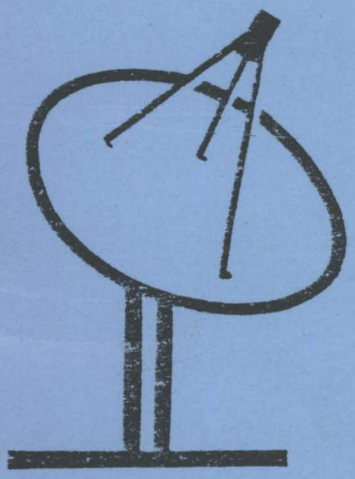
# DEPARTMENT OF COMMUNICATIONS

# THE DBS MARKET IN CANADA

May 1983



A report from the
Marketing and Economics Group

**Woods Gordon**
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**market facts**
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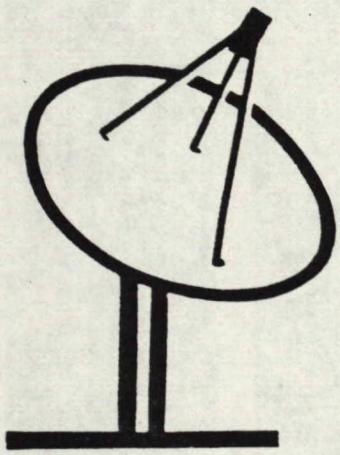





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Government of Canada
Department of Communications

Gouvernement du Canada
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6444-20

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DEPARTMENT OF COMMUNICATIONS - OTTAWA - CANADA

SPACE PROGRAM

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TITLE: DETERMINATION OF THE DIRECT BROADCASTING SATELLITE (DBS) MARKET IN CANADA

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# THE DBS MARKET IN CANADA

## CONTENTS

# PART I

## REPORT AND CONCLUSIONS

# 1. EXECUTIVE SUMMARY

## 1.1 Study Background, Objectives and Methodology

This study was commissioned by the Department of Communications (DOC) as part of a multi-disciplinary study program to provide the basis for developing a strategic plan for the possible introduction of a Direct Broadcast Satellite (DBS) system in Canada.

The potential rural Canadian market for a DBS system had already been investigated in an analysis of the potential for improved residential television services in rural Canada by Demand Research Consultants (DRC). The forecasts from that study projected that for CATV technology, over half the 1.5 million rural households (870,000) would subscribe within three years at a price of $12 per month. For satellite technology the projections suggested that, at a cost of $600 for individual household receiving equipment, close to half the households (712,000) would adopt the system in the first three years, with an ultimate market penetration of 76% by the twelfth year.

The objective of this study was to develop projections of national and regional demand for DBS service and related television receive-only (TVRO) terminals by estimating the potential demand in urban areas of Canada and integrating the resulting demand projections with those derived from the rural study, calculated as far as possible on a consistent basis. Because there is considerable uncertainty concerning future events which will have a major bearing on the level of demand (such as the price of TVRO's, the programming available via DBS and competitive activity) projections have been developed under a variety of alternative assumptions.

TABLE 1

THE DBS URBAN MARKETPLACE

('000 households)

| | 1983 | 2004 | % Growth |
|---|---|---|---|
| **Urban/Rural Mix** | | | |
| Urban | 6,773 | 8,828 | 30 |
| Rural | 1,822 | 2,180 | 20 |
| All Canadian Households | 8,595 | 11,008 | 28 |
| **Types of Urban Household** | | | |
| With TV - Owned Houses | 3,512 | 4,591 | 31 |
| - Condominium Houses | 73 | 96 | 32 |
| - Rented Houses | 559 | 730 | 31 |
| - Apartment and Flats | 2,507 | 3,278 | 31 |
| All Urban TV Households | 6,651 | 8,696 | 31 |
| Without TV | 122 | 132 | 8 |
| All Urban Households | 6,773 | 8,828 | 30 |
| **Urban TV Reception** | | | |
| Cable Subscribers | 4,689 | 6,800 | 45 |
| Cable Non-Subscribers | 1,527 | 1,469 | -4 |
| Uncabled Areas | 434 | 427 | -1 |
| All Urban TV Households | 6,650 | 8,696 | 31 |

Source: Woods Gordon Market Projection Model (Base-case projections).

DBS services can be provided to urban areas via DBS terminals co-located with cable system head-ends, via community DBS terminals that feed community rebroadcast systems, and via direct-to-home TVRO's. Separate estimates of demand were required for each of these market segments.

The urban market projections developed in this study are based on a 1,400-respondent consumer survey covering: urban households not passed by cable systems; households passed by a cable system but not subscribing to it; and cable subscriber households. The consumer survey was supported by an executive interview program covering broadcasters and other knowledgeable industry participants to assess the degree to which cable companies and others might use the DBS system, and to evaluate factors such as competitive response which could affect demand. A computer-based market projection model was developed to produce demand projections under a variety of scenarios reflecting different TVRO costs, alternative levels of programming and variations in other influencing factors.

## 1.2 The DBS Marketplace

The marketplace in which demand for DBS service can develop is summarized opposite in Table 1. The first column shows data for 1983, reflecting the current market situation. The second column shows what is expected to have happened to the demographics of this marketplace by the year 2004. The analysis includes type of housing (e.g. houses vs. apartments) since this will affect householders' freedom to install TVRO's. The research phase of this study covered the urban market, which currently accounts for 79% of households.

## 1.3 Assumptions

As discussed earlier, future demand for DBS service, and for TVRO terminals, will be influenced by future events which cannot now be ascertained with any degree of certainty. This study has shown that ultimately a large portion of the urban population is likely to receive DBS service by one means or another, but that demand for TVRO terminals will be strongly influenced by three factors:

- o the level of programming
- o the price of the TVRO terminal
- o competitive factors

This was, of course, intuitively sensed before, but this study now provides a more quantitative understanding of the sensitivity of demand to these factors.

### i) The Level of Programming*

Our analysis of the urban market has been carried out at two basic levels of programming which we term "Full" and "Minimum". A third level, for the "most likely" scenario, was added while the study was in progress. A detailed description of the programming options and other variables used in this study is contained on the fold-out page in Appendix G.

- o Full Programming consists of Canadian free, pay and special interest channels, plus the U.S. networks and pay TV channels.
- o Minimum Programming excludes the Canadian special interest channels and the U.S. networks, but is otherwise the same.
- o The programming for the "most likely" scenario includes Canadian free and pay channels plus the US networks and free DBS channels.

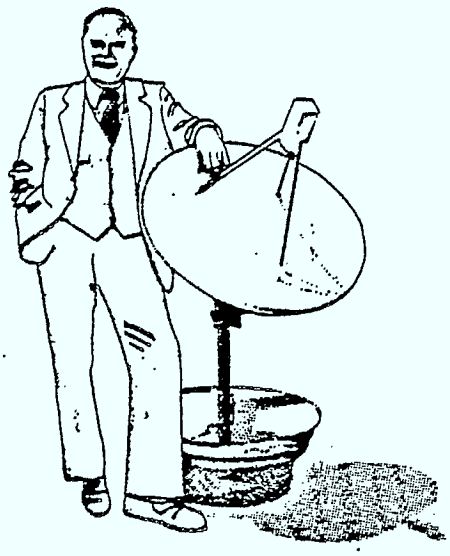
* Also defined in Appendix G, which may be folded out as a ready reference to these and other terms used in this report.

## FULL PROGRAMMING DESCRIPTION

In this section are descriptions of some other ways to receive T.V. programs on your T.V. Please imagine as you read about them, that these options are available now. Read the options and answer the questions with your family.

**OPTION A**

This would need a special antenna and adapter to receive signals from a Canadian satellite. (The special antenna would be a small dish, two to three feet across, that would go in the yard or on the roof. It would be very reliable and easy to service. A picture of this equipment is shown below.)



Using this method of T.V. reception, you would receive the following Canadian channels free, in your own language:

- CBC
- one or two independent commercial channels such as CTV or TVA
- an educational channel
- a public interest channel such as live broadcasts from the House of Commons

You would be able to receive three Canadian Pay T.V.* channels in your own language:

- a national channel of movies, entertainment, etc.
- a national channel of special arts and culture programs
- a regional channel of movies, entertainment, etc.

Various Canadian special-interest channels would be available:

- free channels such as native or religious programming
- Pay T.V.* channels such as children's programs, movies or sports

The U.S. channels that you could receive would be:

- the U.S. networks: ABC, NBC, CBS and PBS (the educational network)
- Pay T.V.* channels (3 or more) which would include movies, sports and family entertainment

The reception on all these channels would be of the highest quality and would be very sharp and clear.

* Pay T.V. provides quality programs you pay extra for by renting a special adapter for your set. The monthly rental is $15 for one channel, $25 for two channels, $30 for three, in addition to your regular cable charge, if any.

Source: Consumer Survey Questionnaire.

Although, in practice, programming may be introduced at one level, then later increased, perhaps in a stepped fashion, our projections assume either "Full" or "Minimum" programming from the outset. Reaction to other possible programming alternatives was also explored but the results, discussed in the body of the report, do not influence the projections in this Executive Summary.

Reproduced opposite is a description of "Full Programming" as it appeared in the questionnaire. Note that emphasis was placed on the fact that Pay TV would incur extra charges.

The rural study examined demand under only one programming assumption which approximated what we have termed "Minimum Programming".

ii) Price of TVRO Terminal

As one would expect, householder demand for TVRO terminals is price sensitive. Not surprisingly the degree of price sensitivity is greater than that found in rural areas since alternative ways of obtaining acceptable TV programming and reception quality are more likely to be available to urban householders than is the case for their rural counterparts.

In many cases, urban housedwellers will be evaluating the possible purchase of a TVRO against the alternative of receiving their television service by cable. The critical factor affecting the level of demand for TVRO's is therefore the relationship between the price of the TVRO and the cost of receiving the equivalent service via cable.

Our consumer survey investigated the elasticity of urban demand for TVRO's within the price range $400 to $1,200 and for DBS service via cable at monthly charges within the range of $10 to $25.

The urban demand projections developed in this study reflect three TVRO/DBS-via-cable pricing relationships, combined with variations in other less sensitive factors which could influence demand for TVRO's. These other factors include the growth in population, apartment living, cable subscriptions and the rate at which CATV companies introduce DBS on their systems (our study results indicated they all will eventually).

The Base case (B)* assumes a TVRO cost of $600 and DBS-via-cable at a monthly charge of $15, with moderate projections for the other factors. High and low projections of TVRO demand were developed by setting the elements of the market projection model as follows:

| Element | High Projection (A)* | Low Projection (C)* |
|---|---|---|
| Population Growth | High | Low |
| Apartment Living | Low | High |
| Cable Subscription Growth | Low | High |
| DBS Accessibility via Cable | Delayed | Accelerated |
| TVRO Cost | $400 | $800 |
| DBS-Via-Cable Cost | $10/month | $20/month |

Even higher and lower urban TVRO projections would result from using high cable costs in combination with low TVRO costs and vice versa.

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* See also Appendix G.

TABLE 2

DBS MARKET PROJECTIONS

(Full Programming - 2004)

| | Projection Scenario** | | |
|---|---|---|---|
| | A | B | C |
| Direct-to-Home TVRO Demand (000's) | | | |
| Urban Market: | | | |
| Cable Subscribers | 977 | 424 | 192 |
| Cable Non-Subscribers | 186 | 50 | 14 |
| Uncabled Households | 97 | 28 | 7 |
| Urban Total | 1,260 | 502 | 213 |
| Rural Market:* | 2,252 | 1,656 | 1,256 |
| Direct-to-Home Total | 3,512 | 2,158 | 1,469 |
| DBS Service via Cable ('000 households) | | | |
| Urban Market | 6,456 | 6,458 | 6,165 |
| Canadian Total | 9,968 | 8,616 | 7,634 |

*Impact of rural market competition excluded.

**Projection A is based on a TVRO cost of $400 and other optimistic assumptions.
Projection B is the Base case, assuming a TVRO cost of $600
Projection C is based on a TVRO cost of $800 and other pessimistic assumptions.

Source: Woods Gordon Market Projection Model.

Our projections under all three scenarios are based on the assumption that during the interim phase of DBS introduction, when Anik-C3 would be used, the cost of a TVRO will be $1,200. It is only after the full service is introduced in 1988, using a dedicated satellite, that the A, B and C projections assume the reduced TVRO costs specific to each scenario.

iii) Competitive Factors

There are a number of competitive factors which could influence demand. The price of cable subscriptions, just discussed, is clearly one. Although we did not explore whether TVRO purchasers would subsequently discontinue their cable subscriptions, cable companies may conclude that this is a reasonable assumption and, to the extent that economics permit, price their service accordingly.

Similarly in the rural market, the services provided and proposed by CANCOM and Northstar provide alternative means of meeting the demand for improved TV service in rural and remote areas. The possible impact this could have on demand for TVRO's is discussed in the body of the report and summarized in Section 1.5.

In summary, projections of TVRO demand (and of the resulting usage of DBS service) have been made for a base case (B) scenario, and for high TVRO (A) and low TVRO (C) demand, each under assumptions of "Full" and "Minimum" programming.

## 1.4 DBS Demand Projection

Table 2 opposite presents demand projections for the year 2004, based not only on consumers' interest and preferences regarding

DBS, as revealed by the market survey, but also on considerations such as the decisions landlords and cable companies may be expected to make affecting physical availability of the service. This table shows both TVRO demand and the number of households receiving DBS service by cable, for the Base case (B) and under the high TVRO (A) and low TVRO (C) scenarios, assuming "Full" programming. The table also summarizes demand from the rural market, calculated as far as possible on a consistent basis.

The most notable feature of the projections of urban demand for TVRO's is their wide variation. The projections under the "A" and "C" scenarios differ by a factor of six. This is a reflection not of any inadequacy in the survey, but of the degree of price sensitivity in the market. Even the "A" and "C" scenarios do not present the extreme range of possibilities. For example, under the "C" scenario 213,000 households are expected to choose a TVRO at $800 in preference to receiving DBS by cable at a monthly charge of $20. If instead the alternative was cable at $10 even fewer households would choose to buy their own TVRO.

The corresponding TVRO projections for the rural market are based on those developed by DRC in their earlier rural study, adjusted to make them consistent, as far as possible, with the assumptions underlying the urban projections. These adjustments are described in detail in the body of our report. Essentially, they allow for population growth and take account of the higher TVRO cost ($1,200) during the period of interim service provided by Anik-C3. The rural

projections are based on a single level of programming which approximates the "Minimum Programming" used in the urban survey.

The resulting demand projections for rural areas show less sensitivity to price than those for the urban areas, and range from 1.26 million to 2.25 million. The reduced level of price sensitivity is not surprising, given the generally lower quantity of programming and quality of television reception currently available in rural areas.

Integrating the urban and rural elements, projections for direct-to-home TVRO's range from 1.5 million for the low "C" scenario, up to 3.5 million for the high "A" scenario. The Base-case projection indicates a demand level of 2.16 million by 2004.

The majority of TVRO demand is expected to come from the rural market segment; between 64% for the high market scenario and 85% for the low market scenario. More than three quarters of the potential urban demand for TVRO's comes from cable subscribers.

Our interview program with cable system operators and other industry participants indicated that over the next 15 years it is likely that all the cable systems (524 in operation in 1981) would ultimately switch to a DBS satellite feed for programming. As a result, all cable system subscribers would obtain access to the DBS service. This means that by the year 2004 between 6.2 and 6.5 million households would have access to DBS-delivered programming via cable.

Head-end terminal demand for cable systems would be 524 terminals, if each cable system requires a single dish antenna, based on the current number of systems in operation. Significant growth in the

number of conventional cable systems is not expected, other than for a few areas like Windsor, which is in the process of being cabled.

The preceding demand projections are based on the availability of the "Full Programming" package. For the "Minimum Programming" package, which excludes the US networks and Canadian special-interest channels, the projected urban demand is reduced to less than one-third of its "Full Programming" level, showing the sensitivity of the market to this significant factor:

DBS URBAN MARKET PROJECTIONS

2004

| Direct-to-Home TVRO Demand (000's) | Base Case Projections "Full Programming" | Base Case Projections "Minimum Programming" |
|---|---|---|
| Cable Subscribers | 424 | 109 |
| Cable Non-Subscribers | 50 | 20 |
| Uncabled Households | 28 | 15 |
| Direct-to-Home Total | 502 | 144 |

The impact of programming variations on the rural market could not be assessed, since this was not included in the rural survey.

## 1.5 Competition in the Rural Market

A Canadian DBS system could face competition from three other services already planned or in place:

- o CANCOM'S Community Service, which commenced operation in 1982 to supply four TV channels to isolated communities across the country.
- o CANCOM I, designed to bring the same programming as the community service to individual TVRO owners where community systems are not viable.
- o Northstar Home Theatre's proposal to offer four Pay-TV channels to areas with no cable or Pay TV service.

Although it was beyond the terms of reference of this study to refine the rural projections or to quantify the impact these potentially competitive services might have on rural demand for DBS service and related TVRO's, we have provided some indication of the possible effect. The understanding we gained of the plans and objectives of CANCOM and Northstar, after adjustment for competition between services and allowance for somewhat slower rates of market penetration, would suggest the following level of subscribers by 1993:

Services Potentially Competitive to DBS*
('000 subscribers - 1993)

| | |
|---|---|
| CANCOM (Community) | 600 |
| CANCOM I | 77 |
| Northstar | 331 |
| Total | 1,008 |

The impact of these services on DBS penetration of the rural market could be substantial if they were to compete with DBS. Fully deducting the effect of these competitive services from the Base-case scenario would reduce the direct-to-home TVRO demand projections for 1993 as follows:

Direct-to-Home DBS TVRO Demand - 1993

| | '000 TVRO's | |
|---|---|---|
| | Without Competition | With Competition |
| Urban | 443 | 443 |
| Rural | 1,469 | 461 |
| Direct-to-Home Total | 1,912 | 904 |

* If these services were to become an integral part of a Canadian DBS service, then they would not be competitive with DBS and the impact would be eliminated. Projections were not developed for the period beyond 1993 because of the high degree of uncertainty concerning the long term, and the fact that these projections are based on 5-year company plans.

The actual impact of these services will depend to a large extent on how a DBS system is developed in Canada. For example, the proposed Northstar service is essentially rural distribution of the existing Pay TV services (First Choice, Super Channel, C-Channel, etc.). If the Pay TV companies decided to distribute their services to the cable companies through the DBS system, the signal would also be available for direct-to-home reception and Northstar's role could be simply one of marketing and billing the rural market.

If, as appears reasonable, CANCOM I and Northstar were to become integral parts of a Canadian DBS system, then the effects of competition from these services would be eliminated. Even with these competitive services, the overall demand for TVRO's is unlikely to be reduced, and may even be increased, although the demand for 14/12 GHz TVRO's directly attributable to a Canadian DBS service would be reduced.

## 1.6 Urban Market Demand for US DBS Services

To assess the impact of not introducing a Canadian DBS system, an indication of the level of interest in US DBS services and the potential numbers of direct-to-home TVRO's that might be purchased for US reception alone was developed from the consumer survey results.

Urban Houses Willing to Buy TVRO's*
(000's)

| Would buy @... | Full Programming | US DBS Only | US DBS as % of Total DBS |
|---|---|---|---|
| $400 | 1,068 | 541 | 51 |
| $600 | 415 | 254 | 61 |
| $800 | 162 | 99 | 61 |
| $1,200 | 70 | 54 | 77 |

* Based on 1983 household population.

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TABLE 3

PROJECTION OF TVRO'S IN USE
('000 Units)

(Base Case - Full Programming)

URBAN MARKET

| Region | 1984 | 1988 | 1992 | 1996 | 2000 | 2004 |
|---|---|---|---|---|---|---|
| Atlantic | 4 | 27 | 31 | 33 | 36 | 37 |
| Quebec | 10 | 62 | 73 | 77 | 79 | 81 |
| Ontario | 28 | 151 | 177 | 182 | 190 | 198 |
| Manitoba | 2 | 16 | 19 | 21 | 22 | 22 |
| Saskatchewan | 2 | 17 | 18 | 21 | 23 | 24 |
| Alberta | 7 | 43 | 55 | 61 | 66 | 71 |
| B.C. | 10 | 58 | 65 | 67 | 70 | 73 |
| Territories | 0 | 0 | 0 | 0 | 0 | 1 |
| CANADA | 68 | 372 | 441 | 462 | 482 | 502 |

TOTAL MARKET

| Region | 1984 | 1988 | 1992 | 1996 | 2000 | 2004 |
|---|---|---|---|---|---|---|
| Atlantic | 29 | 168 | 279 | 305 | 323 | 337 |
| Quebec | 46 | 260 | 413 | 448 | 463 | 476 |
| Ontario | 69 | 378 | 567 | 607 | 635 | 659 |
| Manitoba | 9 | 56 | 86 | 94 | 98 | 101 |
| Saskatchewan | 12 | 73 | 113 | 122 | 127 | 131 |
| Alberta | 20 | 112 | 171 | 184 | 186 | 189 |
| B.C. | 27 | 149 | 222 | 236 | 247 | 258 |
| Territories | 1 | 4 | 7 | 8 | 9 | 9 |
| CANADA | 218 | 1,199 | 1,858 | 2,006 | 2,083 | 2,158 |

Source: Woods Gordon Market Projection Model (see Table E19-E22, and E25-E29).

This analysis indicates that, depending on TVRO price, between one-half and three-quarters of those house-owners who would be willing to buy a TVRO for a Canadian DBS system might still buy a TVRO if only US DBS were services available.

## 1.7 Regional Projections and Penetration Rates

From the table opposite and the associated appendices, it will be seen that, to a large degree, regional distribution of TVRO demand in the urban market reflects the distribution of urban households, but with above average penetration in the Western and Prairie provinces, and somewhat below average penetration in Quebec.

The table also provides an indication of the rate of penetration over time. It will be noted that market penetration is rapid over the first five years, and then declines sharply. The figures shown are for the Base case (B) scenario and assume "Full Programming".

## 1.8 The "Most Likely" Scenario

Developments during the course of this study led DOC to conclude that, at this point in time, a reasonable "most likely" scenario is one in which subscriptions to US Pay TV channels would not be allowed in Canada in the foreseeable future. In addition, DOC believes that the lowest TVRO cost tested ($400) is now a strong possibility. Clearly, as time passes and events unfold, what is perceived to be the most likely scenario may change. This is why the forecast methodology incorporates several scenarios and is sufficiently flexible to allow for construction of forecasts based on alternative assumptions.

TABLE 4

"MOST LIKELY" DBS MARKET SCENARIO*

| | Projected TVRO Demand ('000 units) | | | Total DBS Accessibility ('000 households) | | |
|---|---|---|---|---|---|---|
| Year | Urban | Rural | Total | Urban | Rural | Total |
| 1984 | 42 | 150 | 192 | 655 | 150 | 805 |
| 1988 | 419 | 796 | 1,215 | 3,715 | 796 | 4,511 |
| 1992 | 566 | 1,735 | 2,301 | 5,864 | 1,735 | 7,599 |
| 1996 | 593 | 1,979 | 2,572 | 6,403 | 1,979 | 8,382 |
| 2000 | 620 | 2,056 | 2,676 | 6,712 | 2,056 | 8,768 |
| 2004 | 646 | 2,129 | 2,775 | 7,015 | 2,129 | 9,144 |

* Defined by DOC as:

Canadian free and pay channels available, plus 4 US networks and US free DBS channels. TVRO at $400, cable subscription $10/month. Moderate growth in all other modelled factors

Source: Tables E31 and E32

Although there was no provision in the study for directly developing data for a market model run exactly reflecting DOC's "most likely" scenario, it was possible to derive urban market estimates by interpolation between the closest two cases that could be run through the model.

