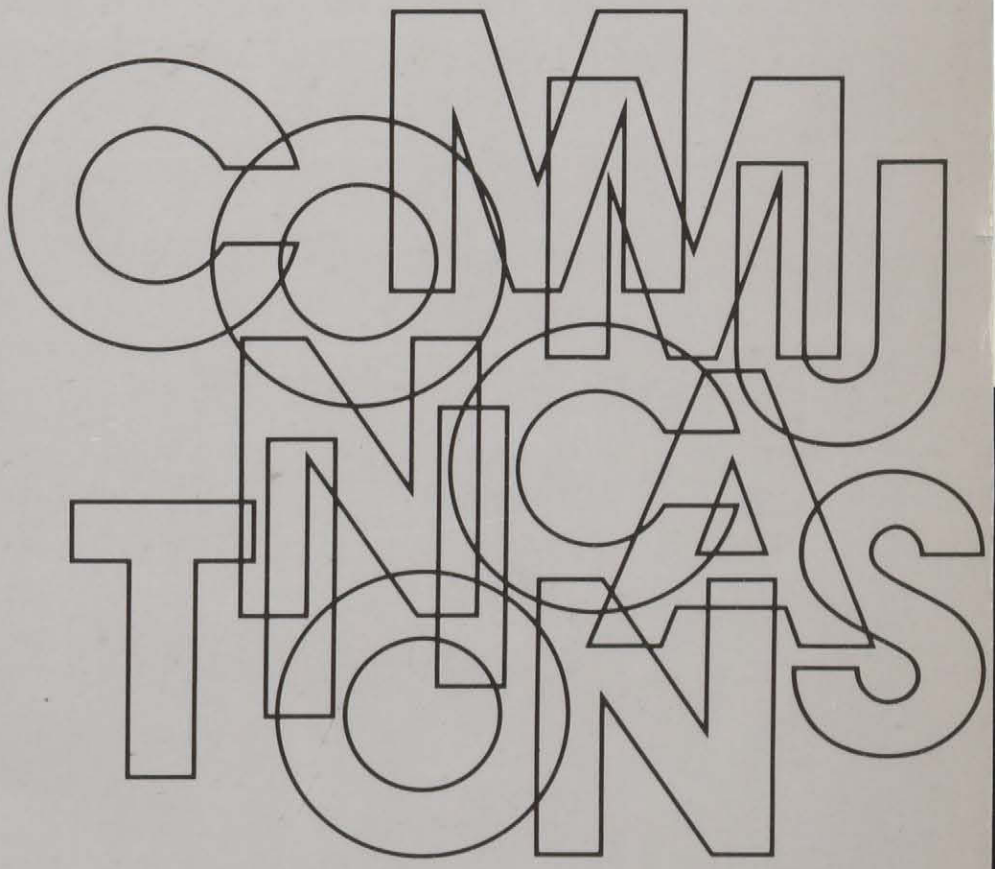
Supply of and demand for equipment in the Canadian cable television industry



Canada

Government of Canada
Department of Communications

Gouvernement du Canada
Ministère des Communications

SUPPLY OF AND DEMAND FOR EQUIPMENT IN THE CANADIAN CABLE TELEVISION INDUSTRY

Economic and Marketing
Analysis Division
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CONTENTS

I GOALS AND OBJECTIVES

The Department of Communications undertook to set up a data bank in the summer of 1982 to assemble first-hand information on the equipment needs of the CATV* industry in Canada. For this purpose, the department conducted a national survey on the supply of and demand for CATV equipment.

The survey was an attempt to gather information pertinent to a well-organized activity of Canadian industry in the domestic and international markets. A knowledge of the supply and demand for CATV equipment can be useful to Canadian firms in making their manufacturing and marketing plans and essential to various levels of government when making policy decisions likely to have an impact on the industry.

This publication was made possible by the co-operation of the firms involved in the supply and use of CATV equipment; the collaboration of the regional offices of the Department of Communications, the departments of Industry, Trade and Commerce and Regional Economic Expansion, and Statistics Canada; and the support of national industry associations like the Canadian Cable Television Association (CCTA), the Canadian Advanced Technology Association (CATA), the Electrical and Electronic Manufacturers Associations of Canada (EEMAC) and the Cable Telecommunication Research Institute (CTRI).

