calle 100 N° 11A-35, Piso 8
Santafé de Bogotá, Colombia

Telephone 610-4555
Telefax 228-4836

Manager Jairo Molano

PROYCO S. A.

Street Address Avenida 40A N° 13-09, Piso 3
Santafé de Bogotá, Colombia

Telephone 288-2600
Telefax 288-6308

Communications Manager Hernando Murcia

SOLANDINA S. A.

Street Address Calle 99 N° 11A-32
Santafé de Bogotá, Colombia

Telephone 222-8840
Telefax 222-9979

Manager Francisco Rincón

RADIOTEC LTDA.

Street Address Calle 33 N° 17-28
Santafé de Bogotá, Colombia

Telephone 245-4602
Telefax 288-0591

Manager Moisés Hurtado

RAYCO LTDA.

Street Address

Calle 59 N° 6-36, Oficina 601
Santafé de Bogotá, Colombia
255-8829, 249-1286
255-8849

Telephones

Telefax

Manager

Rodrigo Aristizábal

REY MORENO Y CIA.

Street Address

Calle 101A N° 28-27
Santafé de Bogotá, Colombia
610-2025, 610-2275
218-6228

Telephones

Telefax

Manager

Ernesto Rey

SINGER PRODUCTS INC. CIA. LTDA.

Street Address

Carrera 9A N° 91-27
Santafé de Bogotá, Colombia
610-3400
218-6640

Telephone

Telefax

Technical Manager

Silvano Rivano

SISTECOM LTDA.

Street Address

Carrera 8A N° 95-33
Santafé de Bogotá, Colombia
218-1352, 256-1832
214-3003

Telephones

Telefax

Manager

Carlos Puesch

NOVACOM

Street Address

Carrera 9 N° 71-38, Oficina 401
Santafé de Bogotá, Colombia
210-4204
210-4206

Telephone

Telefax

Manager

Antonio Bernal

AUTOPHON S. A.

Street Address

Calle 37 N° 20-51

Santafé de Bogotá, Colombia

Telephone

288-2588

Telefax

288-6251

Manager

Ricardo Torres

TECNOLOGIAS Y REPRESENTACIONES LTDA.

Street Address

Carrera 7ª N° 123-40

Santafé de Bogotá, Colombia

Telephone

213-5564

Telefax

215-7248

Manager

Hernando Barreto



6098481800

ANNEX C: POTENTIAL REPRESENTATIVES**ADVANCED TECHNOLOGY SECTOR****ABC MICROS**

Street Address

Calle 40 N° 20-42

Telephones

Santafé de Bogotá, Colombia

Telefax

285-1692, 287-0478

245-0987

General Manager

Guillermo Leaña

AEROCOMERCIAL DE COLOMBIA Y CIA. LTDA.

Street Address

Carrera 15 N° 84-24, Local 216

Telephones

Santafé de Bogotá, Colombia

Telefax

610-7894, 610-7853

218-2827

General Manager

José Manuel Pineda

ALTATEC LTDA.

Street Address

Calle 93 N° 14-20, Oficina 505

Telephones

Santafé de Bogotá, Colombia

Telefax

257-5763, 218-9260

257-4891

General Manager

Carlos Alberto Urrea

AMERICAN MACRO SYSTEMS

Street Address

Calle 41 N° 77B-82, Oficina 203

Telephones

Santafé de Bogotá, Colombia

Telefax

295-3302, 410-0727

410-3855

General Manager

Guillermo Chapetón

ANDINA COMERCIAL DE COMPUTADORES

Street Address Carrera 15 N° 78-33, Locales 207 y
161
Santafé de Bogotá, Colombia
Telephones 218-5877, 218-7419
Telefax 2218-5878
General Manager Guillermo Schultz

AUDITRON LTDA.