This procedure (described in detail in Section 10) produced the estimates summarized in Table 4. The total market (urban and rural) to 2004 for TVRO's under this scenario is estimated at around 2.8 million units, and the number of households to whom DBS programming will eventually be accessible at 9.1 million. This places TVRO demand in the range of the high, or A, projections discussed earlier, and DBS accessibility between the A and Base-case levels:

Comparative DBS Market Projections
(to 2004)

| | Projection A | | | Base Case | |
|---|---|---|---|---|---|
| | Full Prog. | Min. Prog. | "Most Likely" Scenario | Full Prog. | Min. Prog. |
| TVRO Demand ('000 units) | 3,512 | 2,591 | 2,775 | 2,158 | 1,800 |
| DBS Accessibility ('000 households) | 9,968 | 9,612 | 9,144 | 8,616 | 8,523 |

## 1.9 Using the Study Results

The results of this market definition study indicate that there is a high degree of variability in the potential demand for DBS services. Price of the TVRO's and price of DBS service via cable, along with the programming available will be the key factors influencing demand. All other elements of the market projection model such as

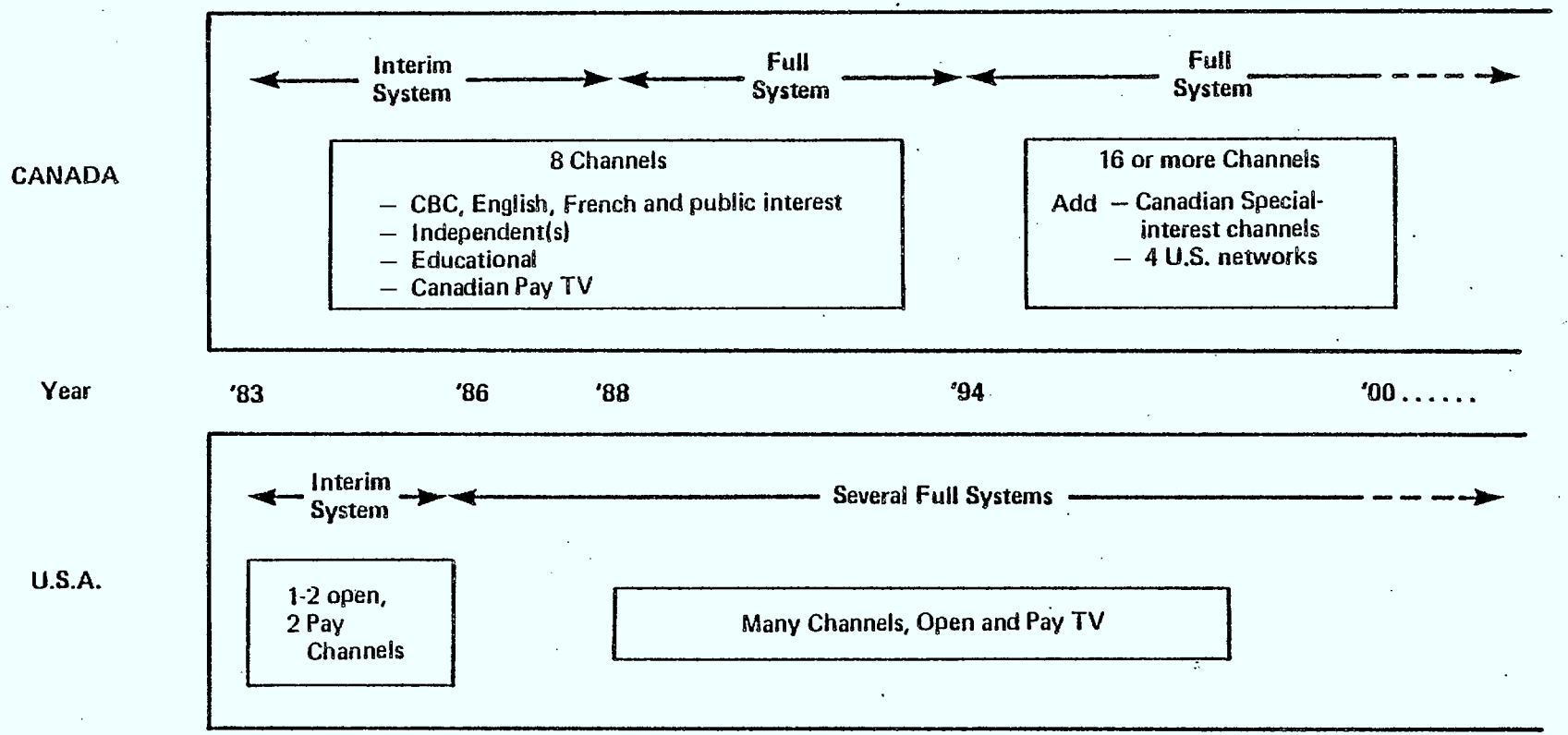
population growth and regional differences are insignificant compared to the impact of price and programming.

Competitive service in the rural market is the only other factor that significantly affects demand, and the impact here could be complementary if the CANCOM and/or Northstar services were to become integral parts of a Canadian DBS system.

Care should be taken in using the "most likely scenario" forecast of demand, because this may encourage the belief that a greater degree of confidence can be attributed to that forecast than is properly warranted. The uncertainty with regard to demand for TVRO's relates primarily to the "input" assumptions concerning events which have yet to be determined. Principally, these are pricing and programming. This study provides a working tool for evaluating the impact of these factors and should therefore assist those who have to make the relevant decisions.

Figure 1

DBS TIMETABLE



## 2. INTRODUCTION

The Department of Communications (DOC) foresees that it will soon be possible to provide a basic Canadian television service of about eight channels which can be received off air virtually anywhere in Canada. It will be carried by a Direct Broadcast Satellite (DBS).

Such a service is already technically feasible, and DOC is confident that further advances will bring the receiving equipment into the price-range that could make it a mass consumer product. The level of demand that will actually develop will depend mainly on market factors. The most important of these will be the programming available via DBS, the level of costs, and competitive services; and the relative timing of these three.

DOC believes that the timing and development of DBS service could be approximately that shown in Figure 1 opposite. The interim services would be carried on Anik-C3, which is also carrying the Canadian Pay TV services which began 1 February 1983, and is a relatively low-powered satellite. During this phase, receiving equipment will be relatively expensive, and this might limit demand for antennas from individuals. In order to make the DBS service's programming available to as many Canadians as possible, cable companies and other exhibitors could be offered the opportunity to receive and distribute the programming to their subscribers. After 1988 it is expected that the full system will be provided by a dedicated satellite permitting the use of smaller, less costly antennas, thus stimulating demand from individuals.

The programming described in Figure 1 is not necessarily final either as to content or dates of introduction. The study tested several possibilities, including having all programming available immediately; having all but the Canadian special-interest channels available immediately; and having no Canadian DBS service at all.

The greatest consumer appeal of DBS is thought likely to be in those remote and rural areas where few, if any, TV channels can be received satisfactorily. This aspect of demand for a direct service via satellite was addressed in a report commissioned earlier by DOC ('An Analysis to the Demand for Improved Residential Television Service in Rural Canada', Demand Research Consultants, Inc., March 1982.).

To evaluate total DBS demand, DOC commissioned this study to make an assessment of urban market potential and integrate the results with those of the rural survey. It was suspected that there could be significant urban demand in areas without cable systems, without large nearby population centres as sources of broadcasts, or with peculiar topographical problems. Accordingly, DOC retained Woods Gordon to perform the necessary market study, covering the demand for both the DBS service itself and for the receiving equipment.

Our method of estimating demand was to develop a computerized model to project urban, rural and overall market potential. The model starts with all Canadian households and progressively divides them into smaller and smaller market segments until it arrives at those who are expected to buy Television Receive Only terminals (TVRO's) for DBS, as against becoming or remaining cable subscribers, or remaining among the off-air audience. This market

projection model is described more fully in Section 5.

The inputs needed for this market model come from several sources. The demographic projections are based on Statistics Canada's population forecasts, while other published Statistics Canada reports provide more specific information on households and their television facilities. The public's reactions to various specific DBS possibilities were investigated in a mass survey carried out for us by Market Facts, and Woods Gordon carried out an executive interview program among organizations likely to have significant influence on the development of the market.

The rural projections used were basically those provided in the rural study referenced earlier, although a number of adjustments had to be made. The essential elements retained were the percentages of rural households forecast to buy TVRO's in the first year of service and ever, at various price levels. The most important adjustments were to take account of population growth and the staged introduction of DBS, with an interim service phase (low-power satellite, high-cost TVRO, low demand) preceding full service (high power, lower cost, high demand).

The detailed study methodology is described in Part II of this report, with technical detail in the appendices.

The time-horizon of our projections is to 2004. Over so many years, there are necessarily many uncertainties both as to the extent and timing of critical developments. It is essential to recognize these uncertainties. Our market model therefore incorporates various alternatives which can not only be combined into many different

TABLE 5

THE DBS MARKETPLACE
('000 households)

| | 1983 | 2004 | % growth |
|---|---|---|---|
| **Urban vs. Rural** | | | |
| Urban | 6,773 | 8,828 | 30 |
| Rural | 1,822 | 2,180 | 20 |
| All Canadian Households | 8,595 | 11,008 | 28 |
| **Types of Urban Household** | | | |
| With TV - Condominium Houses | 73 | 96 | 32 |
| - Other Owned Houses | 3,512 | 4,591 | 31 |
| - Rented Houses | 559 | 730 | 31 |
| - Apartments and Flats | 2,507 | 3,278 | 31 |
| All Urban TV Households | 6,651 | 8,696 | 31 |
| Without TV | 122 | 132 | 8 |
| All Urban Households | 6,773 | 8,828 | 30 |
| **Urban TV Reception** | | | |
| Cable Subscribers | 4,693 | 6,800 | 45 |
| Cable Non-subscribers | 1,526 | 1,469 | -4 |
| Uncabled Areas | 432 | 427 | -1 |
| All Urban TV Households | 6,651 | 8,696 | 31 |

Source: Woods Gordon Market Projection Model base-case projections.

scenarios of use for immediate purposes, but which can be refined in future as events unfold. The development of projections for DOC's current "most likely" scenario is an illustration of such use.

The general market environment in which a Canadian DBS service will develop is summarized in Table 5 opposite. It is a picture of generally slow but steady growth in the number of households: most gains are about 30% over the whole forecast period, or an average 1.3% per annum compounded. However, rural households, which account for one Canadian household in every five, will increase somewhat more slowly, averaging about 0.9% annually, for a total gain of 20%. The numbers of households without TV at all or without cable subscriptions will, on present trends, increase little or even decline. The trend for cable subscriptions, on the other hand, implies a 45% increase by 2004, or 1.8% compounded annually, as penetration continues to rise.

Table 6

CABLE SYSTEMS ACQUIRING DBS TVRO'S - CANADA

IN OPERATION 1981: 167 WITH MICROWAVE LINKS, 357 OTHERS

TOTAL CONVERTED

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 17 | 24 | 41 | 24 | 36 | 60 | 33 | 51 | 84 |
| 1985 | 33 | 48 | 81 | 48 | 71 | 119 | 67 | 102 | 169 |
| 1986 | 50 | 71 | 121 | 72 | 107 | 179 | 100 | 153 | 253 |
| 1987 | 67 | 95 | 162 | 95 | 143 | 238 | 134 | 204 | 338 |
| 1988 | 84 | 119 | 203 | 119 | 179 | 298 | 167 | 255 | 422 |
| 1989 | 100 | 143 | 243 | 143 | 214 | 357 | 167 | 306 | 473 |
| 1990 | 117 | 167 | 284 | 167 | 250 | 417 | 167 | 357 | 524 |
| 1991 | 134 | 190 | 324 | 167 | 286 | 453 | 167 | 357 | 524 |
| 1992 | 150 | 214 | 364 | 167 | 321 | 488 | 167 | 357 | 524 |
| 1993 | 167 | 238 | 405 | 167 | 357 | 524 | 167 | 357 | 524 |
| 1994 | 167 | 262 | 429 | 167 | 357 | 524 | 167 | 357 | 524 |
| 1995 | 167 | 286 | 453 | 167 | 357 | 524 | 167 | 357 | 524 |
| 1996 | 167 | 309 | 476 | 167 | 357 | 524 | 167 | 357 | 524 |
| 1997 | 167 | 333 | 500 | 167 | 357 | 524 | 167 | 357 | 524 |
| 1998 | 167 | 357 | 524 | 167 | 357 | 524 | 167 | 357 | 524 |

ANNUAL CONVERSIONS

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 17 | 24 | 41 | 24 | 36 | 60 | 33 | 51 | 84 |
| 1985 | 16 | 24 | 40 | 24 | 35 | 59 | 34 | 51 | 85 |
| 1986 | 17 | 23 | 40 | 24 | 36 | 60 | 33 | 51 | 84 |
| 1987 | 17 | 24 | 41 | 23 | 36 | 59 | 34 | 51 | 85 |
| 1988 | 17 | 24 | 41 | 24 | 36 | 60 | 33 | 51 | 84 |
| 1989 | 16 | 24 | 40 | 24 | 35 | 59 | 0 | 51 | 51 |
| 1990 | 17 | 24 | 41 | 24 | 36 | 60 | 0 | 51 | 51 |
| 1991 | 17 | 23 | 40 | 0 | 36 | 36 | 0 | 0 | 0 |
| 1992 | 16 | 24 | 40 | 0 | 35 | 35 | 0 | 0 | 0 |
| 1993 | 17 | 24 | 41 | 0 | 36 | 36 | 0 | 0 | 0 |
| 1994 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 23 | 23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |

## 3. MARKET PROJECTIONS

### 3.1 Cable System/Rebroadcaster Demand

Our industry contacts in the executive interview program had not generally considered what their reaction in terms of buying head-end TVRO's would be if they were allowed to carry the Canadian DBS service. We concluded, however, from our interview program, that all cable systems would eventually buy the necessary TVRO's, but only in the normal course of replacement and upgrading of present equipment.

This reasoning is developed in more detail in Section 9. Its consequences are shown in Table 6 opposite, which illustrates three possible patterns of demand for "commercial" TVRO's, based on the 524 cable systems in operation in 1981 according to Statistics Canada. Conversion demand from this source will apparently never exceed about 85 in a year, and could well be in the 25-40 range, depending on how quickly cable systems move over. There will, of course, eventually be a replacement market, and some upgrading of the electronics package may be required for the switch in 1987-8 from the interim to the full (dedicated satellite) service.

We have not attempted to project the number of cable systems in operation beyond 1981. Partly this is due to the fact that the historical development to that year, although consistently upward, did not show a trend that could be satisfactorily projected by statistical methods. More importantly, there is, since the licensing of a system in Windsor, little room for growth in the number of urban cable systems. And the development of rural cable systems has, with the

start-up of CANCOM's community service, changed course sharply, as discussed in detail in Section 3.8.

The regional distribution of cable systems operating in 1981 was as follows: -

Operating Cable Systems, 1981

| Region | # | % |
|---|---|---|
| Atlantic | 50 | 10 |
| Quebec | 173 | 33 |
| Ontario | 140 | 27 |
| Manitoba | 21 | 4 |
| Saskatchewan | 12 | 2 |
| Alberta | 49 | 9 |
| B.C. | 77 | 15 |
| Territories | 2 | 0 |
| CANADA | 524 | 100 |

Source: Statistics Canada report #56-205, 1981.

The regional patterns of conversion (detailed in Tables F4-F12) are not expected to differ materially from the national pattern discussed above, although local conditions may have some influence, e.g. the large proportion of Quebec systems that already have 14/12 GHz TVRO's for TVFQ (Television Francaise au Quebec) signals. No such differences have been taken into account in the projections.

An additional source of "commercial" demand may be those systems that already have TVRO's working on other frequencies. These will be principally the CANCOM affiliates, whose growth is discussed in Section 3.8. Since it is not known when, if at all within our forecast period, these systems may wish or have to convert, it can only be remarked that CANCOM expects between 1,500 and 2,500 communities to be

in their network by the end of the century. Total head-end demand in the period could therefore be four to six times that estimated above for the 'regular' cable systems alone.

A third source of head-end terminal demand would be created if cable companies were allowed to carry US DBS signals emanating from one or more U.S. satellites not in range of their Canadian DBS TVRO's. The cable executives in our interview program reacted positively in general to the possibility, but with qualifications: only if the programming were new; only if no equivalent were available elsewhere; only if no Canadian equivalent were available.

There are presently about as many rebroadcasters as there are cable systems, mostly in rural/remote areas. It would be largely speculation on our part to estimate demand from this source, because:

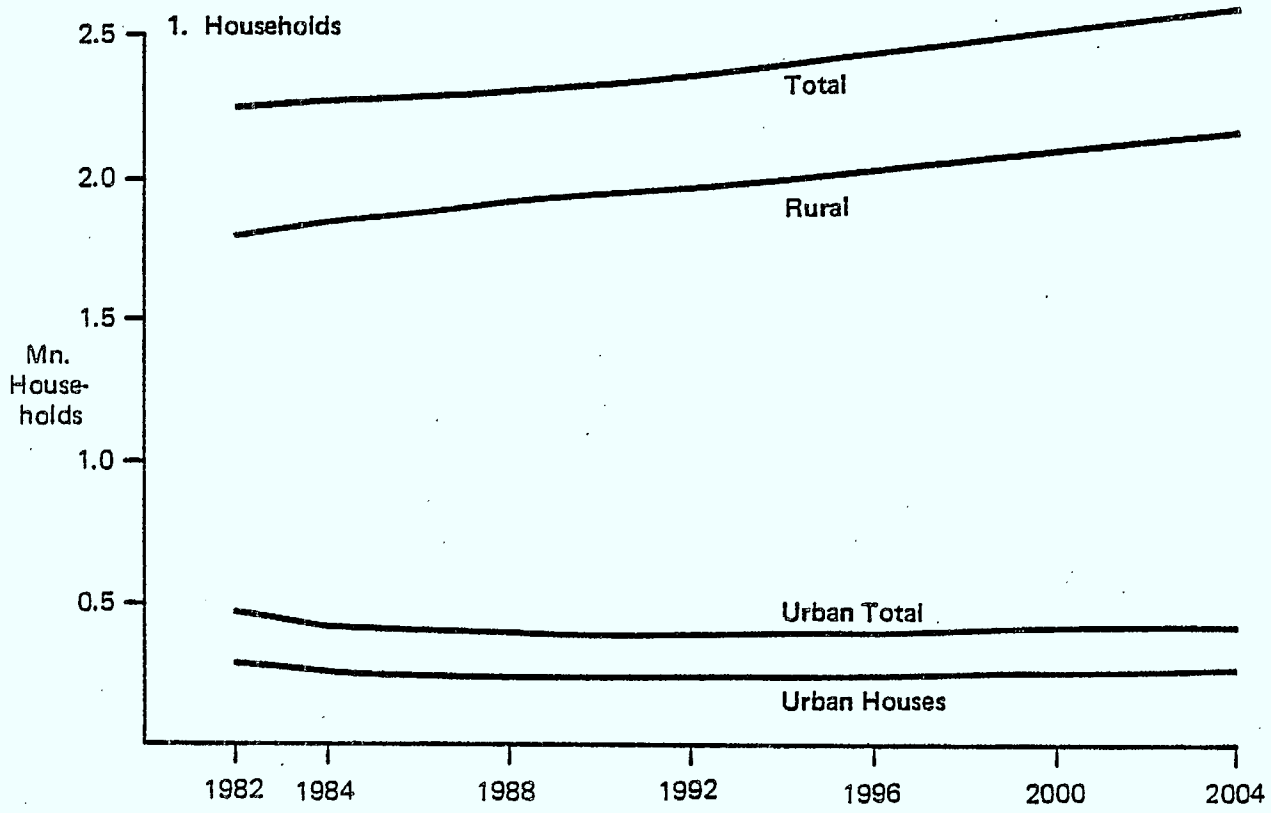
i) The rural study was concerned only with demand from individual households.

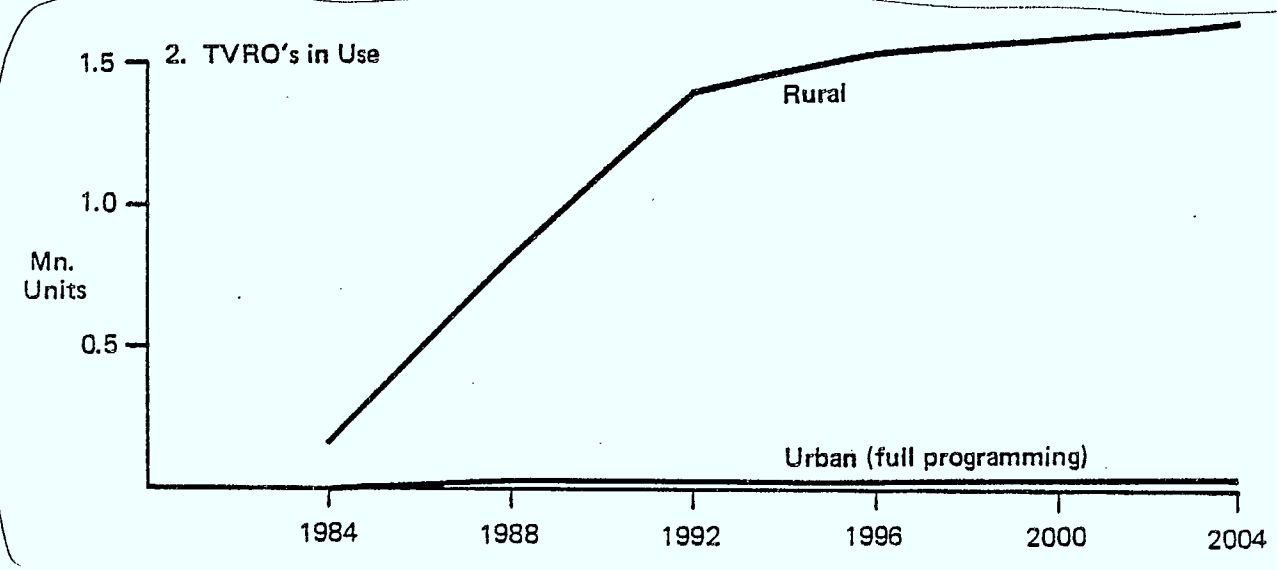
ii) The bulk of rebroadcasters are CBC affiliates, so that the vital re-equipment decisions would be made at the political level.

iii) Most of the private rebroadcasters are or could be CANCOM affiliates, whose prospects are discussed in Section 3.8.

Figure 2

BASE-CASE PROJECTIONS FOR
UNCABLED AREAS




Source: Tables E1 and E2

## 3.2 Consumer Demand in Uncabled Areas

As the upper section of Figure 2 opposite shows, there are presently 2.3 million households in Canada beyond the reach of conventional cable systems. 20% of these are in urban areas. By the end of the forecast period (2004) the total is expected to increase by 16% to 2.6 million, although the urban element will decrease slightly in both absolute numbers and as a percentage.

The base-case* projections of TVRO usage are presented in the lower part of the diagram. They show very rapid growth among the rural households, but, even with full programming**, little response from uncabled urban households, most of whom are well served off-air. The rural study results indicate that three-quarters of rural households are expected to have bought TVRO's*** by the time a DBS service is about

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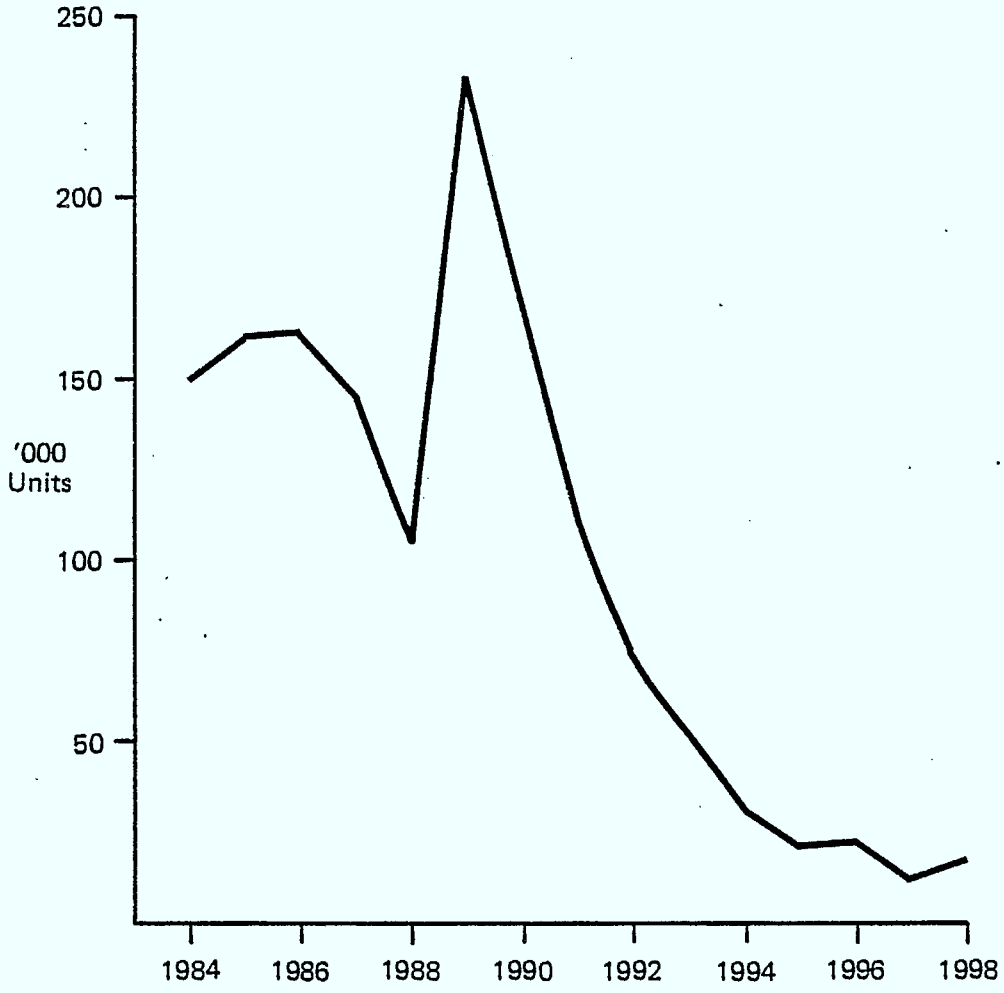
* This assumes not only moderate population growth but also moderate forecasts for apartment living, cable subscriptions, availability of DBS on cable, and TVRO and cable costs ($600 and $15/month respectively). The various projection levels are also defined in Appendix G, which may be folded out as a ready reference to this and other terms used in this report.