We gratefully acknowledge the contribution of the participating firms - CATV operators, equipment manufacturers and suppliers - who voluntarily participated in the survey and told us about their projects, development strategies, ambitions and, sometimes, their frustrations.

This document provides an overview of actual and forecast purchases of equipment by Canadian CATV operators, and two central Canada telephone companies. It also provides information on actual and forecast sales of CATV equipment by Canadian manufacturers and on the proportion of their sales which is directed to the export market. In keeping with our promise to maintain the confidentiality of all responses, we are releasing only aggregate data which have been deemed appropriate for publication.

II METHODOLOGY

DEMAND

According to data released by Statistics Canada on cable television, there were 564 CATV operating systems in Canada in 1982 serving 4,933,589 subscribers. For purposes of our survey, the users of CATV equipment have been deemed to be the purchasers of CATV equipment, that is CATV operators across Canada as well as two telephone companies, Manitoba Telephone System and Saskatchewan Telecommunications**. We have tried to contact all users by establishing a list of

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* An acronym for Community Antenna Television, more commonly known as cable television.

** These two companies make capital expenditures in CATV equipment, including drops and connectors of customer devices.

117 corporations, conglomerates and CATV licensed systems from industry lists and directories such as the Cable Communications Magazine Index and Matthew's List. These 117 firms serve approximately 95% of Canadian cable subscribers.

SUPPLY

A survey questionnaire was sent to 92 equipment manufacturers and suppliers whose Canadian operations focus primarily on CATV distribution.

RESPONSE RATE

The data collected from the survey are more fully representative of the situation in the CATV industry than the response rates indicate. The 56 CATV companies who replied to the questionnaire represent 77% of cable subscribers in Canada and their capital expenditure decisions affect 3,798,863 Canadian subscribers. All the major companies supplying CATV equipment replied to the questionnaire.

Table 1

Response rate in absolute numbers by region

Region	Demand (CATV firms)	Supply (Equipment manufacturers and suppliers)
Atlantic	12/22 = 55%	
Quebec	13/32 = 40%	6/10 = 60%
Ontario	12/29 = 44%	29/68 = 43%
Central	13/22 = 59%	1/4 = 25%
Pacific	6/12 = 50%	4/10 = 40%
Total	56/117 = 48%	40/92 = 43%
Average	96/209 = 46%	

Because of the prevailing economic conditions at the time of the survey a number of companies were only able to provide partial information on their future capital expenditures. On the demand side, some 20 companies serving 25,000 or more customers were contacted a second time for the purpose of revising or confirming the figures originally supplied. Also, several statistical checks were made to ensure the validity and reliability of the findings.

It should be noted that new capital expenditures by users of CATV equipment represent only the purchase price of equipment and exclude the cost of capitalized labour. Capitalized wages can represent between 20% and 30% of total capital expenditures in a distribution network and up to 20% of capital expenditures in drops and customer devices.

On the supply side, several manufacturers and suppliers of CATV equipment also revised or confirmed their sales figures for 1983 and 1984.

III INDUSTRY COMMENTS

In addition to quantitative data, the survey collected an abundance of opinions and comments from firms across Canada during the interviews and telephone conversations carried out at the end of 1982 and beginning of 1983.

We express our appreciation to the regional offices of the Department of Communications whose collaboration was essential in the collection of the qualitative information and in the completion of the quantitative data provided by the firms for the period 1981-1984. We acknowledge particularly the contribution of the Ontario Regional Office which followed up on 97 companies located within its territory, this number included the majority of the Canadian equipment suppliers covered by our survey (68 out of a total of 92).

The comments published reflect serious concerns expressed repeatedly by members of the industry across Canada, which are deemed representative of certain industry segments. These comments do not necessarily represent the position of the department.

GENERAL ESTIMATE OF DEMAND BY CATV OPERATORS

The introduction of the 6 and 5% ceiling on CATV rate increases for the years 1982 and 1983 as well as the dramatic increase in interest rates forced a large number of companies to reconsider their capital expenditures planned at the time the survey questionnaire was sent (the beginning of the summer of 1982). A climate of caution prevailed throughout the summer and fall of 1982 and forced the companies to re-evaluate their priorities and planned purchases. These considerations are reflected in certain data which indicate that equipment purchases were directed toward meeting immediate and short-term needs, not more sophisticated needs such as the requirements of pay-TV for example. In this context, the CATV operators had difficulty forecasting their capital expenditures more than 12 months ahead.