Street Address Carrera 10 N° 127A-93
Santafé de Bogotá, Colombia
Telephones 258-3234, 216-5664
Telefax 216-5664
General Manager Carlos Ochoa Romero

BASIC 2000

Street Address Carrera 15 N° 95-39
Santafé de Bogotá, Colombia
Telephones 236-5657, 218-1151
Telefax 218-8565
General Manager Alberto Bigio

CODISDATA & CIA. LTDA.

Street Address Calle 60 N° 15-87, Oficina 401
Santafé de Bogotá, Colombia
Telephones 221-8403, 275-5349
Telefax 2212-8403
General Manager Mary A. Garzón

COLCOMP S. A.

Street Address Calle 90 N° 10-46
Santafé de Bogotá, Colombia
Telephones 236-5707, 611-0676
Telefax 211-9155
General Manager Marco de Castro

COLDATOS S. A.

Street Address

Telephone

Telex

General Manager

Carrera 14 N° 89-12

Santafé de Bogotá, Colombia

611-0111

73444

Humberto Rueda Armella

COLSOFTWARE LTDA.

Street Address

Telephone

General Manager

Marketing Manager

Avenida 15 N° 104-30, Oficina 410

Santafé de Bogotá, Colombia

226-9098

Alvaro Baptiste

Fernando del Pino

COMPAÑIA LATINOAMERICANA DE SOFTWARE - LASC

Street Address

Telephone

Telefax

General Manager

Carrera 18 N° 79-37/43

Santafé de Bogotá, Colombia

218-4511

611-0151

María Eugenia Botero

COMPAÑIA NACIONAL DE MICROCOMPUTADORES LTDA.

Street Address

Telephones

Telefax

President

General Manager

Calle 70 N° 11-30

Santafé de Bogotá, Colombia

212-3195, 255-8604

212-5362

Felipe Vallejo

Yesid Pineda

GLOBAL INGENIERIA LTDA.

Street Address

Telephones

Telefax

General Manager

Calle 37 N° 16-90, Oficina 301

Santafé de Bogotá, Colombia

245-8365, 287-2098

287-2098

Fabio Avendaño

INTERNACIONAL DE INGENIERIA LTDA.

Street Address

Carrera 15 N° 84-24, Oficina 209
Santafé de Bogotá, Colombia

Telephone

257-5212

Telefax

2610-5014

General Manager

Cayetano Rugeles

INTERNACIONAL DE TELECOMUNICACIONES Y COMPUTADORES LTDA. -**ITECOMP**

Street Address

Carrera 7ª N° 58-48
Santafé de Bogotá, Colombia

Telephones

211-9982, 211-9150

Telefax

235-9016

General Manager

Pedro Pablo Arrubla

INDUSTRIA DE TELECOMUNICACIONES Y ELECTRONICA - ITEL S. A.

Street Address

Carrera 77A N° 38A-14
Santafé de Bogotá, Colombia

Telephones

263-5157, 295-7872

Telefax

410-0506

General Manager

Carlos Alberto Otoya

LATAM COMPUTADORES LTDA.

Street Address

Carrera 21 N° 84-53
Santafé de Bogotá, Colombia

Telephones

236-2936, 257-2086

Telefax

610-1637

General Manager

Angela María Escobar

MBC REPRESENTACIONES Y SUMINISTROS LTDA.

Street Address

Carrera 15 N° 78-33, Local 143
Santafé de Bogotá, Colombia

Telephones

218-5584, 236-1823

Telefax

236-9517

General Manager

Adriana Castillo

MICRO EQUIPOS LTDA.

Street Address

Calle 99 N° 11B-47

Santafé de Bogotá, Colombia

Telephones

610-7494, 610-7402

Telefax

610-7316

Commercial Manager

Alfonso Acevedo

MICROMATIZACION LTDA.

Street Address

Calle 72 N° 8-56, Piso 10

Santafé de Bogotá, Colombia

Telephones

217-8784, 217-8842

Telefax

217-8865

General Manager

Carlos Alberto Pradilla

MICROSOFT-COLOMBIAN SUBSIDIARY OF MICROSOFT CORP. LTDA.