** 'Full' programming, here and elsewhere in this report, assumes the availability from the beginning of DBS service of Canadian free, pay and special-interest channels plus the US networks and DBS channels. 'Minimum' programming is the same without the Canadian special-interest channels or the US networks. A third option, 'Reduced' programming, which has the US networks but no Canadian special-interest channels results in demand only a fraction below 'Full' programming. It has therefore been omitted from this section. The only programming package tested in the rural study was 'at least six different channels' of unspecified type. See also Appendix G.

*** Data on the rural TVRO market are always subject to adjustment for the effects of competition from other services. This matter is dealt with in detail in Section 3.8.

Figure 3

ANNUAL RURAL TVRO DEMAND
(base-case projection)




Source: Table E3

twelve years old. The consumer survey, however, suggests that only 6-11% of uncabled city houses will buy, depending on programming. (This is 6-11% of houses because virtually no condominium or apartment/flat dwellers are expected to be allowed by their covenants or landlords respectively to install individual dishes.)

Annual TVRO demand* from rural areas over the first 15 years is shown in Figure 3 opposite. (To this may be added the very small numbers required in uncabled urban areas [15-28,000 over the whole period, depending on programming]. Even this could be too high an estimate, if rebroadcasters such as CANCOM make headway in the smaller centres.) It will be noticed that the demand pattern exhibits two peaks; the first within two to three years of introduction of the interim service, the second within two to three years of introduction of the full service. Demand will then drop off from over 230,000 in 1989 to under 25,000 units a year by 1995.

High and low projections** of TVRO demand result from switching the elements of the market model from their base-case levels as follows:

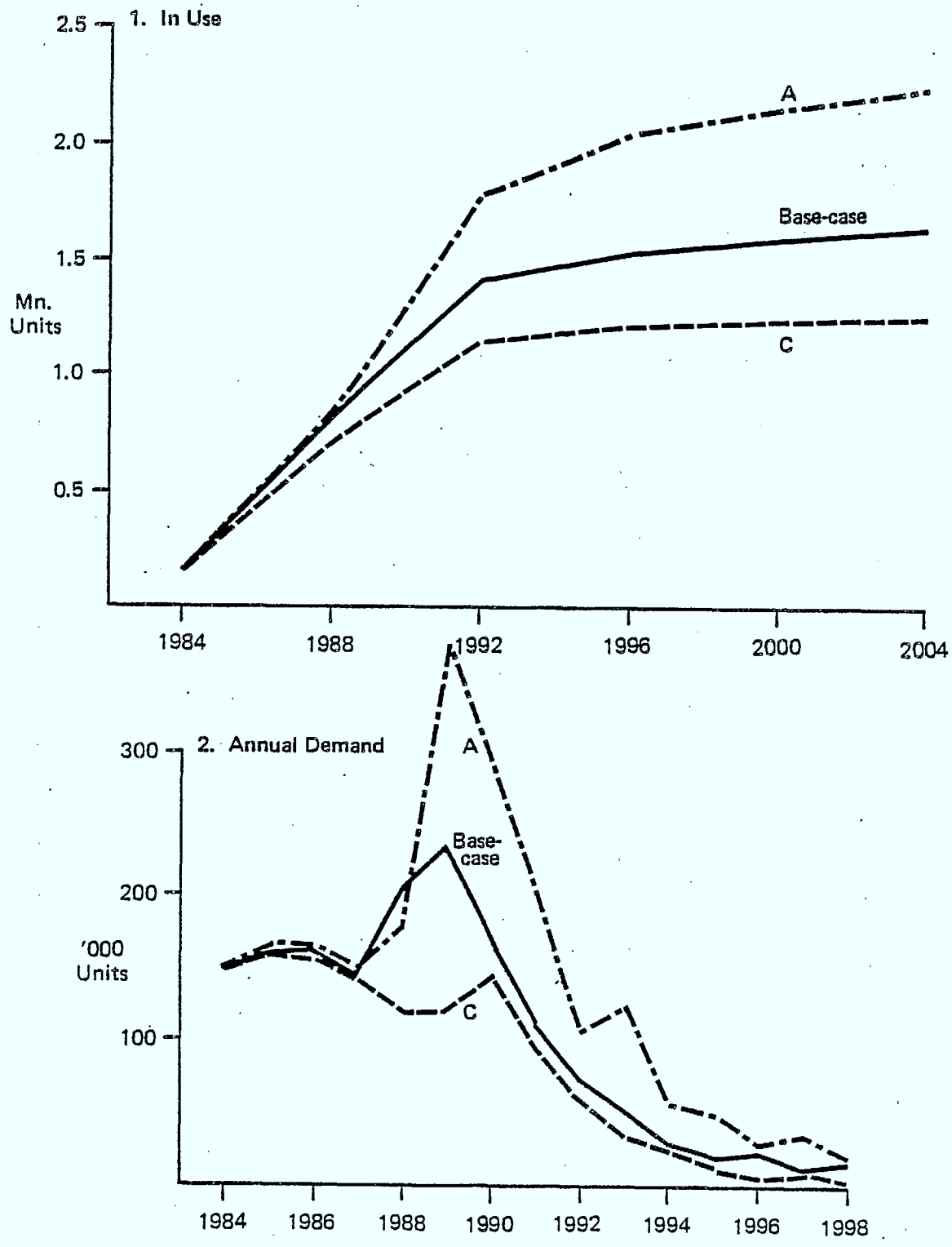
| Elements | High Projection | Low Projection |
|---|---|---|
| Population growth | High | Low |
| Apartment living | Low | High |
| Cable subscriptions | Low | High |
| DBS accessibility via cable | Delayed | Accelerated |
| TVRO cost | $400 | $800 |
| Cable cost | $10/month | $20/month |

* Exclucing replacements and under the Base-case scenario.

** Defined also in Appendix G.

Figure 4

COMPARISON OF
RURAL TVRO PROJECTIONS




Source: Table E3

It should be noted that these settings do not result in the absolutely highest and lowest TVRO demand projections possible: this would require pairing the highest cable costs (applying to urban areas only) with the lowest TVRO costs and vice-versa. Since some of these settings will have precisely opposite effects on TVRO and cable penetration, and consequently on DBS availability via cable, we avoid confusion in the remainder of this report by using 'Projection A' for the 'high' TVRO projection and 'Projection C' for 'low'.

Comparisons of the A, Base case and C projections are shown in the diagrams opposite for rural TVRO demand. Low equipment prices and high population growth together (projection A) would be expected to increase the number of rural TVRO owners in 2004 by one-third over the 1.7 million of the Base case. High prices and low growth would result in a one-quarter decrease, based on the price sensitivities developed in the rural study.

The annual demand for TVRO's under each projection scenario is expected to peak in the first five or six years of DBS service and then decline to below 30,000 by year 15. The peaks range from 60% above the Base case in projection A, to 30% below in projection C.

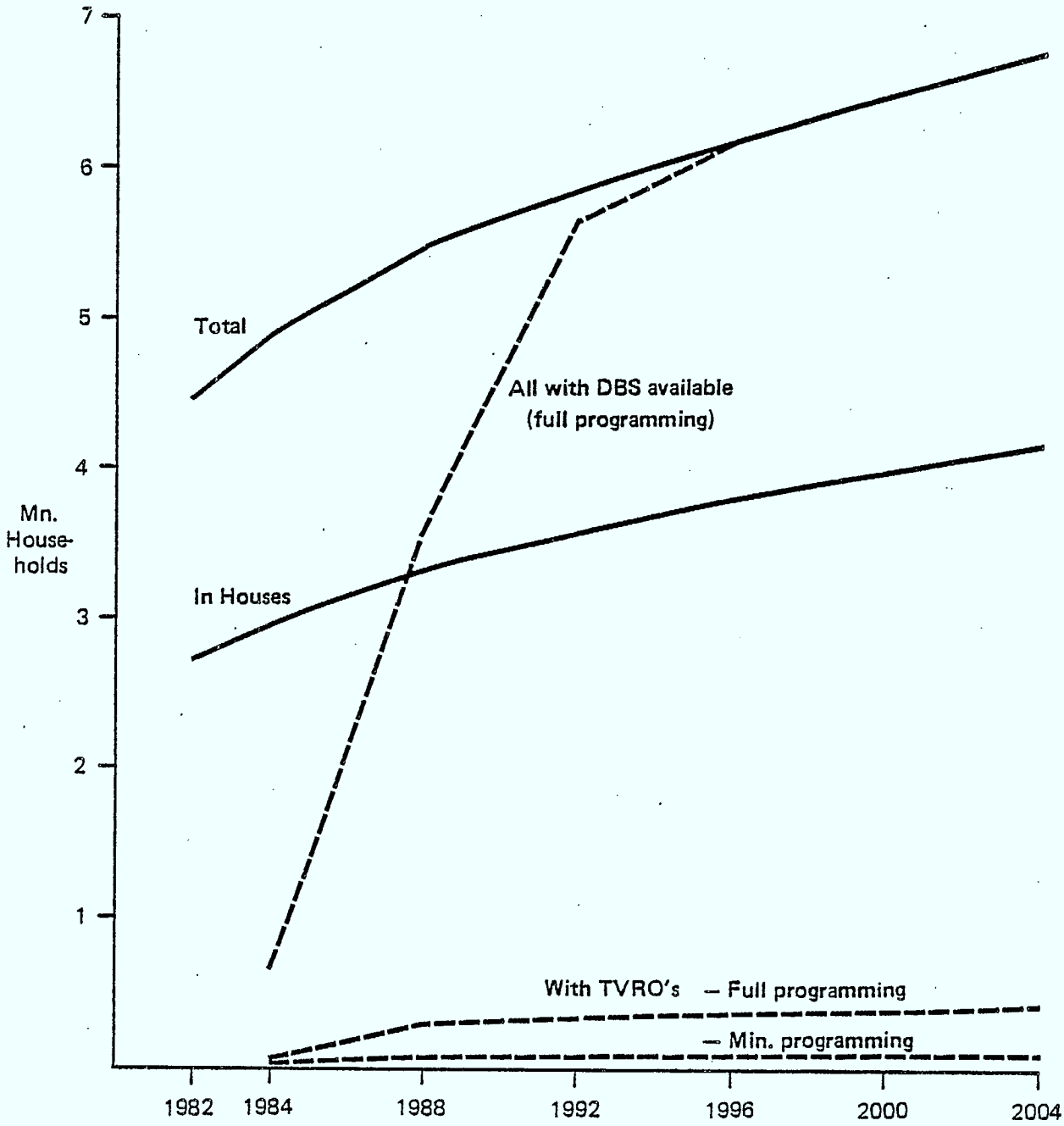
Urban demand is very small and therefore omitted from Figure 4. Even though the differences among the three projection levels are large in percentage terms, the absolute numbers are insignificant compared with the rural market:

| | Ranges* of Projections of Uncabled Urban Houses with TVRO's, 2004 | | |
|---|---|---|---|
| Projection | '000 | % of all uncabled urban houses | % of all TVRO's |
| A | 48-97 | 17-35 | 1.9-2.8 |
| Base case | 15-28 | 6-11 | 0.8-1.3 |
| C | 4-7 | 2-3 | 0.3-0.5 |

* Depending on programming.

Figure 5

BASE-CASE PROJECTIONS FOR
URBAN CABLE SUBSCRIBERS




Source: Tables E4 and E5

## 3.3 Consumer Demand by Cable Subscribers

In the Base-case projections, the number of urban cable subscribers in Canada who live in houses and therefore have available to them the option of using a TVRO is expected to grow by over 50% during the forecast period, from 2.7 million households to 4.2 million (see Figure 5 opposite.). Population growth, greater cable coverage and higher proportions of covered households subscribing will all contribute to this increase. Although only a small percentage of subscribing house-dwellers are expected in the Base Case* projections to invest in TVRO's - from 3% if only Minimum* DBS programming is available, to 10% with Full* programming - the number of units is considerable, ranging from 100,000 to over 400,000. Three-quarters of these levels are expected to be achieved by the first year or two of the full DBS service, when TVRO prices drop to a 'consumer' level (i.e. $400-$800, or the same general area as a TV set).

DBS service is expected to be available to a much larger audience than these TVRO owners. We expect virtually all cable systems to carry the DBS package eventually, assuming they are allowed to. (This will also attract to cable a few households who would not otherwise have subscribed - see Section 3.4). Total urban cable subscribers will increase by 50% to 6.8 million from 4.5 million over the forecast period; by the time the full (dedicated satellite) service arrives, two-thirds of them will have DBS; and by the time replacement

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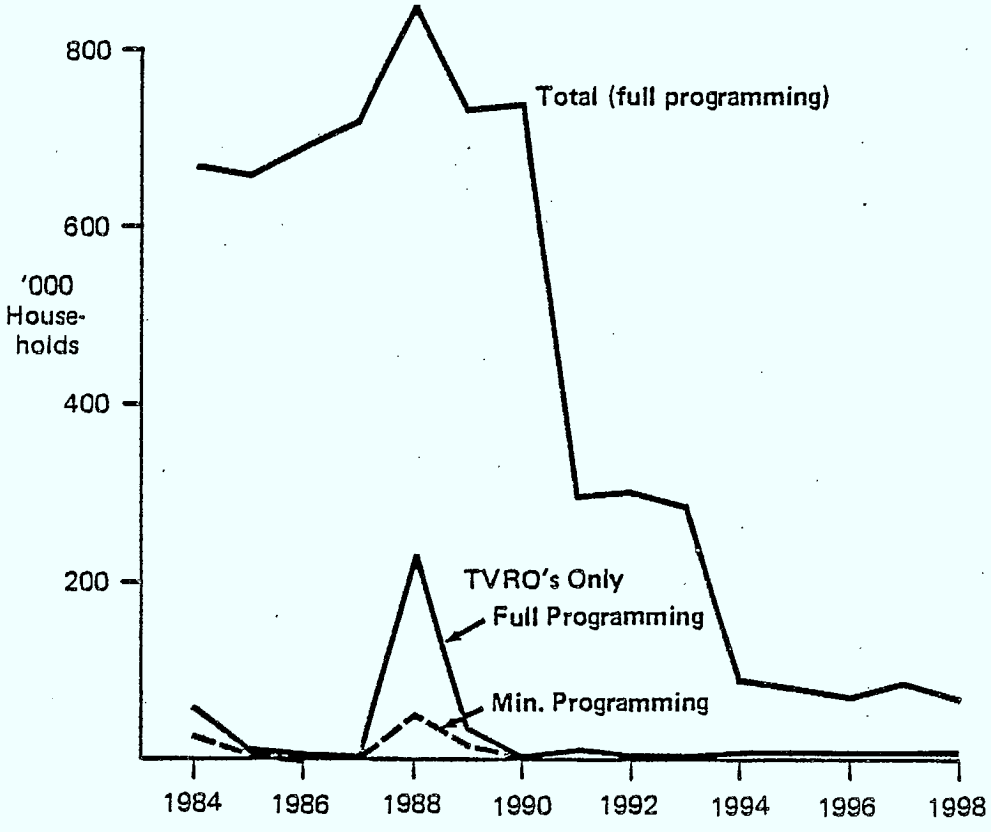
* Terms defined in Appendix G.

Figure 6

BASE-CASE PROJECTIONS OF
ANNUAL INCREASES IN DBS AVAILABILITY
TO URBAN CABLE SUBSCRIBERS




Source: Table E6

satellites are launched, service will be accessible to practically all cable subscribers. The type of programming will make very little eventual difference to the total numbers of households (any type of dwelling) with the service accessible, but will affect the balance between those getting it by TVRO (1.5% to 6%) and those receiving it by cable (the remainder).

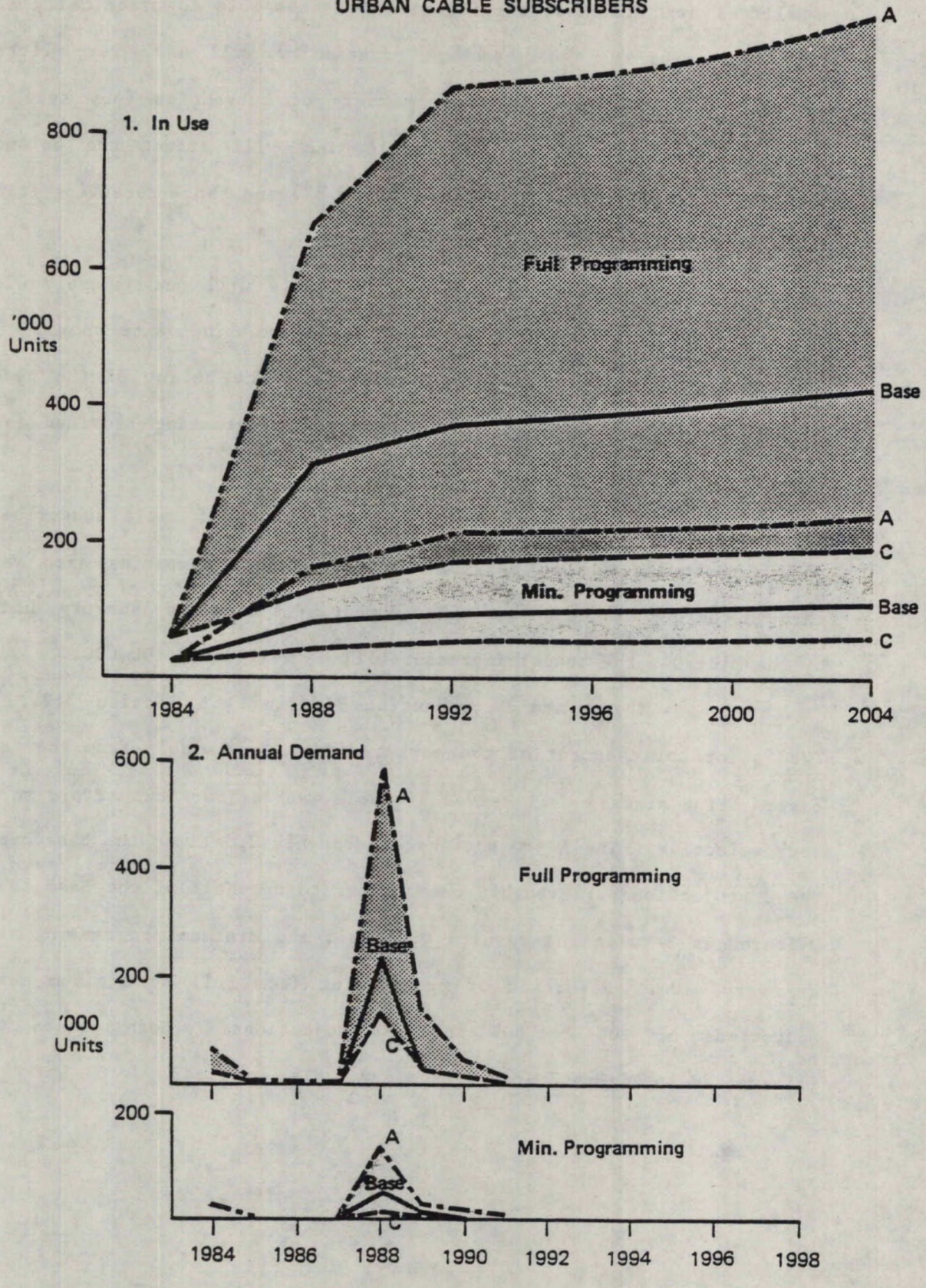
The Base-case demand for TVRO's will peak sharply with the introduction of the full service, as Figure 6 opposite shows. It will then drop quickly to very low levels. The height of the peak, 50,000 or over 230,000, will depend on the programming provided (see Section 3.2).

The graph also shows large numbers of cable subscribers acquiring access to DBS service via their cable companies each year through the end of the decade. The number will then drop sharply, until by the mid-90's the annual increases will be well under 100,000.

The A and C projections (defined in Section 3.2.) of TVRO's for this segment of the market differ very widely from the Base case: being already well served by cable, subscribers can afford to be very selective. The A projections are roughly 2.5 times the Base case; the C projections are roughly one-quarter to one-half of the Base case. Differences between the results with Full and Minimum programming also are very wide. Reduction of programming from Full to Minimum means reductions of 60% to 80% in the projections. Both points are illustrated in Figure 7 and the summary tables overleaf:

Figure 7

COMPARISON OF
TVRO PROJECTIONS FOR
URBAN CABLE SUBSCRIBERS




Source: Tables E6–E8

Projections of TVRO's in Use, 2004
('000)

| Projection | Full Programming | Minimum Programming |
|---|---|---|
| A | 977 (22% of houses) | 240 (5% of houses) |
| Base case | 424 (10% of houses) | 109 (3% of houses) |
| C | 192 ( 5% of houses) | 61 (2% of houses) |

Projections of Peak Annual TVRO Demand
('000)

| | | |
|---|---|---|
| A | 581 | 131 |
| Base case | 234 | 50 |
| C | 59 | 25 |

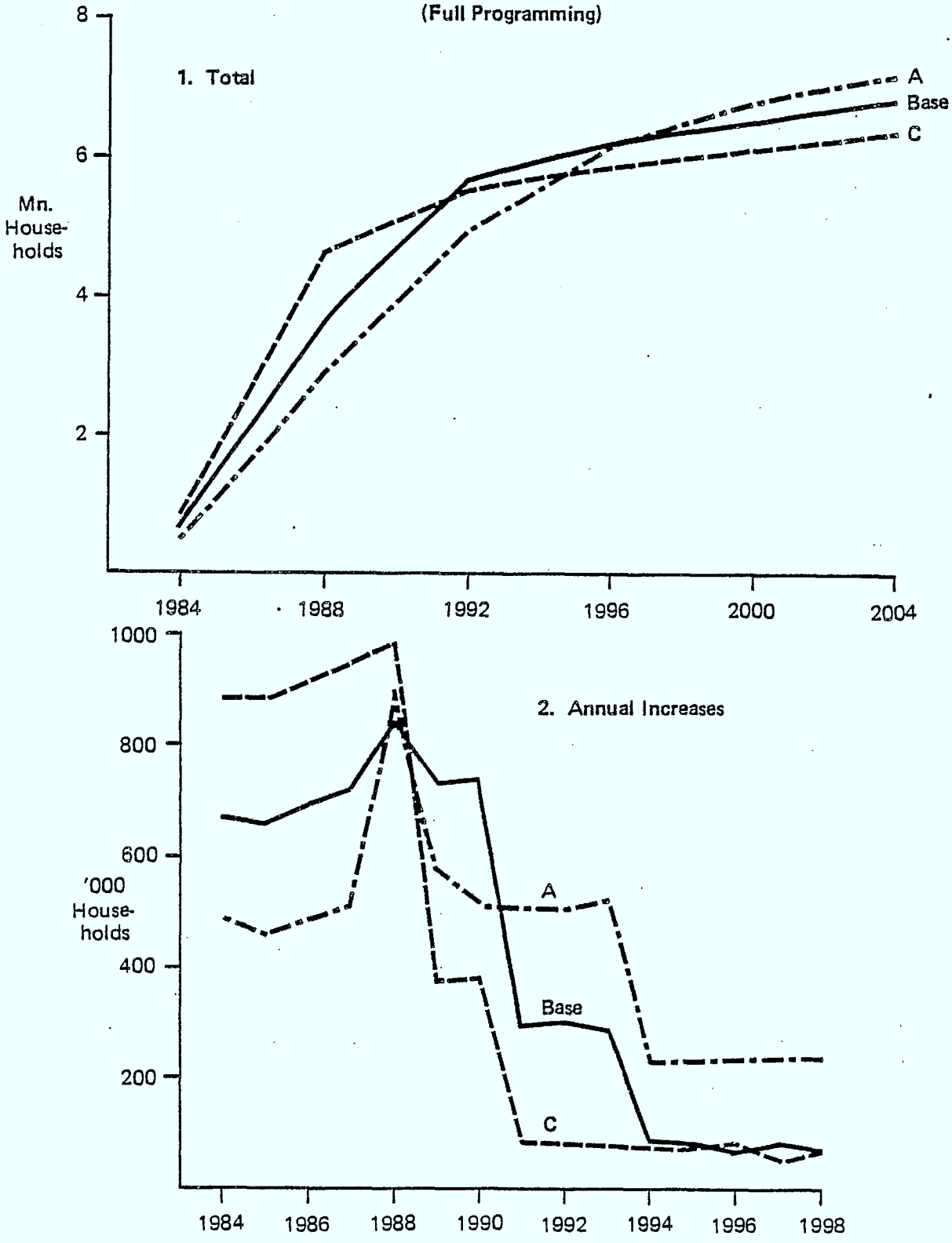
Total DBS accessibility is relatively insensitive to the projection scenario. As the upper part of Figure 8 overleaf shows, the eventual levels reached in projections A and C are within 7% of the Base case. The rates of growth differ somewhat in the early years, so that annual increases in projection A are roughly 30% below the Base case, in projection C roughly 30% above. Later, the positions reverse, as saturation approaches.

As reference to the source tables will show, differences in total accessibility caused by programming are even smaller, and again concentrated in the early years.

It should be noted that it is entirely possible that urban cable subscribers who choose to buy a TVRO will cancel their cable contracts: there is evidence (discussed in Section 4.5) both of dissatisfaction with cable and preference for owning equipment rather than renting. The possible cancellation of cable subscriptions was not investigated in this study, because our objective was only to estimate demand for DBS service and equipment, which is not affected by retention or otherwise of cable after a TVRO is bought.