The factors generally taken into consideration by CATV operators in the purchase of equipment are: 1) cost, 2) immediate availability of the product and after sale service, and 3) quality of the product. A large proportion of the equipment purchased by the CATV distributors is imported from the United States where the products meet the criteria of cost and immediate availability, having been used there for pay-TV for several years.

Our survey established that, with respect to regulation, the companies generally prefer a free hand in implementing new services (other than programming) and deplore the climate of uncertainty created by government reservations and delays caused by pending decisions of the CRTC. During the past few years, some of the larger companies have opted for large investments in the United States where return on investment and freedom of action seemed at first to be more attractive.

Because development opportunities in the American market are now more limited or too costly, the CATV distributors are forced, on the one hand, to try again to develop the Canadian market (new services) and, on the other hand, to give serious consideration to development opportunities overseas. However, before investing heavily in the domestic market in bi-directional networks or in fibre optics, the CATV distributors want to be certain that these new services are economically viable. The banks and financial institutions are very cautious when asked to provide credit for new services which are subject to the approval of a regulatory agency.

GENERAL ESTIMATE OF MARKET BY EQUIPMENT MANUFACTURERS AND DISTRIBUTORS

Competition

It is evident, from our conversations with Canadian manufacturers, that their growth forecasts are based for the large part on sales to foreign markets. They are finding it increasingly more difficult to penetrate foreign markets where competition is becoming more intense and where they often have to deal with restrictive practices. In the domestic market, they are encountering more and more competition from large foreign manufacturers who are able to offer lower cost equipment and favourable financing terms.

Research and Development

The small and medium-size Canadian firms are very aware of the need for technological innovation and the importance of R&D to remain competitive. However, they are constrained by their lack of resources and they fear foreign competitors who are able to allocate greater resources to the development and marketing of new products. They allocate little more than 5% of their total sales to R&D, which tends to be evolutionary rather than innovative, although there is much debate about the merits of one over the other in the development of industrial strategy. The manufacturers would like to participate in product development projects with the department's Communications Research Centre. As a result, technology transfer could take place, even on a small scale, for those products with immediate commercial application. The encouragement to seek excellence and the support they have received from the Communications Research

Centre and the department when seeking advice or technical assessments have strengthened their desire to develop closer relationships with government laboratories. They are aware of the importance of allocating a large part of their resources to marketing their products and, in this area also, they often lack the necessary resources.

IV FINDINGS

DEMAND

New capital expenditures by users of CATV equipment are estimated at $72.5 million for 1981, $83.2 million for 1982, $131.2 million for 1983 and $155.3 million for 1984 (see Table 2). These figures represent the purchase price of equipment only, excluding the cost of capitalized labour. According to industry members interviewed, capitalized wages can represent up to 30% of total capital expenditures in a distribution network and up to 20% of total capital expenditures in equipment and customer devices.

Table 2

New capital expenditures by users of CATV equipment

($000)			
1981	1982	1983	1984
72,504	83,203	131,225	155,362

Analysis of aggregate demand should take into consideration the fact that 1982 was characterized, on the one hand, by uncertainty due to the combined effect of budget cuts and high interest rates, and, on the other hand, by the anticipation of additional revenues from the introduction of pay-TV. Following the announcement of the 6 and 5% policy, several CATV companies asked us, in September 1982, to revise their 1982 figures downward. A number of these companies reassessed their needs at the end of 1982 and beginning of 1983 when they proceeded to purchase equipment.

Following a modest increase of 14.7% from 1981 to 1982, the substantial increase forecast for 1983 is due mainly to capital expenditures in pay-TV equipment (item 2.7 of questionnaire) and descramblers (item 3.3) (See appendix B).