Street Address

Carrera 9A N° 99-02, Piso 2

Santafé de Bogotá, Colombia

Telephones

618-2269, 618-2255

Telefax

618-2269

General Manager

Felipe Sánchez

MULTIREDES & CIA. S. C. S.

Street Address

Calle 40 N° 23-56

Santafé de Bogotá, Colombia

Telephones

268-8202, 269-8262

General Manager

Luis Javier Espinosa

NASCO S. A.

Street Address

Carrera 15 N° 72-73

Santafé de Bogotá, Colombia

Telephone

217-6400

Telefax

2212-1686

General Manager

Diego Escobar

ORACLE COLOMBIA LTDA.

Street Address

Calle 100 N° 8A-55, Oficina 415
Santafé de Bogotá, Colombia

Telephones

219-1243, 610-9213

Telefax

219-1467

General Manager

Juan Manuel Wills

Financing Director

Andrés Llano

PROCALCULO S. A.

Street Address

Carrera 7ª N° 74-09, Piso 6
Santafé de Bogotá, Colombia

Telephones

214-4469, 212-4343

Telefax

255-0472

Vice-President

Helena Gutiérrez

PROVEEDURIA UNIVERSAL & CIA. LTDA.

Street Address

Calle 97 N° 9-57
Santafé de Bogotá, Colombia

Telephone

256-1476

Telefax

212-8197

General Manager

Gustavo Toledo

SISTEMAS COMPUTADORES Y ASESORIAS - SCA

Street Address

Carrera 11 N° 84-24, Piso 2
Santafé de Bogotá, Colombia

Telephone

218-8108

Telefax

218-8108

General Manager

Edgar E. Páez

SISTELCOMP LTDA.

Street Address

Calle 86 N° 14-38, Oficina 202
Santafé de Bogotá, Colombia

Telephones

257-3377, 257-7369, 218-1490

Telefax

257-9638

General Manager

Gloria Cuervo de García

Commercial Manager

Armando García

SISTEMAS INTEGRALES DE INFORMATICA S. A. - SISA

Street Address

Calle 79B No 7-59

Santafé de Bogotá, Colombia

Telephones

235-2046, 235-5287

Telefax

217-3634

General Manager

Hugo Enrique Berrío

Regional Manager

Diego Arango

SISTEMAS DE TECNOLOGIA AVANZADA S. A. - STA

Street Address

Carrera 9ª N° 77-67

Santafé de Bogotá, Colombia

Telephone

217-2500

Telefax

217-9835

General Manager

Abdel Karin Hay Harb

Commercial Manager

Fernando Jaramillo

SUPERMICROS Y SISTEMAS S. A.

Street Address

Calle 114A N° 27-39, Interior 102

Santafé de Bogotá, Colombia

Telephones

215-4010, 215-4820

Telefax

2214-4490

General Manager

Juan de la Rosa

TECNICOMPUTO LTDA.

Street Address

Calle 30 N° 6-22, Oficina 2404

Santafé de Bogotá, Colombia

Telephones

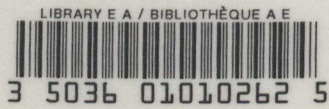
285-6101, 287-1121

Telefax

287-5708

General Manager

Germán Achury

**URIBE Y GARCIA INGENIERIA LTDA. - U. Y G.**

Street Address

Transversal 93 N° 62-46, Interior 2

Telephones

223-8919, 223-8991

Santafé de Bogotá, Colombia

Telefax

224-5880

General Manager

Abdel Karim Hay Hare

Development Manager

Fernando García

Commercial Manager

Emilio Fajury

SISTEMAS COMPUTADORES Y ASESORIAS - SCA

Street Address

Carrera 11 N° 84-24, Piso 2

Santafé de Bogotá, Colombia

Telephone

218-8108

Telefax

218-8108

General Manager

Edgar E. Páez