Figure 8

COMPARISON OF
DBS ACCESSIBILITY PROJECTIONS FOR
URBAN CABLE SUBSCRIBERS
(Full Programming)




Source: Tables E6—E8

3.4 Consumer Demand by Non-Subscribers

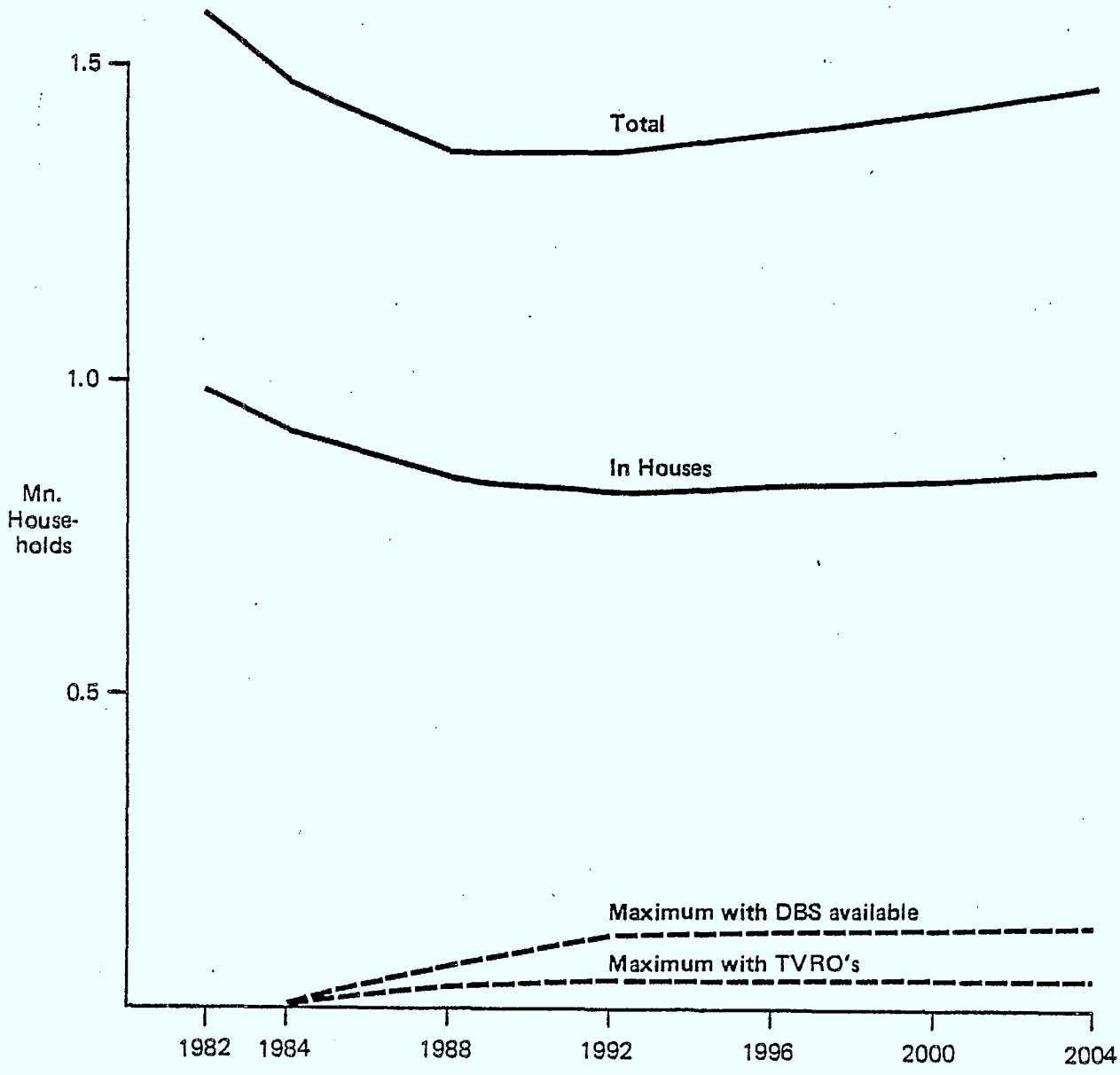
There are presently 1.6 million households in Canadian cities who have cable TV available but choose not to subscribe. As Figure 9 overleaf shows, the number of these who live in houses (and therefore are reasonable candidates for TVRO's) is expected to fall over our forecast period by one-eighth from its present level of nearly one million as cable coverage increases and the trend persists towards subscribing, where cable is available. Only a few non-subscribers living in houses (in the 2% - 6% range, depending on DBS program offerings) are forecast in our Base case to buy TVRO's: as discussed in Section 4.5, this group is less favourably disposed to TV in general than the other two.

With the continuation of present trends (which implies no DBS service), the total number of non-subscribers (including those in apartments, etc.) would be expected to fall over the forecast period by 7%. However, a few of them (2% to 6%) are expected to become subscribers, attracted to cable by the accessibility of DBS service. (A more exact description of this group, when they make this choice, would be 'potential non-subscribers'.) In that case, the total then with access to DBS, including those with TVRO's, projects to 50-130,000, or 4% - 9% of all potential non-subscribers.

As reference to Tables E11-E13 will show, the likely annual demand for TVRO's in this market sector is very variable, but, as with uncabled households, insignificant compared with other sectors under all possible variations of programming and other factors investigated:-

Figure 9

BASE-CASE PROJECTIONS FOR
URBAN CABLE NON-SUBSCRIBERS




Source: Tables E9 and E10

Woods Gordon

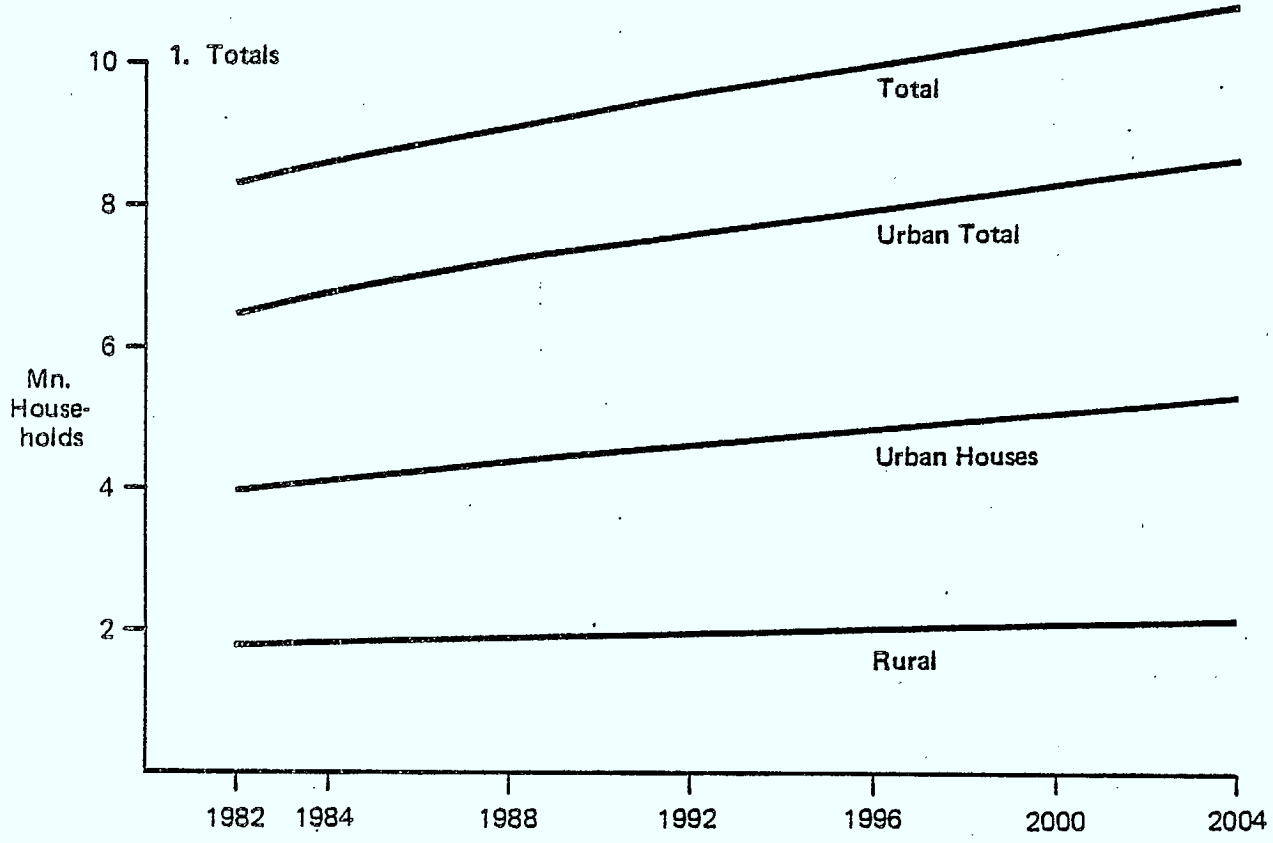
Ranges* of Projections of Non-Subscriber Urban Houses with TVRO's, 2004

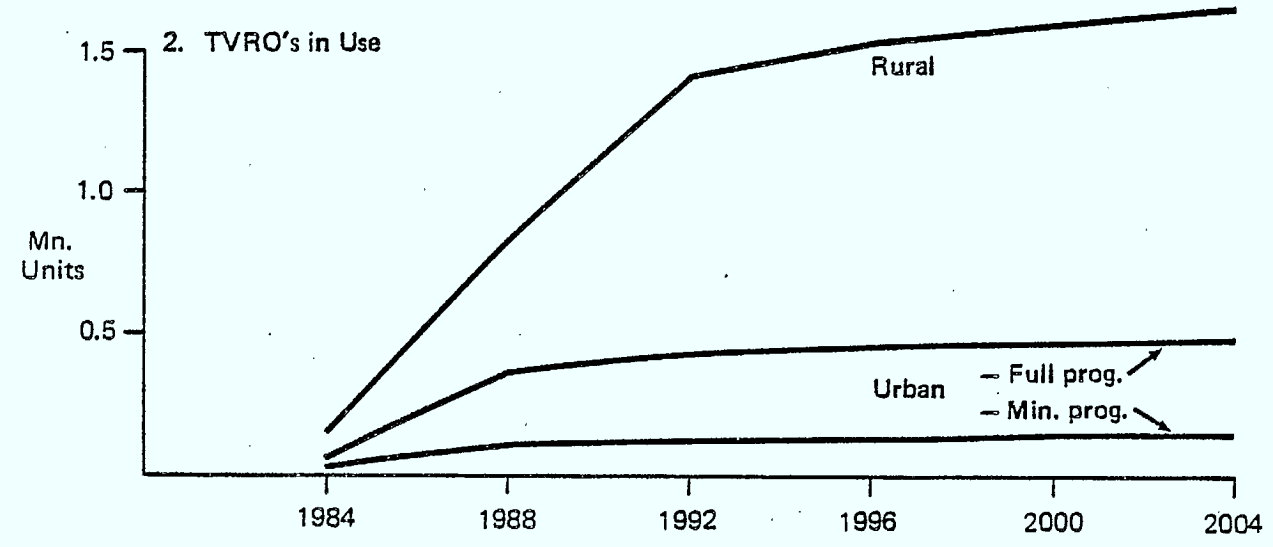
| Projection A | '000 | % of all non-subscriber urban houses | % of all TVRO's |
|---|---|---|---|
| Base case | 51-186 | 6-20 | 2.0-5.3 |
| C | 20-50 | 2-6 | 1.1-2.3 |
| | 7-14 | 1-2 | 0.5-1.0 |

* Depending on programming.

Figure 10

BASE-CASE PROJECTIONS FOR
ALL HOUSEHOLDS

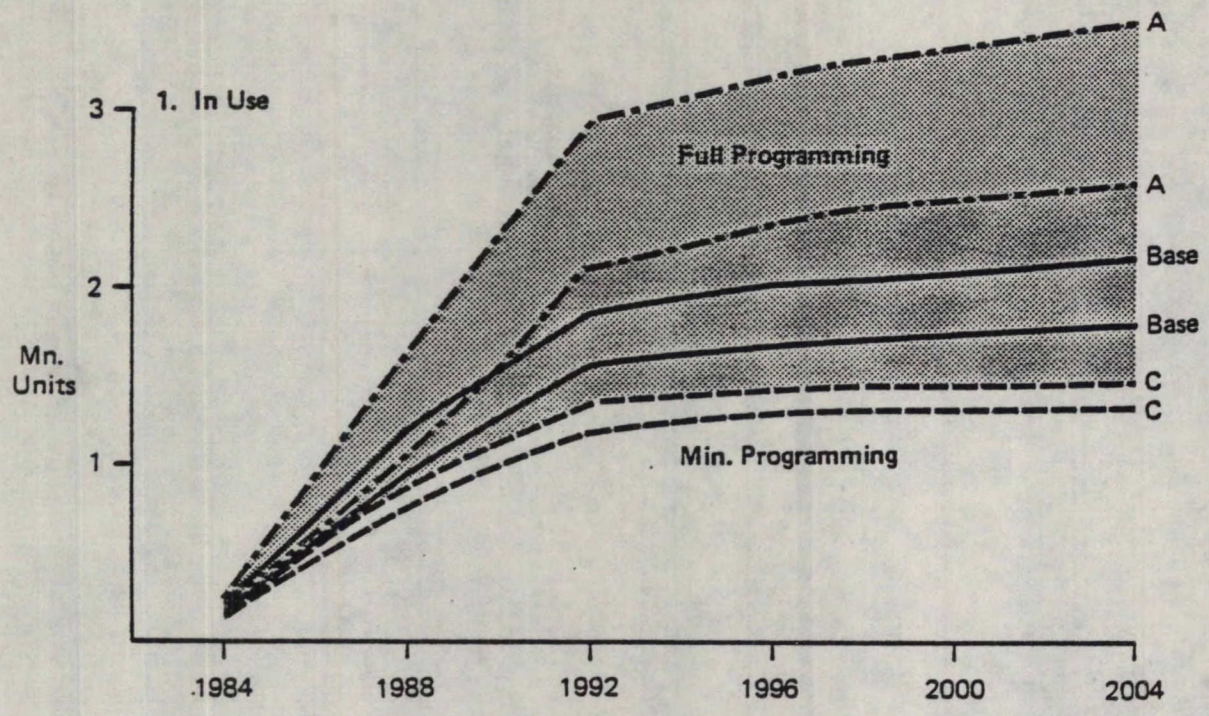


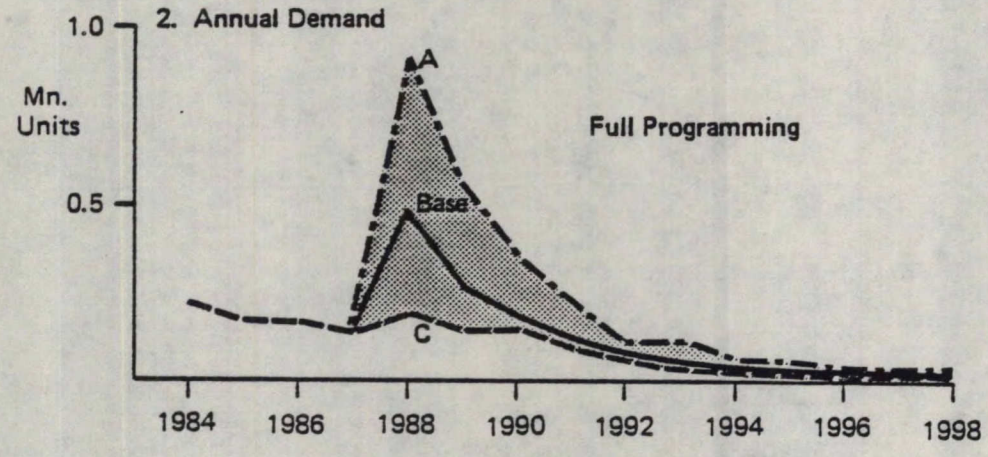



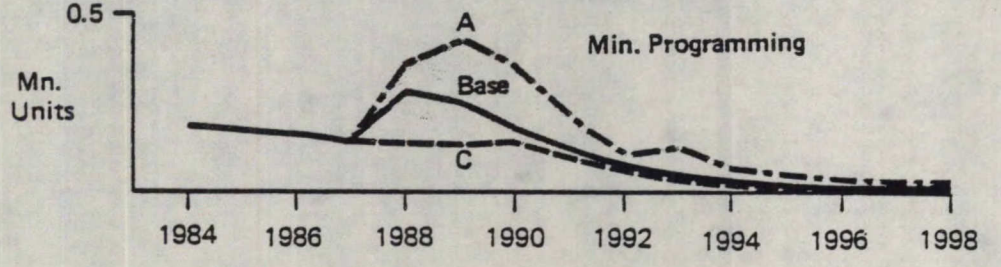

Source: Tables E14 and E15

Figure 11

COMPARISON OF
TVRO PROJECTIONS FOR
ALL HOUSEHOLDS




Source: Tables E16—E18

## 3.5 Aggregate Demand

The number of households in Canada is expected to grow by 30% over the forecast period, as shown in Figure 10. The urban-rural balance will change little, and within the urban segment the proportion of houses to other dwellings should remain constant.

It is the rural segment that has the greatest potential for TVRO's, some 1.7 million units in the Base case.* The corresponding urban demand will be in the 150,000 - 500,000 range (8 - 23% of total TVRO demand), depending on the programming available.

The aggregate 'A' and 'C' Full-programming projections (see Section 3.2 and Figure 11 opposite) of TVRO's in use range from 3.5 million down to 1.5 million by the end of the forecast period, or two-thirds above and one-third below the 2.2 million of the Base case respectively. These result in sharp annual demand peaks ranging from 214,000 to 915,000, or under one-half to nearly double the 488,000 of the Base case.

Since the rural projections of demand were made assuming only one programming possibility, the variation in aggregate demand with programming is caused only by changes in the urban segment. Substitution of Minimum for Full programming results in final ownership levels reduced by 10% in projection C, 17% in the Base case and 26% in projection A.

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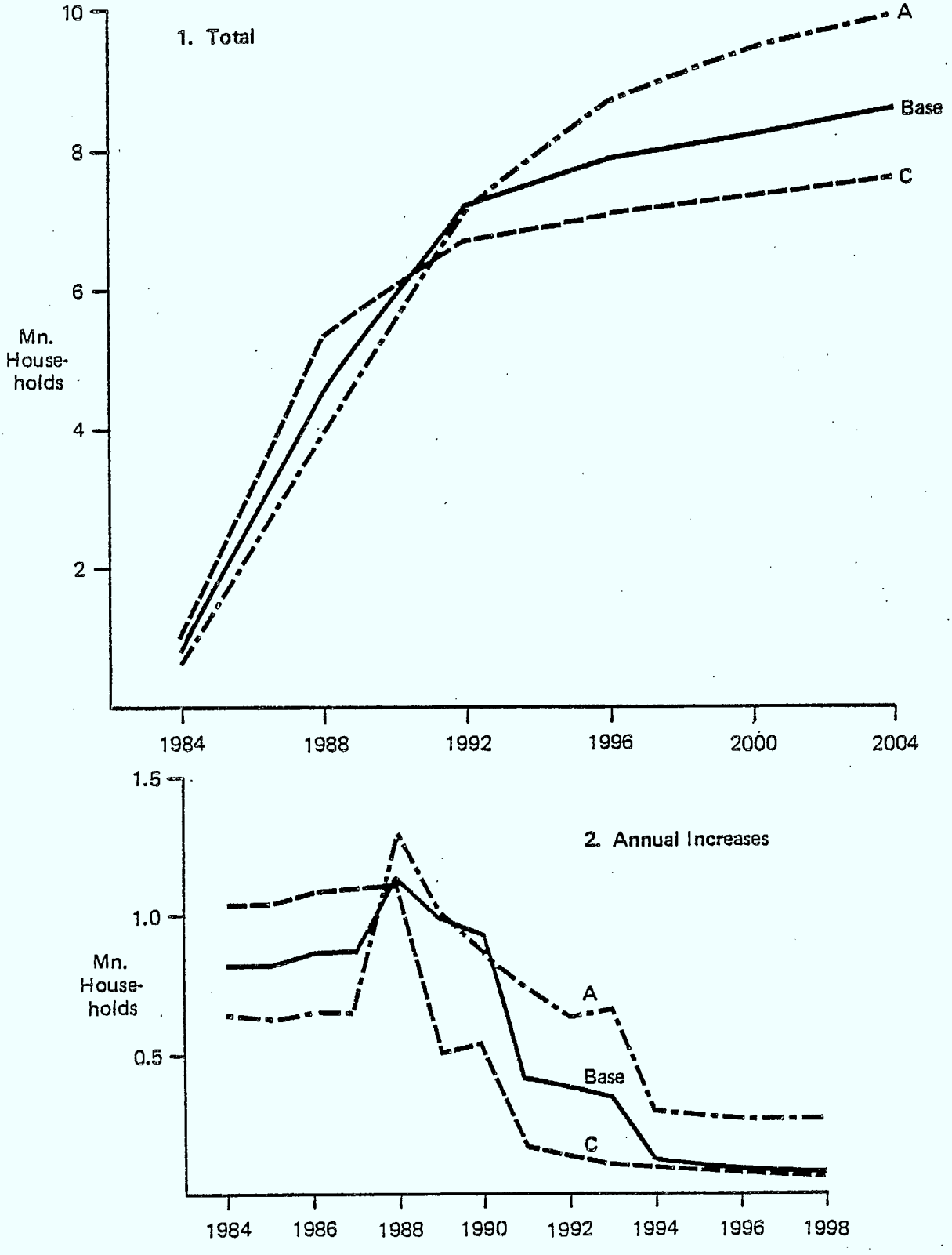
* See Section 3.8 on the subject of competitive services.

Figure 12

COMPARISON OF FULL-PROGRAMMING
DBS ACCESSIBILITY PROJECTIONS
FOR ALL HOUSEHOLDS




Source: Tables E16–E18

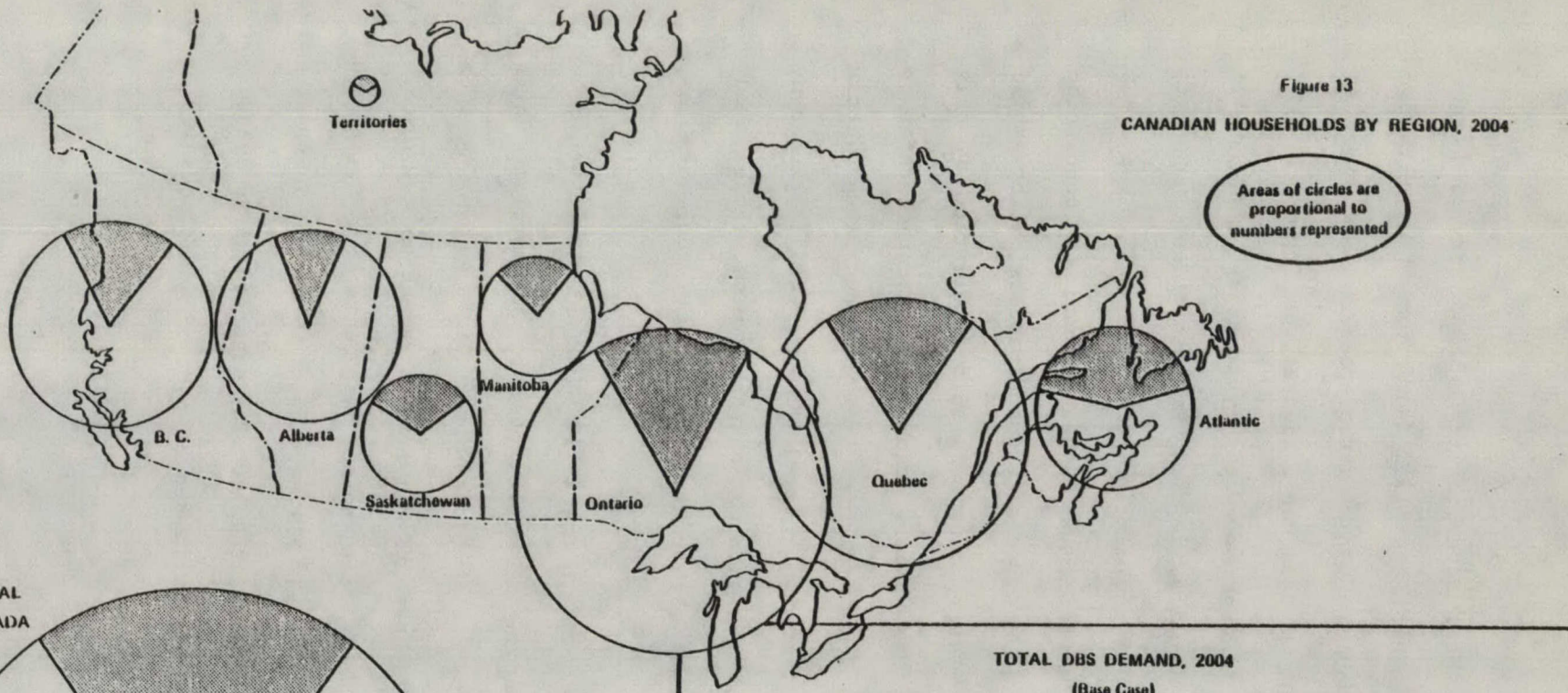
The eventual total accessibility of DBS service is not greatly affected by which projection is used (+16% for 'A', - 11% for 'C', mostly accounted for by population differences). The speed at which the final level is achieved does vary, however, as Figure 12 opposite shows. The peaks in increases roughly coincide, but the 'C' projection, though lower eventually, leads by a significant margin in the early years, with the 'A' projection trailing. This apparent inconsistency stems from the fact that under scenario C population growth is low (resulting in a low level of eventual accessibility) while cable subscription growth is high, offering rapid penetration by this means in the early years. (The numbers graphed and described refer to the Full-programming situation: Minimum programming makes little eventual difference. The variations in total DBS accessibilitycaused by differences in programming are minor, compared with those among projections A, Base and C, as may be confirmed in the source tables, E16-E18.)