Table 3

Distribution and proportion of capital expenditures
by three product categories

Product category	1981	1982	1983	1984
			($000)	
Head end network	4,648.0	5,539.7	7,505.9	4,490.8
Distribution network	41,759.1	46,711.4	66,472.5	55,169.3
Customer devices	26,096.8	30,951.4	57,246.5	95,701.0
Total	72,504.0	83,203.0	131,225.0	155,362.0
			(percentage)	
Head end network	6.4%	6.6%	5.7%	2.8%
Distribution network	57.5%	56.1%	50.6%	35.5%
Customer devices	35.9%	37.2%	43.6%	61.5%

The proportion of capital expenditures in each of the three main product categories shows that the major part of these expenditures in 1981, 1982 and 1983 was made in the distribution network in amounts of $41.7 million, $46.7 million and $66.4 million respectively. For 1984, the largest share of capital expenditures will shift to customer devices where $95.7 million, representing 61.5% of the total forecast for that year, will be outlayed.

There is still much uncertainty regarding the purchase of equipment for 1984. What appears as a decrease in capital expenditures for head end networks and distribution networks may be due to a delay in decisions rather than a weakening of demand as well as to the fact that final decisions have been made only in regard to customer devices.

During the summer of 1983, the industry has been quite busy evaluating its priorities and especially preparing its marketing activities in anticipation of the second launching of pay-TV in the fall of 1983. Many small and medium-size CATV operators have aligned their development plans with those of the larger CATV operators following the constraints of the 6 and 5% ceiling on rate increases announced in the summer of 1982. The industry is more optimistic in 1983, although still very cautious regarding capital expenditures.

For example, capital expenditures for bi-directional trunk and trunk bridgers (amplifier stations, item 2.11b) reflect the caution in new expenditures for equipment: $2.3 million in 1981, $3.5 million in 1982, $4.3 million in 1983 and $4.2 million in 1984.

Imports

Our questionnaire asked the firms to indicate the portion of their capital expenditures represented by imports; that is direct imports of finished products and all equipment purchased from Canadian distributors who sell imported equipment. The replies seem to indicate that CATV distributors find it difficult to identify "Canadian" products. Also, there seems to be some confusion in the minds of many CATV distributors between equipment manufactured in Canada, equipment assembled in Canada and equipment that is totally imported. A large amount of equipment which used to be totally imported is now being assembled in Canada even though most of the components are manufactured in other countries.

It appears, in general, that most equipment is imported (at least 50%) with significant variations according to the product.

Thus, more than 70% of the electronic equipment for earth stations is imported but more than 90% of "dishes" are made in Canada.

Nearly 100% of the equipment used in microwave transmission is imported. In distribution networks, the proportion of imports for modulators and signal processors at head end is approximately 60% compared to 50% for studio equipment. Almost 100% of the coaxial cable and 50% of the amplifiers are imported. Approximately 40% of the hardware used in distribution networks is imported.

Capital expenditures for customer devices, especially descramblers, have been made mostly for equipment assembled in Canada. Within the next few years, Canadian CATV operators will have access to equipment designed and manufactured in Canada, including items 3.3 to 3.8 of the questionnaire (see appendix C).

Regional distribution of demand

For the purposes of our survey, users of CATV equipment have been divided into five geographic regions encompassing the ten provinces as well as the territories. The regions are as follows: Atlantic Region - Newfoundland, Prince Edward Island, New Brunswick and Nova Scotia; Quebec Region; Ontario Region; Central Region - Manitoba, Saskatchewan and Alberta; Pacific Region - British Columbia, the Northwest Territories and the Yukon.

Table 4

Regional distribution of new capital expenditures
by users of CATV equipment

Region	1981	1982	1983	1984
			($000)	
Atlantic	1,933	3,007	4,895	3,930
Quebec	12,705	7,493	26,456	54,278
Ontario	34,040	47,065	66,978	61,229
Central	15,140	11,129	24,450	26,281
Pacific	8,687	14,508	8,446	9,647

The apparent decrease in capital expenditures in 1984 in the Atlantic Region is due to the fact that a large number of respondents had not yet finalized their purchasing decisions and had postponed them to the fall of 1983. Quebec users of CATV equipment intend to make large capital expenditures for customer devices in 1984 whereas several large Ontario CATV distributors are delaying their purchasing decisions. In British Columbia, purchases for 1983 and 1984 have been partially finalized and all other equipment expenditures have been postponed to the fall of 1983. In general, any decrease in capital expenditures for 1984 is due to the postponement of decisions after finalization of budgets.