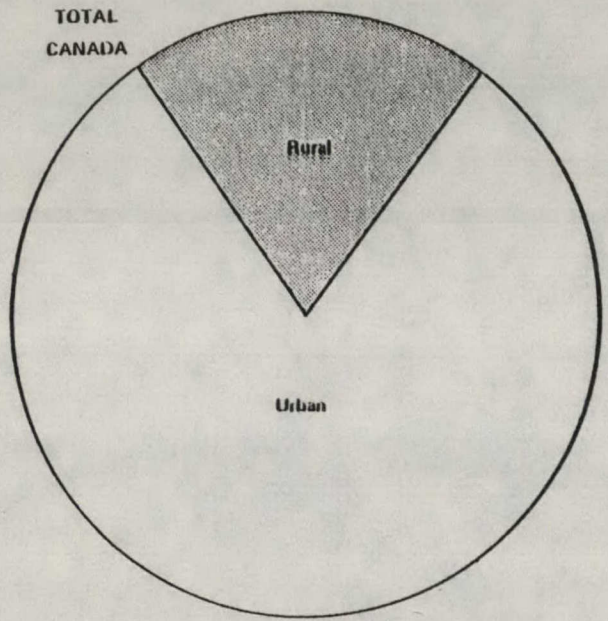
Should CANCOM move to the 14/12 GHz band, there would be some reduction in TVRO demand: a small number of 'commercial' units could replace a large number of individual units. Since we have no idea of possible timing or cost factors, it would be imprudent to speculate.

Our analysis to this point has dealt only with new demand, that is, the rate at which DBS service will become available, either via cable or the purchase of TVRO's. The question of an eventual replacement market for TVRO's is addressed as part of our discussion of hardware supply in section 4.1.

Figure 13

CANADIAN HOUSEHOLDS BY REGION, 2004

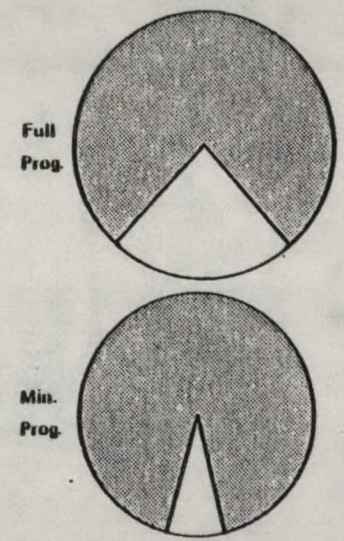


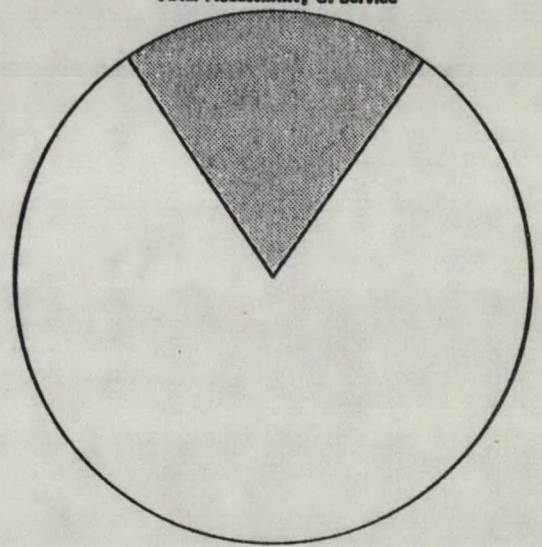




Source: Tables E15, E16, F2

TOTAL DBS DEMAND, 2004

(Base Case)



## 3.6 Regional Demand

We have seen in earlier sections that the national Base case projections* of eventual TVRO ownership divide 23:77 urban:rural, assuming Full programming. This almost exactly reverses the total households ratio, which is 79:21, implying that the average rural household is more than twelve times as likely to buy a TVRO as its urban counterpart. With only Minimum programming available, TVRO's are projected to divide 8:92 urban:rural.

We have also seen that DBS service, whether it is offered by a cable company or received by individual TVRO, is likely eventually to be accessible to almost all TV households, urban or not, whatever the programming. The urban:rural ratio in this case is therefore very close to the overall household ratio at 81:19.

The urban:rural ratios for TVRO ownership and DBS accessibility are presented graphically in Figure 13 opposite.

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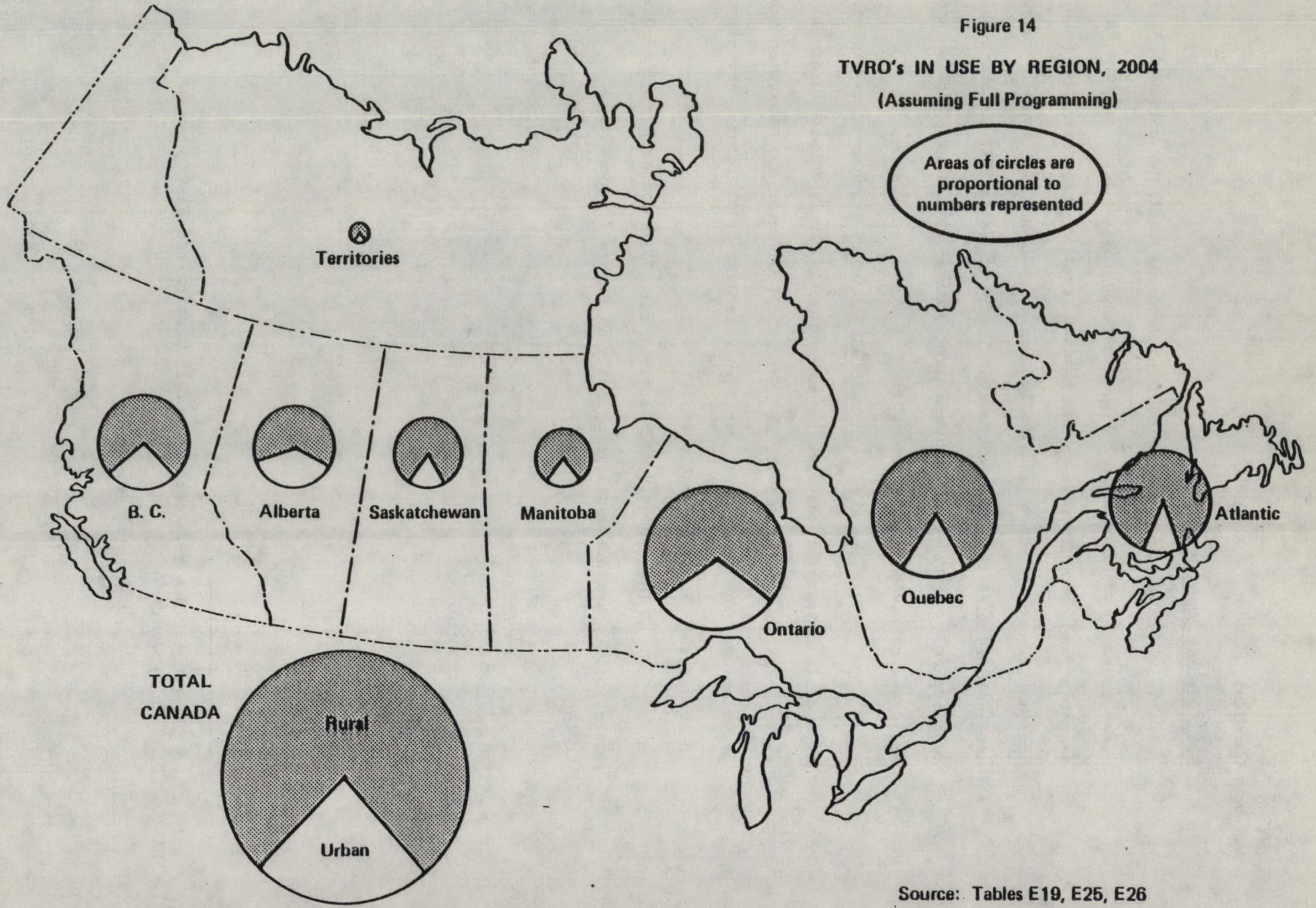
* All projections referred to in this section are Base-case, as defined in Appendix G.

Figure 14

TVRO's IN USE BY REGION, 2004

(Assuming Full Programming)




Source: Tables E19, E25, E26

The regional estimates of eventual TVRO ownership under the Full-programming scenario are shown in Figure 14 opposite and can be compared with the regional household distribution shown in Figure 13.

The general pattern of regional demand estimates is what one would expect from the national estimates and the extent to which each region is urbanized: the greater the urbanization, the smaller the market, relative to population, but the larger the urban share. The point is illustrated in the following table, which summarizes the same data as the diagram:

Household and TVRO Base-case Projections*
('000 in 2004)

| Region | Households | | TVRO's in Use | | |
|---|---|---|---|---|---|
| | % of Canada | % Urban | % of Canada | % Urban | '000 |
| Atlantic | 8 | 58 | 16 | 11 | 337 |
| Quebec | 25 | 81 | 22 | 17 | 476 |
| Ontario | 34 | 84 | 31 | 30 | 659 |
| Manitoba | 4 | 77 | 5 | 22 | 101 |
| Saskatchewan | 4 | 69 | 6 | 18 | 131 |
| Alberta | 11 | 88 | 9 | 38 | 189 |
| B.C. | 12 | 82 | 12 | 28 | 258 |
| Territories | 0 | 66 | 0 | 11 | 9 |
| CANADA | 100 | 80 | 100 | 23 | 2,158 |

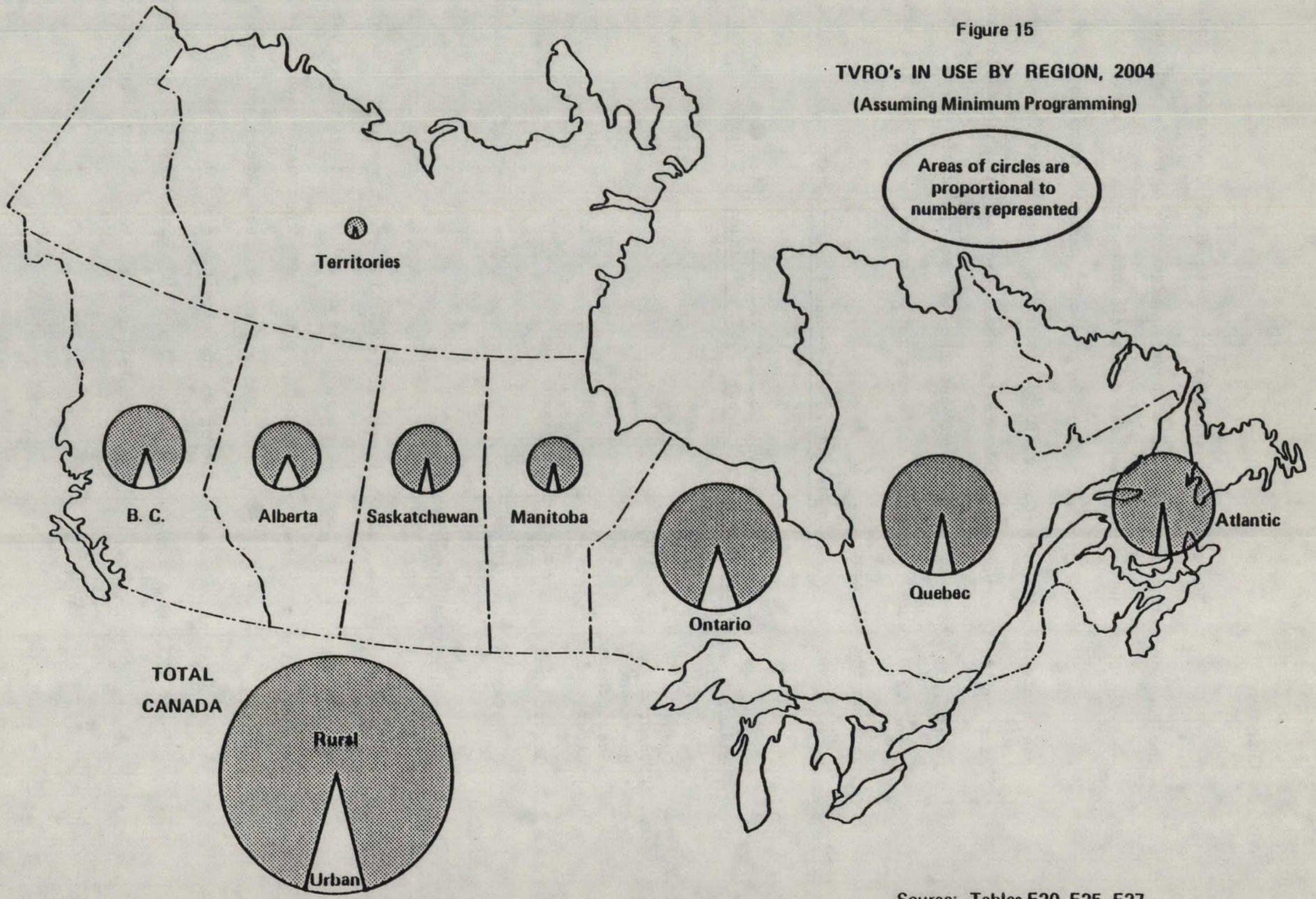
* Assuming Full programming.

The Quebec figures are something of an anomaly: the high urbanization of the province might be expected to lead to higher urban demand. The main reasons for this anomaly are that cable subscribers show far more propensity to buy TVRO's than non-subscribers and there is a low level of cable penetration in the province's urban areas: in 1982 it was 53%, as against the roughly 75%-90% typical of the other highly urbanized provinces; and it is projected to remain well below the

Figure 15

TVRO's IN USE BY REGION, 2004

(Assuming Minimum Programming)




Source: Tables E20, E25, E27

national average. The reason for this is not poor coverage: the number of urban households passed by cable is well up to the national average and is not projected to fall behind. Nor, from comparison of data from Statistics Canada and the Matthews CATV directory on 22 of the province's largest systems, does the problem appear to be related to location (which could affect quantity and quality of off-air signals) or language (which could influence the appeal of imported, i.e. English, channels). The opinion of industry insiders seems to be that chronically high unemployment is likely the problem in a few cases, but that elsewhere marketing of cable services has been relatively unsuccessful.

Under the Minimum-programming scenario, the market sizes and urban shares shrink still further, consistently with the national and Full-programming regional estimates. Figure 15 opposite illustrates this.

Table 7 overleaf summarizes the numbers on which this section has been based.

TABLE 7

PROJECTED ACCESSIBILITY OF DBS SERVICE, 2004
(Base case, '000 households)

| Region/Programming | | Via TVRO | | | Via cable (urban) | Total |
|---|---|---|---|---|---|---|
| | | Urban | Rural | Total | | |
| Altantic | - Full | 37 | 300 | 337 | 351 | 688 |
| | Min. | 11 | | 311 | 365 | 676 |
| Quebec | - Full | 81 | 395 | 476 | 1,465 | 1,941 |
| | Min. | 23 | | 418 | 1,525 | 1,943 |
| Ontario | - Full | 198 | 461 | 659 | 2,537 | 3,196 |
| | Min. | 57 | | 518 | 2,641 | 3,159 |
| Manitoba | - Full | 22 | 79 | 101 | 255 | 356 |
| | Min. | 6 | | 85 | 265 | 350 |
| Saskatchewan | - Full | 24 | 107 | 131 | 132 | 263 |
| | Min. | 7 | | 114 | 137 | 251 |
| Alberta | - Full | 71 | 118 | 189 | 755 | 944 |
| | Min. | 20 | | 138 | 786 | 924 |
| B.C. | - Full | 73 | 185 | 258 | 949 | 1,207 |
| | Min. | 21 | | 206 | 988 | 1,194 |
| Territories | - Full | 1 | 8 | 9 | 10 | 19 |
| | Min. | 0 | | 8 | 10 | 18 |
| CANADA | - Full | 502 | 1,656 | 2,158 | 6,458 | 8,616 |
| | Min. | 144 | | 1,800 | 6,723 | 8,523 |

Source: Tables E19-E22, E25-E29

TABLE 8

SENSITIVITY OF TVRO MARKET PROJECTIONS
TO MODELLED FACTORS

| | Range of Variation about Base-case Projections of Total TVRO's in Use, 2004* | |
|---|---|---|
| | Urban | Rural |
| Population growth | -10% to +5% | -10% to +5% |
| Mix of household types | -2% to +2% | - |
| Cable subscription rate | +1% | - |
| DBS accessibility via cable | -7% to +5% | - |
| Programming available | -68% to +11% | - |
| Cost of TVRO's | -57% to +133% | -24% to +36% |
| Programming and cost combined | -82% to +160% | - |

* Based on A and C scenarios.

Source: Developed from comparisons of systematically varied runs of the Woods Gordon Market Projection Model.

## 3.7 Sensitivity Analysis

The market projections vary in response to changes in the factors included in the market model. (The rationale behind the projections of each factor is described in detail in Part II of this report.) Table 8 opposite lists them with indications of how they affect projected TVRO market levels. Cost and programming clearly dominate. Each factor's influence is discussed separately in more detail below.

Three other factors in the model proved not to be potentially variable enough to warrant separate high and low projections. These were:

- % of urban households with TV
- % of urban households with cable available
- date of DBS introduction.

Population growth changes cause directly proportional market size changes. Since the high and low household projections used in this study were specifically constructed to be 5% above and 10% below the Base-case projection respectively by 2004, those are the amounts by which they affect the market size at that time.

The mix of household types varies little among the three projection levels:

% of Urban Households by Type

| | Apartment Projection | | |
|---|---|---|---|
| | High | Medium | Low |
| Houses - owned | 51.5 | 52.8 | 54.0 |
| - rented | 8.5 | 8.4 | 8.3 |
| | 60.0 | 61.2 | 62.3 |
| Apartments/Flats | 38.9 | 37.7 | 36.6 |
| Condominiums | 1.1 | 1.1 | 1.1 |
| | 100 | 100 | 100 |

Since only the total number of houses affects the (urban) TVRO market to any extent, the market will vary as they do, that is by less than 2% either way.

The cable subscription rate, i.e. the proportion of those households with cable available who elect to subscribe, shows (like the proportion with cable available) so little trend variability that alternative projections were superfluous, except in the case of Quebec, where provision for a high projection was warranted. This makes only a modest difference to that province's urban TVRO forecast (9%), and an even smaller one, naturally, to the national forecast (1%).

DBS accessibility via cable is estimated on the assumption that all cable systems will provide the service when they replace or upgrade their equipment, as detailed in Table 5 (Section 3.1). The length of the replacement/upgrading cycle is rather uncertain, but the anticipated range, based on our interview program, is 7 to 15 years. Accordingly, the effect on the urban market varies somewhat in the early years of DBS service, but very little by the end of the forecast period:

Base-Case Urban Projections* of TVRO's in Use in Selected Years
('000 units)

| | DBS Accessibility Via Cable | | |
|---|---|---|---|
| | Accelerated | Medium | Delayed |
| 1984 | 68 | 68 | 69 |
| 1988 | 347 | 372 | 390 |
| 1992 | 437 | 441 | 463 |
| 1996 | 462 | 462 | 467 |
| 2000 | 482 | 482 | 482 |
| 2004 | 502 | 502 | 502 |

* Assuming Full programming. The percentage differences with Minimum programming are nearly identical, although the absolute levels are not.

Programming availability is one of the two major determinants of urban TVRO demand. It is explicitly built into the model at the three levels tested in the consumer survey (Full, Reduced and Minimum, which are defined in Section 3.2). The effects of varying programming in the Base-case projections are as follows:

Base-Case Urban Projections of TVRO's in Use in Selected Years
('000 units)

| | Programming | | |
|---|---|---|---|
| | Full | Reduced | Minimum |
| 1984 | 68 | 57 | 28 |
| 1988 | 372 | 334 | 108 |
| 1992 | 441 | 393 | 128 |
| 1996 | 462 | 412 | 134 |
| 2000 | 482 | 433 | 139 |
| 2004 | 502 | 451 | 144 |

The differences between Full and Reduced programming are relatively small (around 10%), but demand would be expected to fall by a full two-thirds in the Minimum programming situation.

Programming is so important an influence on demand that we have also made estimates for programming options that provide only Canadian or US DBS. (See Section 3.9).

The cost of TVRO's is assumed for market projection purposes to be constant at about $1,200 during the interim service phase. There are consequently no market variations from that source until 1988. We tested the effects of a low price ($400) thereafter, a base price ($600) and a high price ($800). This being the other major demand determinant with programming, the two were tested in all possible combinations in the urban study:

Projections of
TVRO's in Urban Use in 2004
('000 units)

| Programming | TVRO Cost $800 | $600 | $400 |
|---|---|---|---|
| Full | 242 | 502 | 1171 |
| Reduced | 206 | 451 | 976 |
| Minimum | 82 | 144 | 315 |

Thus, survey results indicate that cost on its own can halve or more than double the Base-case level of urban demand. In combination with programming, it can reduce it to one-fifth of the base or multiply it by more than two-and-one-half times.

Since only one level of programming was tested in the rural study, the picture is simpler:

Base-Case Projections of
TVRO's in Rural Use in 2004
('000 units)

| TVRO Cost $800 | $600 | $400 |
|---|---|---|
| 1256 | 1656 | 2252 |

These data show far less price sensitivity among the rural population, whose choices are very restricted, than among the urban population.

## 3.8 Competition in the Rural Market

At the time the rural market study was conceived in 1978, the only DBS scenario to be considered was the launching of a satellite to broadcast to individual households with 14/12 GHz TVRO's. The development of the resultant projections is described in Section 11.

The situation has since become more complex. There are already three competitive factors to be considered:

- CANCOM's community service;
- CANCOM's individual service; and
- Northstar Home Theatre.

Each of these may be expected to absorb some of the potential DBS demand.

CANCOM's community service was launched at the beginning of 1982 to supply four TV channels to isolated communities across the country with 250-2,000 households. On this basis, 350,000 eventual subscribers were anticipated. Experience has since shown that the lower limit for system viability is probably only 100 households, which raises the potential to 600,000 subscribers. (The recent addition of the four U.S. networks to CANCOM's licence will improve its attractiveness, but not expand its potential market.) The service uses 6/4 GHz TVRO's feeding community cable or rebroadcast systems.

As of December 1982, 700 communities of the 1,200 that had applied to the CRTC had been licensed, and 120 systems with 50,000 subscribers were in operation. CANCOM expected that service to the full 1,500 communities and 600,000 subscribers they are aiming for would take five years to achieve.

Based on the diffusion model used throughout this report for distributing potential demand over time and the diffusion rate of

0.8 quoted by DRC for rural cable systems, CANCOM's five-year forecast seems somewhat ambitious (even with the proposed addition to their service of the four US networks), but not wildly so: 80% of their projections might be a reasonable level (disregarding the possibility of significant competition from DBS), as shown below:-

CANCOM Service Projections

| Year End | Systems In Operation | Total Subscribers ('000) |
|---|---|---|
| 1982 | 120 | 50 |
| 1983 | 329 | 136 |
| 1984 | 623 | 256 |
| 1985 | 938 | 382 |
| 1986 | 1,188 | 479 |

The numbers of subscribers shown (and any further projections such as those made later in this section) will have to be subtracted from the DBS figures calculated by the market model for both DBS service and TVRO demand. The number of systems will represent compensating head-end TVRO demand but, based on their present system design, for 6/4 GHz rather than 14/12 GHz equipment.

CANCOM's individual service, known as CANCOM I, is designed to bring the same programming as the community service to individual TVRO owners living in areas with so small or scattered a population that community systems would not be economically viable. There are estimated by CANCOM to be 300,000-400,000 households living in such areas. CANCOM plans to charge $1,500 for the descrambler only and $25 per month for the service.

CANCOM estimates that there are presently 4-5,000 6/4 GHz TVRO's operating in Canada. Even if all of these were within CANCOM I's

target market and chose to take the service, the effect on DBS would be small. And in our judgement, it is unlikely that any very significant volume of demand will develop in future, considering that the total 'entrance fee', at present prices, would be at least $5,500 ($4,000 TVRO, $1,500 descrambler), with new competitive services likely to be provided at 14/12 GHz or higher frequencies.

However, if we assume a 350,000 potential market, as CANCOM do, market entry in 1984 and about the same success relatively in penetrating it as for the Northstar service discussed below, (i.e. 12% of potential in the first five years, although Northstar has a much lower 'entrance fee'), the following would not be an unreasonable projection of the maximum number of subscribers over the first ten years:

CANCOM I Subscribers - Hypothetical Projection

| | | '000 |
|---|---|---|
| 1984 | - | 5 |
| 1985 | - | 12 |
| 1986 | - | 20 |
| 1987 | - | 30 |
| 1988 | - | 40 |
| 1989 | - | 49 |
| 1990 | - | 58 |
| 1991 | - | 66 |
| 1992 | - | 72 |
| 1993 | - | 77 |

Any CANCOM I sales will have to be subtracted from both the DBS service and TVRO demand estimates.

Northstar Home Theatre plans to distribute four existing Pay TV channels as a service somewhat similar to CANCOM I, but in areas not served by CANCOM's community service, and including less remote

areas that for one reason or another have no cable, or therefore Pay TV. They propose to offer the service from 1984, on 14/12 GHz equipment, in all provinces. The equipment is to cost $1,500 and the four channels will be charged at rates comparable to those of Pay TV elsewhere.

Northstar calculate their potential market as 1.7 million households, but this is without allowing for CANCOM's expanded market estimate for its community service (600,000 instead of 340,000) or for CANCOM I. Northstar aim to capture 12% of their potential market, i.e. 200,000 subscribers, over the first five years of service.

Using Northstar's projections and price sensitivity estimates extrapolated from the rural survey as input to the diffusion model, the following are the results for the first ten years of service:

Northstar Home Theatre - Projected Subscribers

| | | '000 |
|---|---|---|
| 1984 | - | 25 |
| 1985 | - | 57 |
| 1986 | - | 97 |
| 1987 | - | 143 |
| 1988 | - | 190 |
| 1989 | - | 237 |
| 1990 | - | 281 |
| 1991 | - | 316 |
| 1992 | - | 346 |
| 1993 | - | 368 |

Allowing for some loss of market share to the two CANCOM services, it is reasonable to project that only 90% of this business might actually materialize. This assumes that about two-thirds of CANCOM's expanded market potential (170,000 of 260,000) will indeed prefer CANCOM, and that one-third (about 90,000) are available to Northstar.

Woods Gordon

Summarizing the three competitive services, the following adjustments are a reasonable estimate of potential impact on the DBS service and TVRO demand estimates:

Services Competitive to DBS
Potential Subscriber Projection ('000)

| | CANCOM | | Northstar | |
|---|---|---|---|---|
| | Community | Individual | Home Theatre | Total |
| 1982 | 50 | - | - | 50 |
| 1983 | 136 | - | - | 136 |
| 1984 | 256 | 5 | 23 | 284 |
| 1985 | 382 | 12 | 51 | 445 |
| 1986 | 479 | 20 | 88 | 587 |
| 1987 | 540 | 30 | 129 | 699 |
| 1988 | 571 | 40 | 171 | 782 |
| 1989 | 587 | 49 | 213 | 849 |
| 1990 | 594 | 58 | 253 | 905 |
| 1991 | 597 | 66 | 284 | 947 |
| 1992 | 599 | 72 | 312 | 983 |
| 1993 | 600 | 77 | 331 | 1008 |

The minimum effect of these services on DBS is more difficult to estimate. If they all disappeared without trace, there would, of course, be none. This seems improbable. A number of sources in the industry believe that CANCOM will succumb to its own and its exhibitor affiliates' financial difficulties, but that is only speculation. In any event, it is in our view unlikely, for both commercial and political reasons, that the investment would be simply abandoned. As an example of a reasonable minimum scenario, the situation in 1993 if Northstar's plans succeeded and CANCOM met only one-third of its objectives, would be:

DBS-Competitive Services
('000 subscribers, 1993)

| | |
|---|---|
| CANCOM (community) | 200 |
| CANCOM I | 26 |
| Northstar | 331 |
| | 557 |

Thus, before launch of DBS's second dedicated satellite, which will give it the full proposed programming capacity (16 Canadian and U.S. free, pay and special-interest channels), competitive services could have attracted anywhere from 29% to 86% of its potential rural subscribers:

Possible Impact of Competitive Services
on the Rural DBS Market, 1993
('000 households)

| Minimum Competitive Scenario | | | Maximum Competitive Scenario | | |
|---|---|---|---|---|---|
| DBS | Competition | | DBS | Competition | |
| '000 | '000 | % | '000 | '000 | % |
| 1,178 (projection A) | 557 | 47 | 1,178 | 1,008 | 86 |
| 1,469 (Base case) | 557 | 38 | 1,469 | 1,008 | 69 |
| 1,916 (projection C) | 557 | 29 | 1,916 | 1,008 | 53 |

These are only two possibilities out of an enormous range. A second layer of hypothesis could be added: What proportion might take two of the three services, or all three? (The only likely combination appears to be DBS + Northstar, since both could be received on the one TVRO.) A further hypothesis could address the question: What might happen to CANCOM subscribership if the system adopted 14/12 GHz service? Our immediate intention is simply to point out how serious the impact of competitive services could be.

The actual impact depends very much on how far these services are eventually integrated into the DBS system. The proposed Northstar service is essentially rural/remote distribution of the Canadian Pay TV element of the DBS 'package'. CANCOM's offering, shifted to 14/12GHz, would correspond to the 4 US networks and the independent Canadian networks. Between them, these two already have the potential of providing half of the DBS 'package' modelled.

TABLE 9

URBAN HOUSEHOLDS* WILLING TO BUY
TVRO'S FOR TWO PROGRAMMING OPTIONS
('000)

| Would buy at... | Option A | US DBS Only | US DBS Only as % of Option A |
|---|---|---|---|
| $ 400 | 1,068 | 541 | 51 |
| $ 600 | 415 | 254 | 61 |
| $ 800 | 162 | 99 | 61 |
| $1,200 | 70 | 54 | 77 |

* Numbers include only house-dwellers.

Source: Table D8

---

URBAN HOUSEHOLDS* WILLING TO TAKE CABLE
SERVICE FOR TWO PROGRAMMING OPTIONS
('000)

| Would subscribe at... | Option B | Option C | Option C as % of Option B |
|---|---|---|---|
| $10/month | 2,868 | 1,768 | 62 |
| $15/month | 1,183 | 561 | 47 |
| $20/month | 275 | 117 | 43 |
| $25/month | 204 | 28 | 14 |

* Numbers include all types of dwellings.

Source: Table D9

## 3.9 Demand for US DBS Service

It is of interest to DOC to know how much urban demand might develop for US DBS service if there were no Canadian service, and vice versa. The answers help to define how much each service could promote the other and also how much might be lost by Canada's failing to enter the market, or delaying entry.

The best measure we have for the US-but-not-Canadian situation is the contrast between the number of 'eligible' households (house-dwellers) who say they would buy a TVRO given the full (Option A*) range of programming, and the number who say they would buy just to get the US DBS service. As the upper section of Table 9 opposite shows, anywhere from one-half to three-quarters of the demand might still be there, dependent on TVRO price, if only US DBS were available. The rise in the % column, matching the rise in TVRO cost, reflects the existence of a hard core whose price sensitivity for any addition to their TV service is very low.

A measure of the Canadian-but-not-US situation is offered by the contrast of demand for cable service with the full (Option B*) programming and minus US Pay TV (Option C*). The lower portion of Table 9 shows that even without US Pay TV, a solid core of demand remains. (The $15 and $20 levels are the most realistic, with 40-50% remaining: $10/month is too low, since one-third of subscribers already pay more than that, and another one-third $8-10; $25 is unrealistic in the other direction, since only 1% or 2% of subscribers are currently paying $20 or more.)

---

* Defined in Appendix G.

The rural study projected demand without taking any account of US DBS. Therefore, if US DBS does materialize, it can only increase the rural demand calculated in this study, which already is expected to account for anything from 65% to 95% of final demand for consumer TVRO's. (Start-up of the first US DBS service this Fall now seems reasonably assured, with the recent announcement of the Prudential Insurance Co's. taking of a large stake in USTV, the joint venture led by General Instrument which will provide the service.)

TABLE 10

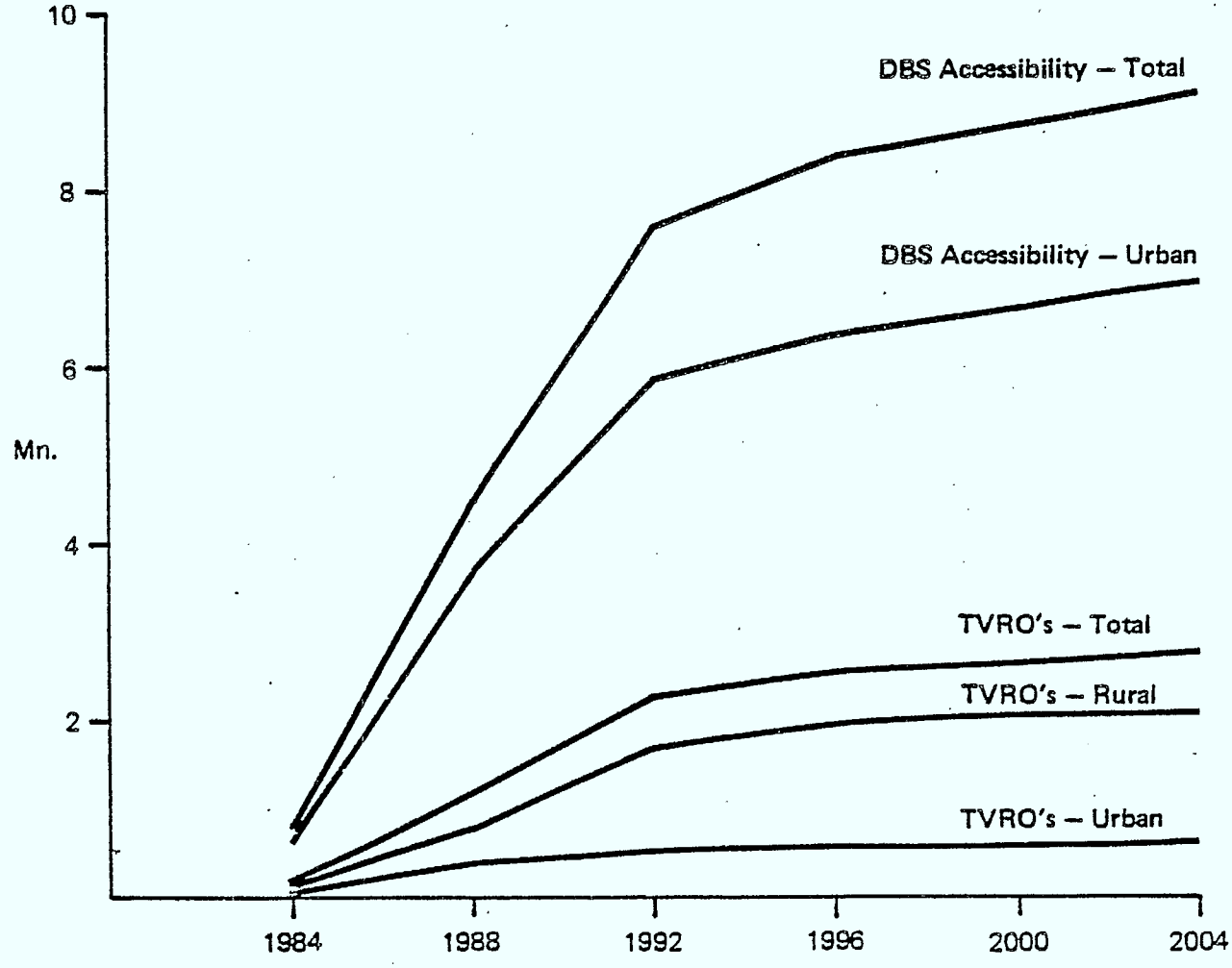
"MOST LIKELY" DBS MARKET SCENARIO*

| | Projected TVRO Demand ('000 units) | | | Total DBS Accessibility ('000 households) | | |
|---|---|---|---|---|---|---|
| Year | Urban | Rural | Total | Urban | Rural | Total |
| 1984 | 42 | 150 | 192 | 655 | 150 | 805 |
| 1988 | 419 | 796 | 1,215 | 3,715 | 796 | 4,511 |
| 1992 | 566 | 1,735 | 2,301 | 5,864 | 1,735 | 7,599 |
| 1996 | 593 | 1,979 | 2,572 | 6,403 | 1,979 | 8,382 |
| 2000 | 620 | 2,056 | 2,676 | 6,712 | 2,056 | 8,768 |
| 2004 | 646 | 2,129 | 2,775 | 7,015 | 2,129 | 9,144 |

* Defined by DOC as:

Canadian free and pay channels available, plus 4 US networks and US free DBS channels.
TVRO at $400, cable subscription $10/month.
Moderate growth in all other modelled factors.

Source: Tables E31 and E32



## 3.10 The "Most Likely" Scenario

Developments during the course of the study led DOC to the conclusion that a reasonable "most likely" scenario was one in which subscriptions to US Pay TV channels would not be allowed in Canada in the foreseeable future. In addition, DOC concluded that the lowest TVRO cost tested ($400) was now a strong possibility.

Although there was no provision in the study for directly developing data for a market model run exactly reflecting DOC's "most likely" scenario, it was possible to derive urban market estimates by interpolation between the closest two cases that could be run through the model.

This procedure (described in detail in Section 10) produced the estimates summarized in Table 10 opposite and the accompanying graph. The total market (urban and rural) to 2004 for TVRO's under this scenario is estimated at about 2.8 million units, and the number of households to whom DBS programming will eventually be accessible at 9.1 million. This places TVRO demand in the range of the high, or 'A', projections discussed earlier, and DBS accessibility between the A and Base-case levels:

Comparative DBS Market Projections - 2004

| | Projection A | | | Base Case | |
|---|---|---|---|---|---|
| | Full Prog. | Min. Prog. | "Most Likely" | Full Prog. | Min. Prog. |
| TVRO Demand ('000 units) | 3,512 | 2,591 | 2,775 | 2,158 | 1,800 |
| DBS Accessibility ('000 households) | 9,968 | 9,612 | 9,144 | 8,616 | 8,523 |

## 4. MARKETING CONSIDERATIONS

The marketing implications of this study fall into two groups. The first group concerns those commercial and industrial aspects which will enter into DOC's strategic planning of policies for Canadian DBS services. The second group will be more applicable when the tactical problems of actually selling the service and the hardware to the public are tackled. The question here is how best the potential buying public may be described in marketing terms, and this is the subject of Section 4.5, which is based upon our consumer survey.

### 4.1 Hardware

We do not anticipate any major difficulties in the supply of 'commercial' TVRO's and basic associated electronics. As discussed in Section 3.1, we expect cable systems to phase in their purchases of DBS equipment smoothly over something at least close to their normal replacement cycles. And in any case, they number only a few hundreds. Some small addition is conceivable from such sources as SMATV installations for condominium corporations, but we would expect it to be minimal in view of their basic motivation, economy. Cost-consciousness is more likely to keep them out of the market until they can take advantage of lower prices on more consumer-oriented equipment.

It is also conceivable that conversion demand could develop if such operations as CANCOM were to switch from the 6/4 GHz technology to 14/12. This area is entirely speculative, but it seems to make commercial sense that present investment, most of it still at present under 18 months old, will not be abruptly abandoned. In the

event of conversion, therefore, we would not expect it to begin for some years, which might thus counterbalance the decline in regular cable systems' demand, discussed in the previous paragraph.

The one piece of commercial equipment that seems to present potential difficulties is the scrambling system: no fully satisfactory system is yet available "off the shelf". However, our contacts in the Pay TV industry are confident that several adequate systems will be available before the problem becomes their top priority. It would seem, indeed, that, at least in the Canadian environment, where Pay TV has only just arrived, 'free sampling' until secure encryption and mass production of decoders are realities could have positive rather than negative effects on the industry's growth.

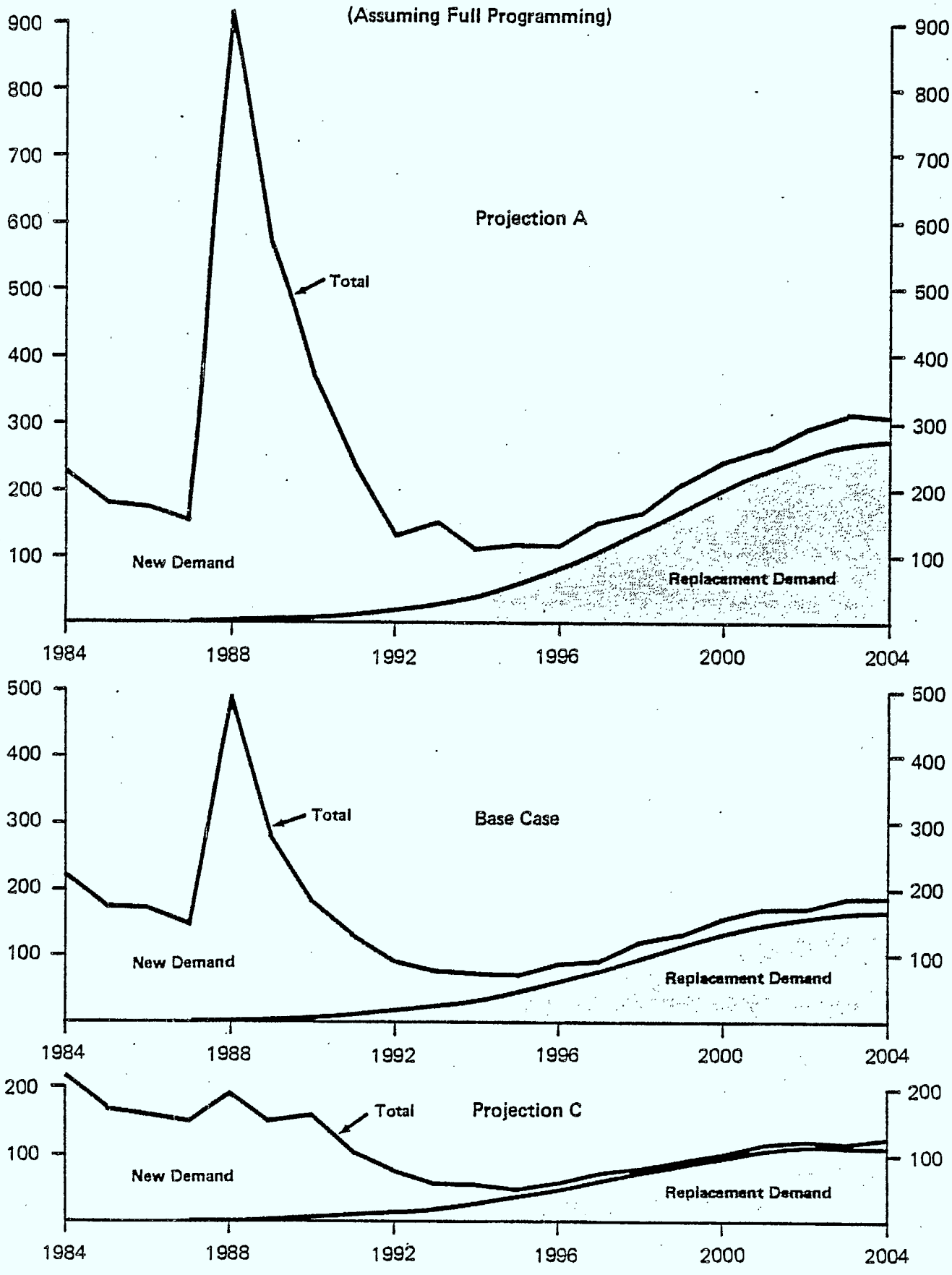
Our consumer demand projections for 1984-1987 foresee, mainly because of strong rural demand, an annual TVRO market in the 150-200,000 range, without any sharp decline after the first peak. Other things being equal, this is not a situation we would expect to cause major supply difficulties.

However, there are two factors to be taken into account. As far as we could discover in our executive interview program, no major Canadian companies have products ready for this market, or are even actively planning any. The general attitude is to wait and see, with confidence that products can be designed, tooled and marketed within a few months, when demand is assured. One obvious possible consequence of this is exactly what the industry fears, capture of most of the Canadian market by American or Japanese companies, who already have plans and facilities in place both for manufacture (outside Canada) and marketing (inside).

Figure 16

DEMAND PROJECTIONS FOR CONSUMER TVRO'S

(Assuming Full Programming)




Source : Table E30

A second possibility is that, at least towards the end of the interim service phase, demand could fall off sharply from the levels projected. This might be precipitated by publicity about the advantage of awaiting the full service. This applies not only to the basic cost of equipment but to the possible conversion cost when the electronics package required for the interim service has to be modified or replaced to match the dedicated system's specifications.

The advent of the full, dedicated-satellite service will aggravate the manufacturing problems from 1988 on. This service will make TVRO's a potential mass market item, allowing them to be priced in the same range as a colour TV set. A sharp surge in demand is expected to result, but trailing off within five years, before any significant replacement needs develop.

It cannot yet be predicted with any certainty how replacement demand will develop. In order to show some of the possibilities, we have made some assumptions about the pattern the product life may follow and applied them to the three Full-programming scenarios considered in this report. The assumptions are that -

- the average TVRO will last 15 years
- 75% of all units will last 10-20 years
- TVRO scrappage will follow a normal (bell-shaped) curve.

It will be seen from Figure 16 opposite that in all three of the projections replacement demand is not expected to develop until after the peak and trough in new demand caused by the introduction of the high-powered dedicated satellite. As is usual with replacement

demand, its peaks and troughs are anticipated to be much less abrupt than those of the new demand it echoes. The first (and highest) peak in replacement demand is due at the end of the forecast period.

However strong the Canadian industry might be by the early 1990's, it could not likely cope easily in an orderly way with such a 'feast and famine' situation as we foresee. The Japanese and American competitors, cushioned by the smoothing effects of their own home markets, will be in a good position to take advantage of this added complication, especially if they have, as surmised earlier, taken strong positions in the market for equipment for the interim service.

The lack of readiness of Canadian manufacturers to enter this market appears to be due largely to their perception that there will be very limited consumer demand, at least until a high-powered satellite brings TVRO prices down. This is a perception that DOC may be able to counter. It is suggested that publicizing the expected size of rural demand could be most effective, especially in combination with policies facilitating the promotion of the relevant technology and its associated programming.

The nature of the terminal equipment itself may provide one more complication on the supply side. Although by no means a garage-and-basement item, it is not the highest of high-tech. It needs three things: basic electronics design capability, preferably including chip applications; mass production experience; and mass marketing expertise. These three skills may be found in combination in a number of companies presently outside this industry, including most consumer audio and video specialists. They may also be found in other companies

(such as, for instance, Texas Instruments), less closely associated with products of this kind but with impressive track records in other innovative markets. And they may also be found in consortia, of which one good example is the joint venture formed in the USA between NEC and Alcoa. In short, there may be even more competitors for the Canadian industry to face than presently appears.

Within the Canadian industry, there are already many small companies in low-volume TVRO production. Rapid market expansion will not only allow the more successful of these to grow, but also attract many others into the business, who also may become established suppliers.

## 4.2 Programming

Preceding sections of this report have made it abundantly clear that software will be at least as important to this market's prospects as hardware. What software will be available to complement or compete with DBS will depend on government policies in whose development DOC will play a major part. The possible extent to which DBS and other services may be complementary or competitive is examined in this section.

The DBS 'package' proposed for the first decade of service seems to have very little appeal to most cable systems, except defensively, to discourage TVRO's: hence their anticipated slow adoption. The CBC channels (unless CBC2 materializes) are already available virtually everywhere; the independent stations would provide little new in most places, at least if they are the local ones; educational channels would have some interest, but are a minority taste; only the Pay TV channels would be much in demand, and there are cost problems there (see Section 4.3). However, if DBS is adopted, the cable companies, with the introduction of Pay TV behind them, should have some experience and personnel to promote it.

Significant consumer appeal is confined to underserved areas, basically the rural/remote population, where any addition to currently available programming will be welcomed with open arms. Elsewhere, the same remarks apply as to cable companies.

The main consideration, then, is how far the DBS 'package' may be promoted by other programming accessible through the same hardware, and how far it may itself promote that other

programming. On the other side will be programming demanding different hardware and therefore offering competition and not synergy.

The almost universal comment on DBS during this study, from consumers and industry alike, has been that it needs American programming to make it attractive. This means the four US networks, basically, although there is certainly some urban demand for the US DBS channels, which the cable companies would wish to distribute. US DBS, therefore, if made legal for Canadians, could be expected to complement the Canadian service in some ways (although other repercussions, on the revenues of Canadian broadcasters and Pay TV companies, for instance, might outweigh this benefit). The addition to DBS of the four US networks is not contemplated for a decade, although the trend towards an 'equalization' philosophy rather than 'adequate' service for all may produce pressure towards hastening this. The only apparent complementary possibilities at the moment are CANCOM, if it eventually broadcasts in the 14/12 GHz band; or advertiser-supported US DBS, if it proves viable. Conversely, Canadian Pay TV via satellite and US DBS would benefit from DBS's free channels, available with the same technology and therefore offering justification for the 'entry fee' in the shape of equipment costs required in rural/remote areas.