Plans for the modernization of networks are under way in all regions even though new customer services are being introduced more cautiously than had been anticipated.

Table 5

Distribution of regional capital expenditures
by product category

Product category by region		1981	1982	1983	1984
			($000)		
Atlantic					
Head end	1	309	891	424	214
Distribution network	2	1,271	1,609	2,796	2,466
Customer devices	3	353	507	1,675	1,250
Quebec					
Head end	1	338	173	247	150
Distribution network	2	2,903	3,019	2,736	2,929
Customer devices	3	9,463	4,301	23,374	51,199
Ontario					
Head end	1	3,123	3,525	4,044	3,540
Distribution network	2	19,351	25,409	39,166	33,819
Customer devices	3	11,565	18,132	23,768	23,870
Central					
Head end	1	580	320	2,396	179
Distribution network	2	10,937	8,207	17,178	11,339
Customer devices	3	3,624	2,602	4,875	14,763
Pacific					
Head end	1	298	631	395	407
Distribution network	2	7,297	8,466	4,597	4,617
Customer devices	3	1,092	5,411	3,454	4,621

SUPPLY

The data on actual and forecast sales provided by the equipment manufacturers and suppliers confirm their comments that foreign sales will become an increasingly larger part of their business volume. In 1981, 30% of their sales were directed to the export market and this figure is estimated to gradually grow to 50% of business volume in 1984.

Total sales for 1984 are forecast at two-and-a-half to three times the 1981 level for the categories of distribution network equipment and customer devices. The expected increase in sales of head end equipment is more modest for 1984, that is one-and-one-half times the 1981 level.

Since the majority of CATV equipment suppliers are located in Ontario, this region accounts for the largest proportion of sales, 86% of total 1981 sales. Two Ontario firms sold mo t of the pay-TV equipment to CATV distributors in 1982 and 1983, thus serving approximately 60% of the cable subscriber market. The rest of the market, 40% of the subscribers, was shared more or less equally by several suppliers. The Pacific Region was responsible for 12% of sales in 1981 but could reach 20% of the total market in 1984. Ontario is expected to be responsible for 75% of sales in 1984 and the rest of the market would be divided between the Central Region and Quebec.

Total sales are distributed on average as follows: head end network, 12%; the distribution network, 42%; and drops and customer devices, 46%. Estimated domestic sales of earth station equipment and broadcast transmitters/receivers for the high level network have risen sharply from 1981 to 1984 but sales of microwave facilities have remained unchanged.

Sales in the distribution network vary according to the equipment. For example, sales of pay-TV equipment (item 2.7) are estimated to rise from $0.4 million in 1981 to $5.2 million in 1984. Sales of fibre optic trunk cables (item 2.10b) will be virtually nonexistent. On the other hand, sales of amplifier stations and bi-directional trunk bridgers (item 2.11b) are expected to double by 1984, reaching $5 million in the domestic market and $15 million in the export market.

With respect to customer devices, substantial domestic sales of converters and descramblers are expected in 1984, reaching $55.0 million and $35.6 million respectively. Also, sales of videotex equipment and terminals are expected to reach $20.3 million.

Export Market

The manufacturers and suppliers expect sales directed to the export market to increase fourfold from $36.7 million in 1981 to $156.1 million in 1984. This growth in exports applies to converters, descramblers, videotex equipment and terminals in the customer devices group, with sales expected to increase from $14.4 million in 1981 to $64.2 million in 1984. In the distribution network equipment group, the sales increase applies to low noise amplifiers, trunk bridgers, bi-directional amplifier stations and line extenders, with estimated sales of $84.7 million in 1984, up from $20.8 million in 1981. For the high level network group, the increase in exports applies to earth station equipment and broadcast transmitters/receivers, with sales expected to increase from $1.3 million in 1981 to $7.0 million in 1984.

Table 6

Distribution of exports by product category

Product category	1981	1982	1983	1984
		($000)		
Head end network	1,356.0	4,214.4	5,597.8	7,093.4
Distribution network	20,888.0	34,968.7	52,100.7	84,787.9
Customer devices	14,435.4	21,545.5	62,538.8	64,241.7
Total	36,679.0	60,728.0	120,237.0	156,122.0
		(percentage)		
Head end network	4%	7%	5%	5%
Distribution network	57%	58%	43%	54%
Customer devices	39%	35%	52%	41%

Manufacturing sales are largely directed to the U.S. market with some penetration of the European, Japanese, South American and Australian markets. The European market is seen as a promising market by the younger firms. The more established firms, however, which had developed a niche in this market at the beginning of the '70s are seeing their share of this market reduced in favour of American firms or young and aggressive European firms. Consequently, these companies have identified South America, the Middle East and China as the next potential markets to be developed. All have stated that export markets are essential to their development if not their survival.

V CONCLUSION

This first survey of the CATV industry has proven to be an exercise in co-operation between the industry, industry representatives through the main industry associations, and the department. It could be useful, for future surveys, to redesign the questionnaire to include cost of equipment per kilometre of network line, as suggested by several CATV operators and equipment suppliers.

We are aware of the effort made by the industry in responding to our request to forecast sales and capital expenditures two years ahead, at a time when economic conditions were particularly difficult. In the demand sector, the CATV operators were generally cautious, reserving decisions on certain planned capital expenditures until the last minute. On the supply side, the equipment manufacturers and suppliers have banked on economic recovery hoping that their sales projections in foreign markets will be achieved.

The maturing Canadian CATV industry will require massive capital expenditures to enable it to provide a wide range of services such as TV shopping, TV banking, teletext, television surveillance, television surveys and videotex; and to remain competitive with other information suppliers. Also, the industry's ability to convince consumers of the exceptional merits of the coaxial cable as a means of transmitting information will determine much of its future growth.

APPENDIX A

PARTICIPANTS

Manufacturers and suppliers

Central Dynamics Ltd.
Les Electroniques Incospec Inc.
RCA Inc.
H.A. Solutec Ltée
Télédac Inc.
Communications Texscan Inc.
Adcom Electronics
Ampex CDA Inc.
Communications Equity Corp.
Andrew Antenna Co. Ltd.
AVA Electronics
Cable Lock Connectors Ltd.
Electrovert Ltd.
Canada Wire and Cable Ltd.
Digital Video Systems Inc.
Electrohome Electronics
ITT Cannon Electric Canada
General Instrument - Jerrold Division
JVC Canada Inc.
Linear Technology Inc.
Lumitrol Ltd.
Microcom Systems Ltd.
NABU Manufacturing Corp.
Philips Electronics Ltd.
Studer Revox Canada Ltd.
3M Canada Inc.
Times Electronics Corp. Ltd.
Trans Canada Electronics Ltd.
Triple Crown Electronics Inc.
Viewstar Inc.
White Radio Ltd.
Delta-Benco-Cascade
Scientific Atlanta (Canada) Ltd.
Tektronix
Zenith Radio Corp.
SED Systems Inc.
Globex Marketing Ltd.
Alpha Technologies Ltd.
Century III Electronics Inc.
Crowder Communications Ltd.

CATV operators

Island Cablevision Ltd.
Shellbird Cable Ltd.
Fundy Cablevision Ltd.
Cape Breton Cablevision
Central Cable T.V. Ltd.
Dartmouth Cable TV Ltd.
Eastern Cablevision Ltd.
Halifax Cablevision Ltd.
K-Vision Services Ltd.
Mid-Valley Cablevision Ltd.
North East Cablevision Ltd.
Seaside Cable T.V. Ltd.
Câblovision Alma Inc.
La Belle Vision Inc.
Compagnie de télévision de Sept-Iles Ltée
Gagnon T.V. Ltée
Câblodistribution Le Rocher Inc.
Le Câble de Rivière-du-Loup Ltée
Télécâble Laurentien Inc.
Télécâble des Mille-Iles Inc.
Transvision Granby Inc.
Câblovision Bas St-Laurent Ltée
Vidéotron (1979) Ltée
Cable TV Inc.
Sorel-O-Vision Inc.
Aurora Cable TV Ltd.
Bluewater TV Cable Ltd.
Classic Communications Ltd.
Cie Cablevision of Hawkesbury Ltd.
Comnet Ltd.
Niagara Co-Axial Ltd.
CUC Scarborough
Mountain Cable
Maclean-Hunter Cable TV Ltd.
Rogers Cablesystems Inc.
Northumberland Cable TV
Western Cable TV Ltd.
Image Cable System Ltd.
Calgary Cable TV/FM
Cable TV Camrose/Wetaskiwin Ltd.
Greater Winnipeg Cablevision Ltd.
Mackenzie Media Ltd.
Northern Cablevision Ltd.
Q.C.T.V. Ltd.
Saskatchewan Telecommunications
Manitoba Telephone System
Saskatoon Telecable Ltd.
Westman Cable TV
Winnipeg Videon Inc.
Cablevision Medicine Hat Ltd.
Interlake Cable T.V. Ltd.
Cable West TV Ltd.
Knowledge Network
Cowichan Cablevision Ltd.
Premier Cablesystems Ltd.
Delta Cable Television Ltd.
West Coast Cablevision Ltd.