DBS will have something of an advantage over these services. It will at least have regional as well as national programming elements, although truly local material, which is viewed as a highly saleable feature by many programmers, will not be possible.

In summary, the DBS package appears adequate for the rural market, where its relationship with other services may prove

mutually beneficial. In urban markets, it needs all the support it can get: any programming delays or omissions could seriously reduce demand.

## 4.3 Distribution Costs

The Pay TV companies would be only too happy to get the added exposure of being on the DBS satellite. The same is certainly true of TV Ontario, a prime candidate for an educational slot. However, it is very unlikely that either, in present circumstances, would be able to meet the transponder costs they expect to be involved. Considering their present cash-flow situation, the additional annual cost, believed to be of the order of $1 million per beam, could not reasonably be expected to be within the reach of the Pay TV companies. TV Ontario could not find such an amount from its present financing, even with the savings that might be realized by dispensing with its microwave links within Ontario. And it is simply beyond the pockets of the less populous English-speaking provinces that might consider, as Manitoba recently did, importing TVO's signals. (The situation in five or ten years may be quite different, of course. The Pay TV companies may be looking for opportunities for expansion, having absorbed their start-up costs. Government finances and therefore policies may be more favourably positioned for funding TVO's wider distribution.)

At the local distribution level, DBS demand from master antenna systems (MATV) for apartment and condominium complexes will likely be small. Supporters of cable TV and MATV make competing claims on the range of TV programming and ancillary services such as meter-reading and security that MATV can provide in favourable locations. Whatever the objective merits of these claims, inertia and the cable companies' entrenched position seem likely to ensure that cable remains the choice of most property managements.

## 4.4 Other Technologies

Some attention has been paid earlier, particularly in Section 4.2, to the relationships which may be expected to develop between DBS and various other services whose prospects are clear enough to permit such consideration. There are other technologies and services which can be expected to have some impact, but whose futures are less clear. These include such items as High Definition TV (HDTV) and other forms of enhanced-definition TV, Subscription TV (STV), stereo TV sound, Multipoint Distribution Services (MDS), modular TV sets and teletext.

A thorough examination of any of these was beyond the scope of this study. The following points, however, suggest the need for flexible policy making.

The difficulties of massive conversion or duplication of equipment for HDTV would no doubt be formidable. Yet it is probable rather than conceivable that mass demand, or at least significant specialty demand, for it could develop within our twenty-year forecast period. Since HDTV requires greater bandwidth than regular broadcasts in an already crowded spectrum, its introduction will apparently depend on one of two things. A reduction might be made in regular broadcasting, which is hard to contemplate without some compensation, such as free programming supply by other means. Alternatively, HDTV might itself be assigned to presently unoccupied spectrum, for which one candidate appears to be DBS's 14/12 GHz band. Depending on the amount of HDTV broadcasting, difficulties in developing the DBS service could clearly arise in that case. (The possible opening up of the 23GHz band for HDTV would, of course, avoid the difficulty entirely.)

STV and MDS both involve restricted distribution in urban areas of small numbers of specialty pay channels. Given the right pricing and programming, they could, if they took hold, provide real competition to DBS for equipment and/or subscription dollars, most of whose programming will already be available from other sources in urban areas.

As more and more TV options become available, bringing with them more and more technological changes, the idea of the modular TV set becomes more attractive -- a new feature or service, a new module. This could be a very positive development for DBS. A discriminating public, comfortable with the idea and practice of adding modules to its TV centre (for stereo sound, teletext, etc.) would likely be more open to the idea of adding DBS electronics than today's public.

It is hardly likely that the few innovations mentioned above will be the only significant ones to appear over the next twenty years. These and many more will affect and be affected by any DBS policy initiatives developed in response to the present study program. It should be a deliberate and emphatic element of a Canadian DBS strategy to ensure that wherever possible new developments will not encounter a policy structure too rigid to accommodate them without major upheaval.

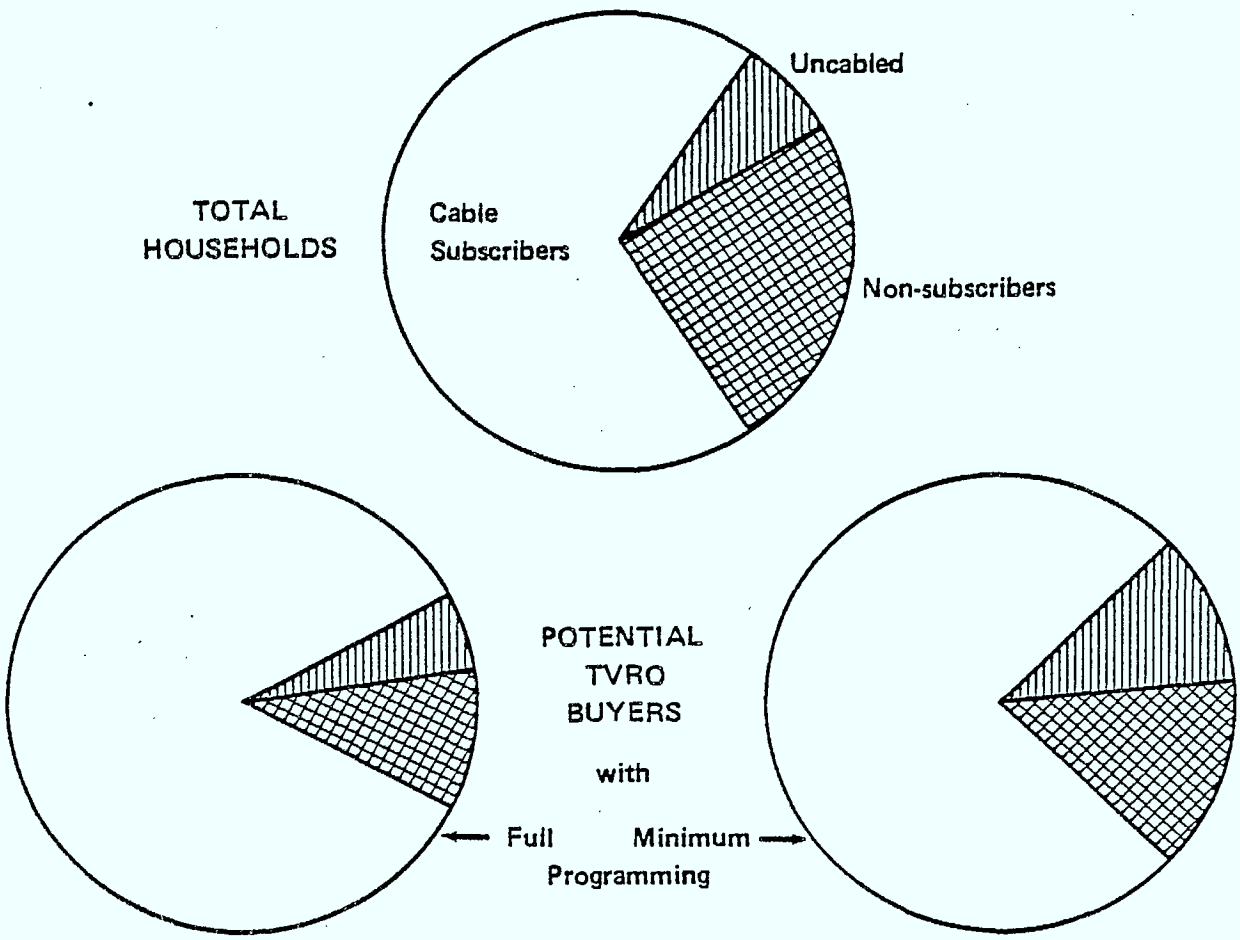
TABLE 11

SOURCES OF URBAN TVRO DEMAND
('000 TV households)

| | Total (1983) | | Potential TVRO Buyers | | | |
|---|---|---|---|---|---|---|
| | | | Full Programming* | | Min. Programming* | |
| | '000 | % | '000 | % | '000 | % |
| Cable subscribers | 4693 | 71 | 424 | 84 | 109 | 76 |
| Non-subscribers | 1526 | 23 | 50 | 10 | 20 | 14 |
| Uncabled | 432 | 6 | 28 | 6 | 15 | 10 |
| | 6651 | 100 | 502 | 100 | 144 | 100 |

* See Appendix G.

Source: Woods Gordon Market Projection Model, Base-case projections.



## 4.5 Urban Consumer Profiles

The three-way segmentation of urban consumers used in earlier sections - cable subscribers, non-subscribers and those living in uncabled areas - is a useful one. Their numbers and contributions to potential urban demand are shown in Table 11 opposite. Cable subscribers are far the largest group; they also contribute disproportionately to potential demand because they are a TV-oriented group, as discussed later in this section. The reasons behind anomalies of this kind and alternative descriptions of the potential heavy buyer types will be essential elements in successfully marketing TVRO's.

The differences among the three groups' reactions to the DBS alternatives presented in the consumer survey reflect the differences among their expected buying patterns. Table 12 overleaf shows three measures of reaction. Non-subscribers show least interest (willingness to take the option in question, disregarding which one they prefer) and the uncabled group most interest. Preference (choice of one option over the others) is clearly influenced by familiarity in the case of cable subscribers, who strongly favour the cable option (B). The other groups are evenly divided between cable and TVRO's. Improved performance (by comparison with the present TV delivery mechanism), although not necessarily enough to warrant purchase, is what the options mean especially to the uncabled group, although many in each group appreciate the potential advantages of DBS, whether received via cable or TVRO.

Potential buyers will react to the benefits to them individually of TVRO's and the DBS service. It is in this dimension

TABLE 12

CONSUMER REACTIONS TO DBS OPTIONS*

% of Respondents Interested in Each Option

| Option | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| A | 30 | 24 | 35 |
| B | 49 | 25 | 44 |
| C | 29 | 18 | 33 |
| US DBS TVRO | 15 | 12 | 20 |

% of Respondents Preferring Each Option

| | | | |
|---|---|---|---|
| A | 32 | 40 | 43 |
| B | 53 | 38 | 41 |
| C | 12 | 15 | 11 |
| | 97** | 93** | 95** |

** 'Don't knows' make up to 100%

% of Respondents Judging Each Option Favourably
(as much or slightly better than present reception mechanism)

| | | | |
|---|---|---|---|
| A | 49 | 56 | 66 |
| B | 39 | 40 | 52 |
| C | 16 | 25 | 31 |

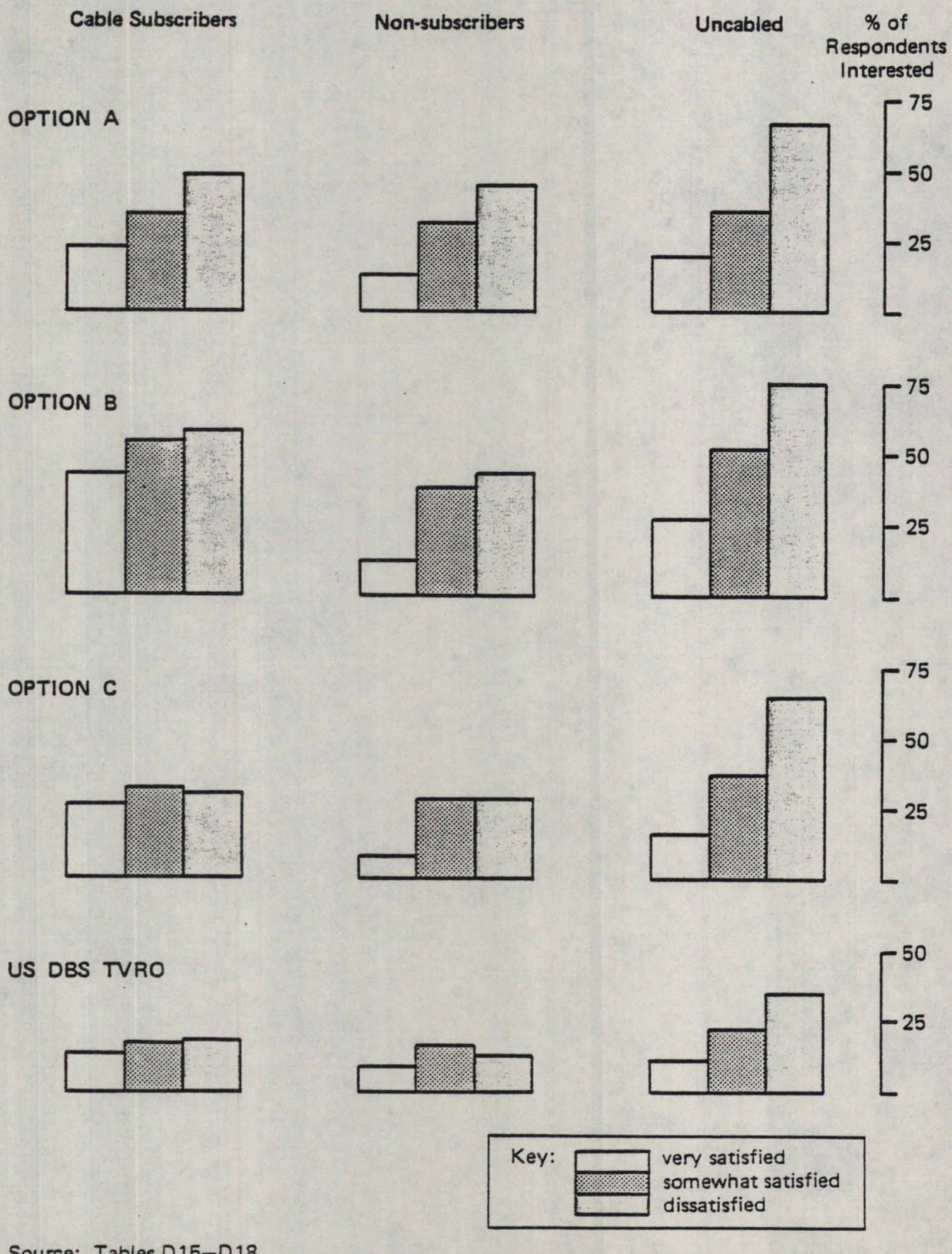
* A - TVRO with full programming (Canadian free, pay and special interest, US networks and pay)
B - Cable subscription, full programming
C - Cable subscription, reduced programming (no US pay)
US DBS TVRO - TVRO, only US DBS available.

Full descriptions are given in the questionnaire, Appendix C, and in Appendix G.

Source: Tables D3, D7, D10, D14.

Figure 17

## INTEREST IN OPTIONS VARIES WITH PRESENT SATISFACTION WITH TV ARRANGEMENTS




Source: Tables D15—D18

that the three-way market segmentation can be improved by taking account of underlying attitudes.

Inadequate TV service, real or perceived, is one thing that does not seem to be a major conscious motive of itself. No urban group believes more strongly than any other that it is underserved. Objectively cable subscribers are far better served than the others (as the table below shows), but are still the prime prospects for TVRO's.

TV Service and Facilities

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| Av. no. of satisfactory channels | 13 | 6 | 7 |
| Av. no. of TV sets | 2.0 | 1.8 | 2.0 |
| % with several sets, including at least one colour set | 70 | 56 | 63 |
| % with video recorders | 7 | 3 | 2 |
| % very satisfied with present TV arrangements | 51 | 50 | 46 |
| % judging quality of most-watched channels excellent | 52 | 52 | 52 |

Source: Tables D1, D2.

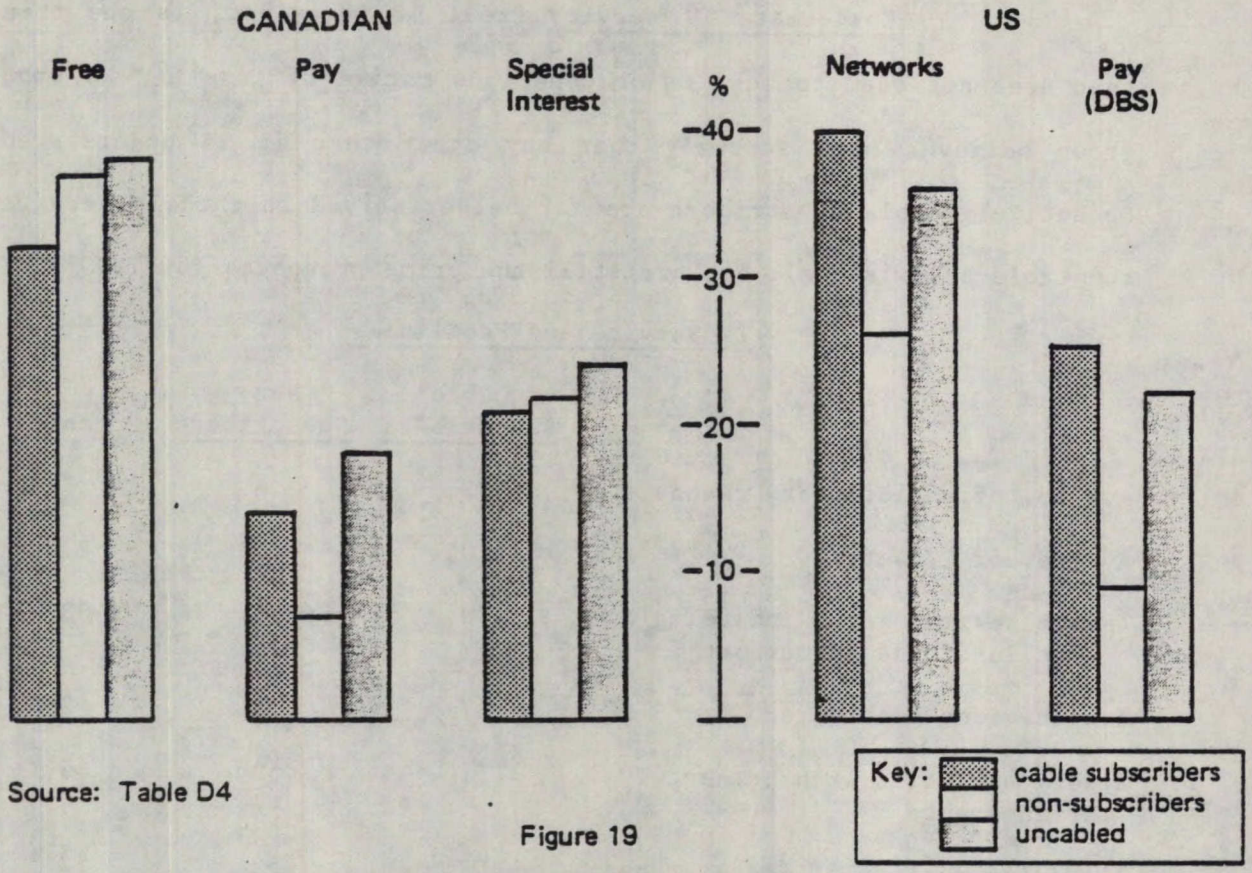
Despite these objective factors and surface attitudes, respondents' interest in each DBS option clearly decreases as their level of satisfaction with present TV arrangements increases, as Figure 17 opposite shows.

Orientation towards TV in general appears to be the basic difference among the three groups and therefore in potential TVRO demand. Cable subscribers and non-subscribers are already categorized by definition as more and less favourable respectively, and those in

Figure 18

IMPORTANCE OF CHANNEL TYPES IN FAVOURABLE REACTIONS TO OPTION A

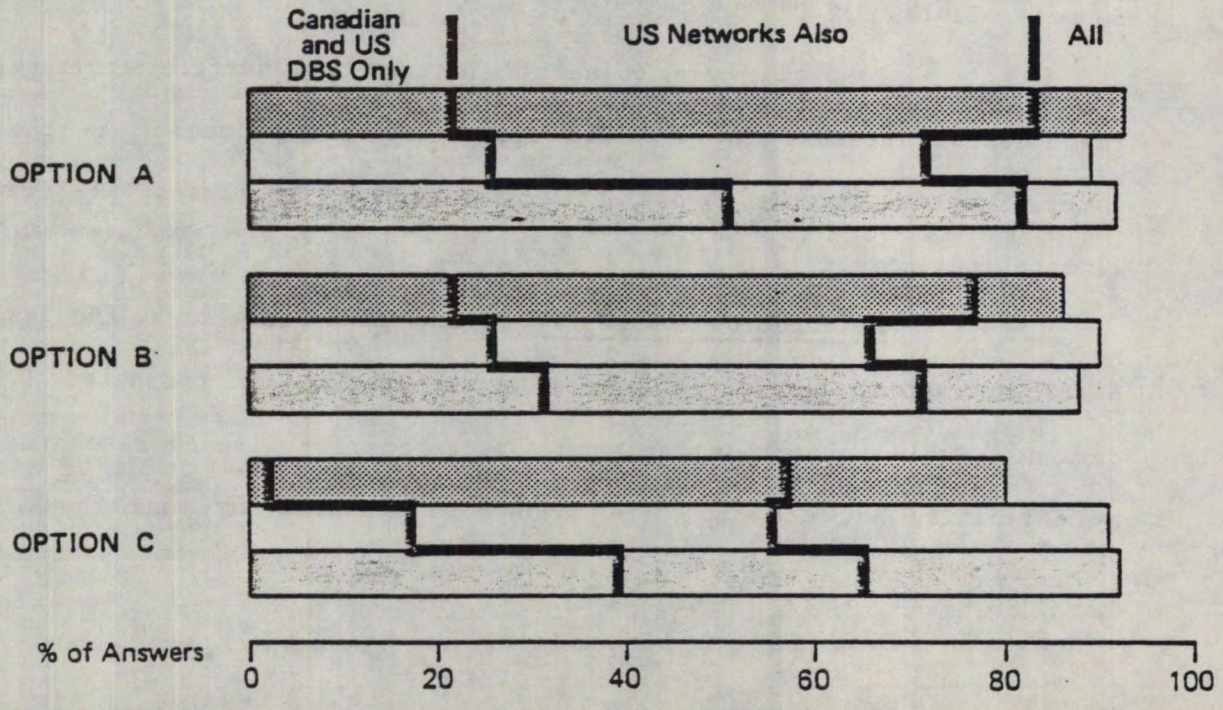
(% judging each type 'extremely important')




Source: Table D4

Figure 19

PROGRAMMING REQUIRED TO INDUCE SWITCH TO TOP OPTION




Source: Table D13

uncabled areas are presumably a mix of the two. The table above already shows several confirmations of this, with the 'uncabled' figures usually lying between subscribers and non-subscribers. Many more instances may be found in later tables. This relationship is not absolute, since people in uncabled areas really are less well served than others, and this does affect their attitudes.

The suspicion that non-subscribers at least include an anti-TV element is supported by some of the reasons given by respondents to justify various judgements. In every case, negative attitudes towards TV are much commoner among the non-subscriber group than others:

% of Respondents Making
Negative Comments on TV in General

| Questions Where Comments Were Made | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| 9 (unfavourable remarks on Option A) | 8 | 30 | 19 |
| 12 (unfavourable remarks on Option B) | 4 | 16 | 7 |
| 15 (unfavourable remarks on Option C) | 1 | 11 | 1 |
| 20 (doubts about buying TVRO for US DBS only) | 8 | 10 | 2 |

Source: Tables D4, D5, D6, D14

Programming is certainly a factor that would be expected to affect choices within the three groups of potential buyers. A graphical summary of the results of direct questioning in this area is shown in Figures 18 and 19 opposite. The great importance of the US networks (ABC, CBS, NBC and PBS) to all groups is clear in both diagrams. DBS will do much to satisfy the uncabled group, and the regular, free channels are every group's first consideration.

Reasons given for comments on other subjects throw some further light on the question of programming. The figures in Tables D4-D6 and D11 show that, despite the common opinion that the public demands American programming and is at best indifferent to Canadian content, there is considerable feeling both for and against each of them. It may safely be said that both hold significant attraction for some potential buyers. (These comments were unprompted, unlike earlier ones, and therefore less likely to be 'motherhood' responses.)

Several other factors covered in the consumer survey appear to have some influence on potential demand. They include attitudes to cable, TVRO's and ownership as opposed to rental. (See Tables D1, D4-D6, D11 and D14.)

Cable inevitably draws adverse criticism from some dissatisfied subscribers, but there are also negative comments from the non-subscriber and uncabled groups. Positive mentions are considerably less frequent.

TVRO's attract much more negative than positive comment all round. Concerns are mainly about maintenance, portability, etc. The most noticeable lack is of comments indicating any 'pro-gadget' enthusiasm.

Ownership rather than rental is a significant attraction for TVRO's among all three groups.

In summary, the important motivations (insofar as they can be judged from a survey of this type) seem to depend on whether potential consumers are cable subscribers, non-subscribers or uncabled, with little reference, except for the uncabled, to objective measures of the quality of their present TV services. In general terms,

TABLE 13

DEMOGRAPHICS OF POTENTIAL CONSUMERS
(% of households)

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| **French/English** | | | |
| Would take - Option A | 22/31 | 23/24 | 34/35 |
| - Option B | 48/49 | 27/24 | 39/45 |
| - Option C | 26/29 | 16/19 | 34/32 |
| - US DBS TVRO | 3/17 | 8/14 | 9/21 |
| **Aged under/over 45** | | | |
| Would take - Option A | 40/23 | 32/17 | 40/27 |
| - Option B | 62/40 | 29/22 | 56/28 |
| - Option C | 37/23 | 20/16 | 43/17 |
| - US DBS TVRO | 22/10 | 17/9 | 24/14 |
| **Income over/under $15,000** | | | |
| Would take - Option A | 34/14 | 30/13 | 38/25 |
| - Option B | 52/39 | 28/21 | 49/30 |
| - Option C | 30/24 | 19/16 | 38/16 |
| - US DBS TVRO | 17/9 | 15/6 | 22/13 |

Source: Tables D15-D18.

orientation towards TV is what determines inclination to buy. More specifically, the main positive factors include:

- accessibility of the US networks and Canadian free programming
- some favourable attitudes to Canadian sources of programming
- dissatisfaction with present TV reception mechanisms, especially cable
- preference for owning rather than renting equipment.