APPENDIX B

PROJECTED INVESTMENTS BY USERS OF
CATV EQUIPMENT

Projected investments by users of CATV equipment

	Equipment	Total Demand 1981	1982	1983	1984
				($000)	
1.0	HIGH LEVEL NETWORK				
1.1	Earth Station Equipment	2,162.6	2,355.2	4,494.3	2,597.0
1.2	Microwave Facilities	2,438.2	3,137.3	2,850.1	1,777.4
1.3	Broadcast a) transmitters/receivers	28.6	28.6	82.7	97.7
	b) repeaters, amplifiers	18.6	18.6	78.8	18.6
2.0	LOCAL DISTRIBUTION NETWORK AND HEAD END				
2.1	Low Noise Amplifiers/Pre-Amplifiers	221.4	218.3	342.6	285.0
2.2	Down Converters	133.4	162.0	140.9	142.4
2.3	Signal Processors	884.8	535.2	535.2	567.2
2.4	Studio Equipment	6,791.0	4,975.8	5,715.0	4,756.1
2.5	Alarm Monitoring Equipment	99.2	466.2	659.4	1,156.4
2.6	Character Generators	542.1	532.3	430.8	456.1
2.7	Pay TV Equipment	56.4	1,436.5	9,875.2	6,018.0
2.8	Videotex Equipment	333.8	264.5	312.5	530.5
2.9	Modulators	772.0	921.1	1,007.8	804.2
2.10	Trunk Cable a) Coaxial	6,914.3	7,943.2	12,540.8	10,767.1
	b) Fibre Optic	-	7.5	206.8	571.9
2.11	Trunk & Trunk Bridgers (Amplifiers Stations)				
	a) unidirectional	5,336.1	5,362.6	8,986.3	7,608.3
	b) bi-directional	2,331.3	3,567.2	4,355.2	4,257.0
2.12	Feeder Line, Line Extenders and Apartment Amplifiers	9,280.8	10,365.1	12,227.7	10,504.5
2.13	Taps	3,921.4	4,469.2	4,780.0	3,543.0
2.14	Power Supplies	1,623.5	1,857.6	1,919.4	1,423.0
2.15	Test Equipment and Tools	2,517.7	3,627.2	2,437.0	1,778.6
3.0	DROPS AND OTHER CUSTOMER DEVICES				
3.1	Drops and Connectors	11,640.8	10,981.7	8,265.4	6,678.3
3.2	Converters	13,503.6	9,770.8	7,284.8	14,645.1
3.3	Descramblers	0.0	8,894.7	39,297.7	72,357.9
3.4	Fire, Burglar Alarm Equipment	344.5	679.4	1,283.5	1,801.2
3.5	Network Addressing Devices	151.7	112.8	427.1	93.2
3.6	Recorders	172.9	168.4	221.1	227.1
3.7	Videotext Equipment (incl. Telidon) and Terminals	136.8	191.0	166.9	218.0
3.8	Decoders, Closed-Captioning Devices	146.5	152.6	300.0	400.8

APPENDIX C

QUESTIONNAIRE

NATIONAL SURVEY ON THE SUPPLY AND DEMAND OF CATV EQUIPMENT

Notification

- The purpose of this survey is to obtain current and prospective data on the acquisition of CATV equipment. The survey is undertaken pursuant to the Department of Communications Act. Your response to this survey is voluntary.

- The Department of Communications will keep all respondents' information CONFIDENTIAL as defined under the Official Secrets Act. Such data will not be released to other government departments and only aggregate information, from which no individual respondent's information can be identified, may be made public.

- Should you require further information to assist you in completing this questionnaire, please contact

Atlantic Region
Mr. J. Guérette
Moncton
(506) 388-6531

Central Region
Mr. A.A. Simpson
Winnipeg
(204) 949-2595

Quebec Region
Mr. D. Lachance
Montreal
(514) 283-7737

Pacific Region
Mrs. L. Johnston
Vancouver
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Ontario Region
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Mrs. Louise Dubé-Martel
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Ottawa, Ontario
K1A 0C8
Tel: (613) 995-8181

Canada

Instructions

- For each period, the values requested should:

  a) be based on the calendar year which covers the period from January 1 to December 31 of the same year. However, if your financial planning is only done on a fiscal year basis (Sept. 1 - Aug. 31), please state if these numbers are based on the fiscal year or the calendar year.

  b) reflect the value of your projected or actual new investment/and sales for each category of equipment. When actual figures are not available, please feel free to report estimates.

  c) exclude federal tax.

  d) be recorded in thousands of dollars and indicate the amount of imports or exports as a percentage of new investment or sales.

- When one of your values overlaps at least two categories of the questionnaire, please provide an estimate based on a proportional distribution of this value for each category.

- If your values are disaggregated to the extent that there is more than one value per category, please combine these values in order to make them more compatible with our classification structure.

- Please return one copy of your completed questionnaire in the enclosed, pre-addressed, postage-paid envelope before June 12, 1982, and keep a copy for your file.

- Thank you for your cooperation and support.

NEW INVESTMENT BY USERS OF CATV EQUIPMENT

CALENDAR YEAR**

($000)

	1981		1982		1983		1984	
	TOTAL	IMPORTS	TOTAL	IMPORTS	TOTAL	IMPORTS	TOTAL	IMPORTS
	$	%*	$	%	$	%	$	%
1.0 HIGH LEVEL NETWORK								
1.1 Earth Station Equipment								
1.2 Microwave Facilities								
1.3 Broadcast a) transmitters/receivers								
b) repeaters, amplifiers								
2.0 LOCAL DISTRIBUTION NETWORK AND HEAD END								
2.1 Low Noise Amplifiers/Pre-Amplifiers								
2.2 Down Converters								
2.3 Signal Processors								
2.4 Studio Equipment								
2.5 Alarm Monitoring Equipment								
2.6 Character Generators								
2.7 Pay TV Equipment								
2.8 Videotex Equipment								
2.9 Modulators								
2.10 Trunk Cable (a) Coaxial								
(b) Fibre Optic								
2.11 Trunk & Trunk Bridgers (Amplifier Stations)								
(a) unidirectional								
(b) bi-directional								
2.12 Feeder Line, Line Extenders, and Apartment Amplifiers								
2.13 Taps								
2.14 Power Supplies								
2.15 Test Equipment and Tools								

* IMPORTS Include all direct imports of finished goods and all material purchased through distributors who themselves import their supplies.

NEW INVESTMENT BY USERS OF CATV EQUIPMENT

CALENDAR YEAR**

($000)

3.0 DROPS AND OTHER CUSTOMER DEVICES	1981		1982		1983		1984	
	TOTAL	IMPORTS	TOTAL	IMPORTS	TOTAL	IMPORTS	TOTAL	IMPORTS
	$	%*	$	%	$	%	$	%
3.1 Drops and Connectors								
3.2 Converters								
3.3 Descramblers								
3.4 Fire, Burglar Alarm Equipment								
3.5 Network Addressing Devices								
3.6 Recorders								
3.7 Videotext Equipment (incl. Telidon) and Terminals								
3.8 Decoders, Closed-Captioning Devices								

* IMPORTS include all direct imports of finished goods and all material purchased through distributors who themselves import their supplies.

** If financial planning done on a fiscal year basis (Sept. 1 - Aug. 31), please state if your data is based on the fiscal year or the calendar year.

COMMENTS:

Prepared by _____ Firm _____

Title _____ Telephone (including area code) _____