Attitudinal considerations of this kind are useful aids in shaping the content of market communications and offer some general guidance on media. However, the most useful practical guide remains demographics. These are shown in full for the four crucial questions (willingness to take Options A,B and C and a TVRO for US DBS only) in Tables D15-18. The main features, summarized in Table 13 opposite are:

- French cable subscribers do not want a Canadian DBS TVRO, and French respondents in general do not want a US DBS TVRO. This presumably reflects the expectation that even Canadian DBS will have too much English programming for them.
- Younger people are much more interested in all the new services than older people.
- Higher income is a key factor, this being a discretionary item.

Reference to the source tables will show that:

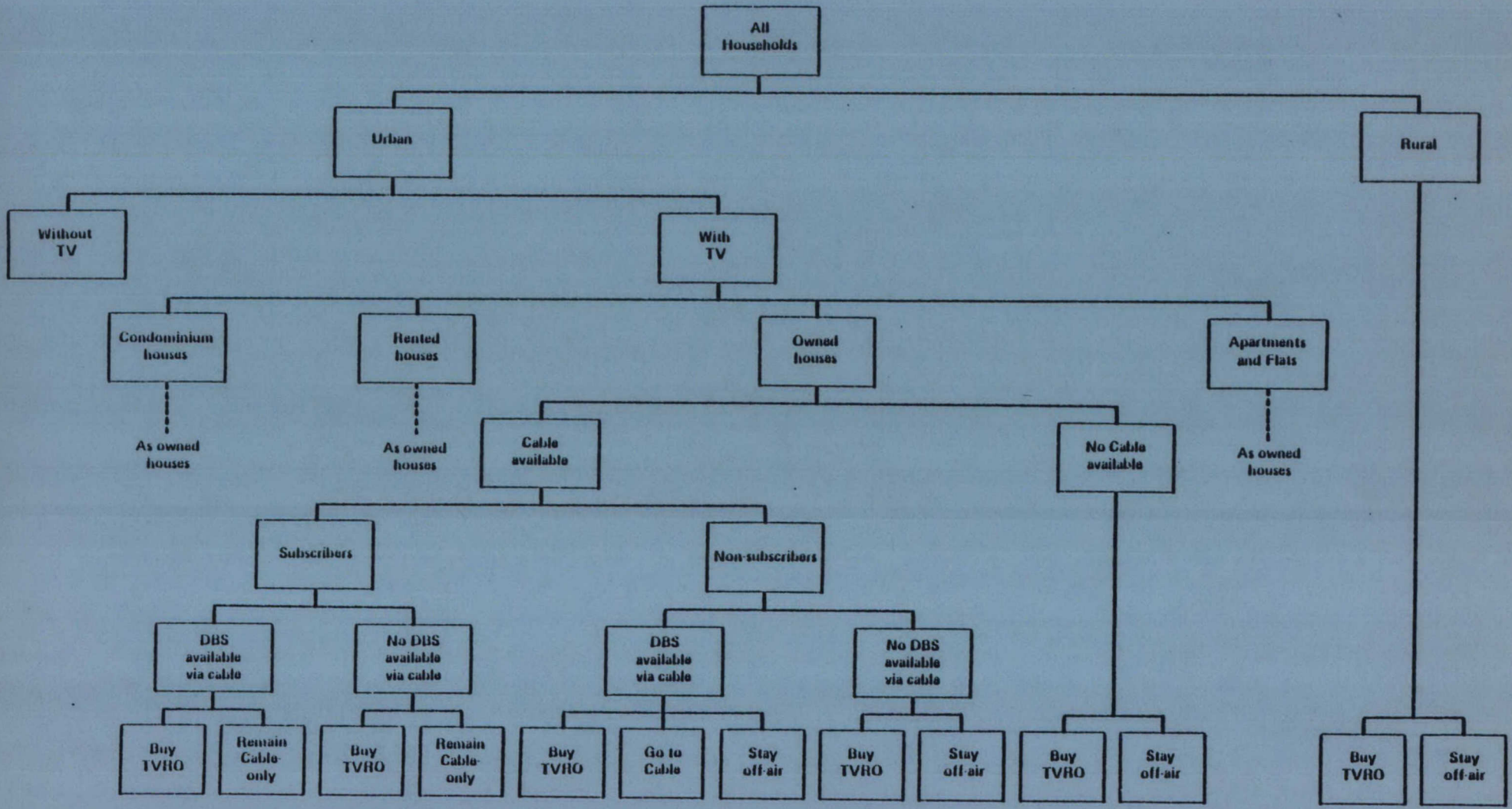
- there is no clear connection with family size, which might have been expected.
- the same applies to ownership of TV sets and VCR's.
- other demographics than those selected above do tend to correlate, but probably only because they themselves are correlated with each other, e.g. education and occupation with income, region to some extent with language and income.

# PART II

# DEMAND PROJECTION METHODOLOGY

Figure 20

STRUCTURE OF
DBS MARKET MODEL



## 5. OVERALL METHODOLOGY

The bulk of the numerical results of this study are outputs of the computer model whose structure is shown in Figure 20 opposite. It starts with all Canadian households (expressed in thousands) and breaks them into smaller and smaller groups tier by tier, by multiplying by up to seven percentages. As an example, the number of urban owner-occupiers who are expected to keep their cable subscriptions if the DBS service is carried is calculated as:

| | | |
|---|---|---|
| | All households (000's) | |
| X | % urban | (= '000 urban households) |
| X | % with TV | (= '000 urban TV households) |
| X | % owned houses | (= '000 urban owner-occupiers with TV) |
| X | % with cable available | (= '000 urban owner-occupiers with TV and cable available) |
| X | % with cable subscriptions | (= '000 urban owner-occupiers on cable) |
| X | % with DBS service available | (= '000 urban owner-occupiers on cable with DBS available) |
| X | % staying with cable | (= '000 in group of interest) |

Regional as well as national outputs were required over the projection period, 1981-2004. There are therefore eight regional versions of the national model, and each percentage factor in each version of the model has one entry for each of the 24 years.

In addition, the model recognizes the uncertainties inherent in the development of the DBS market. It incorporates up to three different (high, medium and low) versions of each factor.

In running the market model, every factor (or in some cases, groups of factors) can be independently set to any one of the three

levels. There are therefore thousands of possible scenarios that can be produced. This report deals extensively with only 6 of them: two versions of the base case, with differing programming levels but all other factors set at the medium level; two high cases, with all non-programming factors set high; and two low cases, constructed analogously to the high cases.

There are five main sources for the data input to the market model: Statistics Canada reports, both published and specially commissioned; demographic forecasts derived by Woods Gordon's Economics group from Statistics Canada forecasts; a nation-wide survey of households, conducted by Market Facts of Canada; an executive interview program with industry participants, conducted by Woods Gordon; and a 1982 report on rural demand produced independently by Demand Research Consultants. The exact methods of deriving the model inputs from the information provided by the five sources are described in subsequent sections.

The household survey was conducted with a national mail panel which provided 1,400 usable returns. To match the required model inputs, separate samples were selected for cable subscribers (661 respondents); non-subscribers with cable service available (432 respondents); and non-subscribers with no cable service available (307 respondents). At standard confidence levels, grossed-up survey results based on samples of this size will be within six percentage points of reality ('reality' meaning 'what the whole population would say', without reference to how 'correct' their comments and indicated actions might be). The questionnaire centred on determining public reactions to

various possible versions of DBS service. Details of methods and results are given in Appendices C and D.

In the executive interview program, Woods Gordon spoke to senior people in a large number of organizations whose activities may affect the chances of the public's being able to realize its expressed wishes regarding DBS. These organizations included cable and Pay TV systems, program providers, equipment companies and others. Further detail will be found in Appendix B.

## 6. HOUSEHOLD PROJECTIONS - URBAN AND RURAL

The household projections used in this study are shown in the tables in Appendix F. The census-year totals are based on population projections which approximate projections 3 and 4 published in February 1979 by Statistics Canada in its report Population Projections for Canada and the Provinces (catalogue number 91-520).

The regional population projections incorporate our views on provincial age structures and interprovincial migration. We have made some minor further adjustments in order to bring the population estimates into line with the results of the 1981 census, and then applied persons-per-household ratios projected from 1961-81 trends to arrive at the numbers of households.

The split between urban and rural households is projected from the trends shown by the 1961-1981 census data. The net result of adopting the split used in Demand Research Consultants' study of the rural market would be insignificant, transferring only 1% of households from the rural to the urban category.

The above processes yielded projections for the quinquennial census years (1986, 1991, 1996, 2001). Satisfactory accuracy for the intercensal years was achieved by linear interpolation.

The estimates developed in this way form our base case, which reflects what we consider to be the most likely future developments. In order to allow for unpredictable changes in demographic trends, high and low scenarios also were constructed. It is our belief that over so short a period (demographically speaking), deviations of more than 5-10% from the final base case total are

extremely unlikely. Downward rather than upward deviations appear much more probable, because of the likely influence of demographic and economic trends, such as lower rates of immigration, fertility, non-family household formation, and undoubling (the splitting of one two-family household into two one-family households). We therefore consider that a total 5% above the base case by 2001 is a sound choice for the high scenario, 10% below for the low scenario. These changes are phased in smoothly (on a percentage basis) over the whole period, proportionately to the urban and rural shares of the total.

## 7. TV OWNERSHIP AND HOUSEHOLD TYPES

Special tabulations were commissioned from the Statistics Canada data-bank based on the annual Household Facilities and Equipment survey, which is published as report # 64-202. These covered urban households in seven regions and Canada (excluding both Territories) for the years 1972-1982. Their definition of 'urban' includes smaller communities than this study required (down to 400 or 500 population in most provinces, rather than 2,500), but, since only percentages were used (of ownership, etc.), the potential inaccuracy was insignificant and we consider it acceptable.

The tabulations - samples for one year are shown following this section - cover TV facilities in the four types of household separated for this study: -

- single-family owned condominiums (data available only for 1972 and 1977-1982)
- single-family owned houses (including row, semi-detached, etc.)
- single-family rented houses (including row, semi-detached, etc.)
- all apartments and flats.

The facilities covered are TV ownership, cable subscriptions (available only for 1975 and 1977-1982) and type(s) of TV set(s) owned.

The TV ownership and household type data form the basis of the corresponding projections input to the market model.

The TV ownership projections were made by curve-fitting, and all are very close to saturation at 100%. No useful purpose would therefore be served by developing high and low versions of the projections, which are all logistic curve extrapolations of 1974-1982 data.

No usable data could be traced on TV ownership in urban areas of the Territories. The best advice from informed sources in government and industry was that it is likely to be close to the national average, which was therefore adopted. A check on the present status and the reasonableness of this assumption will be provided by the results of the 1981 census when they become available.

The household type projections were based on fully adequate data except in the case of condominiums, whose actual numbers are very low, so that Statistics Canada's data, being derived from sample surveys, yield very variable estimates. In most cases, therefore, the base data on condominiums used rely largely on our judgment. No good statistics are available elsewhere, although CMHC has a study under way aimed at solving the problem.

Our choice of methods of deriving the market model's household type percentages were influenced by three considerations:

i) Curve-fitting projection techniques are inappropriate in the medium term because no simple trends are evident: a major housing study would be required to cope with the types of social and economic determinants involved.

ii) The condominium percentages published are very low and very variable: the practical solution is to use in each region a single constant for all years.

iii) The four household-type percentages are interdependent, the historical tendency being for apartments/flats to move up as single-family owned houses move down, rented houses remaining roughly constant.

Consequently, three scenarios were constructed, a base case, a high-apartment/low-owned-houses case, and a low-apartment/high-owned-houses case. In all three, the condominium percentage was held constant, and rented houses fell out as a residual.

The regional apartment and owned-house percentages for the base case were mostly found as simple averages of the 1972-1982 data. In a few cases, the earliest or last readings were omitted from the averages as obvious outliers.

For the other scenarios, the average of the highest readings over the period for one of the two variables was coupled with the average of the lowest of the other. The two combine to determine the rented-house percentage.

In all cases, the national percentages were calculated as weighted averages of the regional percentages. The percentages for the Territories are based on the the 1976 census.

The cable subscription data shown in the commissioned Table 2 were intended as a cross-check against numbers to be derived from Statistics Canada's annual report, Cable Television, #56-205. Good consistency was found, as discussed further in the next section.

Table 3, on type(s) of TV set(s) owned, was required only as validation of the consumer survey. The tables previously described also have this as a secondary purpose. In all cases, the numbers cross-checked well.

TABLE 1A TV OWNERSHIP OF URBAN HOUSEHOLDS BY TENURE, TYPE OF DWELLING AND PROVINCE, 1980

| | HOUSEHOLDS WITH T.V. | | | | | | |
|---|---|---|---|---|---|---|---|
| | SINGLE DWELLING | | | APART-MENTS/ FLATS | TOTAL WITH TV | WITHOUT T.V. | TOTAL URBAN |
| | CONDOS | OWNED | OTHER | RENTED | | | |
| NFLD | | | | | | | |
| SAMPLE COUNT | 1 | 753 | 109 | 183 | 1046 | 21 | 1067 |
| WEIGHTED COUNT(000S) | * | 67 | 10 | 18 | 96 | * | 97 |
| PEI | | | | | | | |
| SAMPLE COUNT | 0 | 209 | 51 | 89 | 349 | 6 | 355 |
| WEIGHTED COUNT(000S) | * | 10 | * | 5 | 17 | * | 17 |
| NS | | | | | | | |
| SAMPLE COUNT | 3 | 746 | 100 | 332 | 1181 | 19 | 1200 |
| WEIGHTED COUNT(000S) | * | 96 | 13 | 47 | 157 | 4 | 161 |
| NB | | | | | | | |
| SAMPLE COUNT | 4 | 974 | 127 | 436 | 1541 | 27 | 1568 |
| WEIGHTED COUNT(000S) | * | 77 | 10 | 42 | 130 | * | 132 |
| PQ | | | | | | | |
| SAMPLE COUNT | 10 | 1572 | 167 | 2098 | 3847 | 51 | 3898 |
| WEIGHTED COUNT(000S) | 4 | 678 | 58 | 993 | 1733 | 24 | 1757 |
| ONT | | | | | | | |
| SAMPLE COUNT | 66 | 3160 | 491 | 1604 | 5321 | 110 | 5431 |
| WEIGHTED COUNT(000S) | 32 | 1429 | 218 | 803 | 2481 | 56 | 2537 |
| MAN | | | | | | | |
| SAMPLE COUNT | 3 | 1300 | 222 | 496 | 2021 | 56 | 2077 |
| WEIGHTED COUNT(000S) | * | 174 | 31 | 71 | 277 | 6 | 283 |
| SASK | | | | | | | |
| SAMPLE COUNT | 13 | 1553 | 279 | 414 | 2259 | 54 | 2313 |
| WEIGHTED COUNT(000S) | * | 139 | 24 | 43 | 208 | 6 | 213 |
| ALTA | | | | | | | |
| SAMPLE COUNT | 52 | 1878 | 509 | 800 | 3239 | 108 | 3347 |
| WEIGHTED COUNT(000S) | 10 | 314 | 92 | 143 | 560 | 17 | 577 |
| BC | | | | | | | |
| SAMPLE COUNT | 18 | 1550 | 281 | 732 | 2581 | 94 | 2675 |
| WEIGHTED COUNT(000S) | 4 | 449 | 73 | 227 | 754 | 23 | 776 |
| CANADA | | | | | | | |
| SAMPLE COUNT | 170 | 13695 | 2336 | 7184 | 23385 | 546 | 23931 |
| WEIGHTED COUNT(000S) | 52 | 3433 | 534 | 2392 | 6411 | 140 | 6551 |

SOURCE: HOUSEHOLD FACILITIES & EQUIPMENT SURVEY
NOTE: * INDICATES ESTIMATED NUMBER LESS THAN 4000 HOUSEHOLD

TABLE 1A TV OWNERSHIP OF URBAN HOUSEHOLDS BY TENURE, TYPE OF DWELLING AND PROVINCE, 1980

| | HOUSEHOLDS WITH T. V. | | | | | | |
|---|---|---|---|---|---|---|---|
| | SINGLE DWELLING | | | APART- | | | |
| | OWNED | | | MENTS/ | TOTAL | WITHOUT | TOTAL |
| | CONDOS | OTHER | RENTED | FLATS | WITH TV | T.V. | URBAN |
| ATLANTIC | | | | | | | |
| SAMPLE COUNT | 8 | 2682 | 387 | 1040 | 4117 | 73 | 4190 |
| WEIGHTED COUNT(000S) | * | 250 | 36 | 112 | 399 | 8 | 407 |
| PRAIRIES | | | | | | | |
| SAMPLE COUNT | 68 | 4731 | 1010 | 1710 | 7519 | 218 | 7737 |
| WEIGHTED COUNT(000S) | 11 | 627 | 148 | 258 | 1044 | 29 | 1073 |
| MAN/SASK | | | | | | | |
| SAMPLE COUNT | 16 | 2853 | 501 | 910 | 4280 | 110 | 4390 |
| WEIGHTED COUNT(000S) | * | 313 | 56 | 115 | 484 | 12 | 496 |

SOURCE: HOUSEHOLD FACILITIES & EQUIPMENT SURVEY
NOTE: * INDICATES ESTIMATED NUMBER LESS THAN 4000 HOUSEHOLD

TABLE 1B TV OWNERSHIP OF URBAN HOUSEHOLDS BY TENURE, TYPE OF DWELLING AND SIZE OF AREA, 1980

| | HOUSEHOLDS WITH T. V. | | | | | | |
|---|---|---|---|---|---|---|---|
| | SINGLE DWELLING | | | APART- | | | |
| | OWNED | | | MENTS/ | TOTAL | WITHOUT | TOTAL |
| | CONDOS | OTHER | RENTED | FLATS | WITH TV | T.V. | URBAN |
| CMA | | | | | | | |
| SAMPLE COUNT | 148 | 7029 | 1178 | 5149 | 13504 | 328 | 13832 |
| WEIGHTED COUNT(000S) | 48 | 2287 | 336 | 1908 | 4580 | 102 | 4681 |
| OTHER URBAN | | | | | | | |
| SAMPLE COUNT | 22 | 6666 | 1158 | 2035 | 9881 | 218 | 10099 |
| WEIGHTED COUNT(000S) | 4 | 1146 | 198 | 484 | 1831 | 39 | 1870 |
| TOTAL | | | | | | | |
| SAMPLE COUNT | 170 | 13695 | 2336 | 7184 | 23385 | 546 | 23931 |
| WEIGHTED COUNT(000S) | 52 | 3433 | 534 | 2392 | 6411 | 140 | 6551 |

SOURCE: HOUSEHOLD FACILITIES & EQUIPMENT SURVEY
NOTE: * INDICATES ESTIMATED NUMBER LESS THAN 4000 HOUSEHOLDS

TABLE 2A URBAN HOUSEHOLDS BY CABLE TV, TENURE, TYPE OF DWELLING AND PROVINCE, 1980

| | HOUSEHOLDS WITH CABLE | | | | | | |
|---|---|---|---|---|---|---|---|
| | OWNED | | | APART-MENTS/ | TOTAL | WITHOUT | TOTAL |
| | CONDOS | SINGLE DWELLING OTHER | RENTED | FLATS | WITH CABLE | CABLE | URBAN |
| NFLD | | | | | | | |
| SAMPLE COUNT | 1 | 185 | 33 | 78 | 297 | 770 | 1067 |
| WEIGHTED COUNT(000S) | * | 21 | * | 8 | 32 | 65 | 97 |
| PEI | | | | | | | |
| SAMPLE COUNT | 0 | 110 | 37 | 49 | 196 | 159 | 355 |
| WEIGHTED COUNT(000S) | * | 5 | * | * | 10 | 8 | 17 |
| NS | | | | | | | |
| SAMPLE COUNT | 3 | 443 | 59 | 223 | 728 | 472 | 1200 |
| WEIGHTED COUNT(000S) | * | 61 | 9 | 33 | 102 | 58 | 161 |
| NB | | | | | | | |
| SAMPLE COUNT | 3 | 560 | 71 | 290 | 924 | 644 | 1568 |
| WEIGHTED COUNT(000S) | * | 45 | 6 | 30 | 82 | 50 | 132 |
| PQ | | | | | | | |
| SAMPLE COUNT | 5 | 673 | 69 | 984 | 1731 | 2167 | 3898 |
| WEIGHTED COUNT(000S) | * | 302 | 25 | 464 | 794 | 963 | 1757 |
| ONT | | | | | | | |
| SAMPLE COUNT | 59 | 2076 | 334 | 1235 | 3704 | 1727 | 5431 |
| WEIGHTED COUNT(000S) | 28 | 978 | 155 | 631 | 1793 | 744 | 2537 |
| MAN | | | | | | | |
| SAMPLE COUNT | 2 | 784 | 111 | 333 | 1230 | 847 | 2077 |
| WEIGHTED COUNT(000S) | * | 123 | 19 | 51 | 193 | 90 | 283 |
| SASK | | | | | | | |
| SAMPLE COUNT | 8 | 539 | 91 | 186 | 824 | 1489 | 2313 |
| WEIGHTED COUNT(000S) | * | 55 | 9 | 21 | 86 | 127 | 213 |
| ALTA | | | | | | | |
| SAMPLE COUNT | 41 | 1151 | 312 | 518 | 2022 | 1325 | 3347 |
| WEIGHTED COUNT(000S) | 7 | 203 | 62 | 96 | 368 | 209 | 577 |
| BC | | | | | | | |
| SAMPLE COUNT | 16 | 1228 | 203 | 705 | 2152 | 523 | 2675 |
| WEIGHTED COUNT(000S) | 4 | 380 | 56 | 218 | 658 | 119 | 776 |
| CANADA | | | | | | | |
| SAMPLE COUNT | 138 | 7749 | 1320 | 4601 | 13808 | 10123 | 23931 |
| WEIGHTED COUNT(000S) | 44 | 2174 | 345 | 1555 | 4118 | 2433 | 6551 |

SOURCE: HOUSEHOLD FACILITIES & EQUIPMENT SURVEY
NOTE: * INDICATES ESTIMATED NUMBER LESS THAN 4000 HOUSEHOLD

TABLE 2A URBAN HOUSEHOLDS BY CABLE TV, TENURE,TYPE OF DWELLING AND PROVINCE, 1980

| | HOUSEHOLDS WITH CABLE | | | | | | |
|---|---|---|---|---|---|---|---|
| | SINGLE DWELLING | | | | | | |
| | OWNED CONDOS | OTHER | RENTED | APART-MENTS/ FLATS | TOTAL WITH CABLE | WITHOUT CABLE | TOTAL URBAN |
| ATLANTIC | | | | | | | |
| SAMPLE COUNT | 7 | 1298 | 200 | 640 | 2145 | 2045 | 4190 |
| WEIGHTED COUNT(000S) | * | 132 | 20 | 73 | 226 | 181 | 407 |
| PRAIRIES | | | | | | | |
| SAMPLE COUNT | 51 | 2474 | 514 | 1037 | 4076 | 3661 | 7737 |
| WEIGHTED COUNT(000S) | 8 | 381 | 89 | 168 | 647 | 426 | 1073 |
| MAN/SASK | | | | | | | |
| SAMPLE COUNT | 10 | 1323 | 202 | 519 | 2054 | 2336 | 4390 |
| WEIGHTED COUNT(000S) | * | 178 | 28 | 73 | 279 | 218 | 496 |

SOURCE: HOUSEHOLD FACILITIES & EQUIPMENT SURVEY
NOTE: * INDICATES ESTIMATED NUMBER LESS THAN 4000 HOUSEHOLD

TABLE 2B URBAN HOUSEHOLDS BY CABLE TV, TENURE,TYPE OF DWELLING AND SIZE OF AREA, 1980

| | HOUSEHOLDS WITH CABLE | | | | | | |
|---|---|---|---|---|---|---|---|
| | SINGLE DWELLING | | | | | | |
| | OWNED CONDOS | OTHER | RENTED | APART-MENTS/ FLATS | TOTAL WITH CABLE | WITHOUT CABLE | TOTAL URBAN |
| CMA | | | | | | | |
| SAMPLE COUNT | 128 | 4951 | 815 | 3473 | 9367 | 4465 | 13832 |
| WEIGHTED COUNT(000S) | 42 | 1563 | 237 | 1245 | 3087 | 1594 | 4681 |
| OTHER URBAN | | | | | | | |
| SAMPLE COUNT | 10 | 2798 | 505 | 1128 | 4441 | 5658 | 10099 |
| WEIGHTED COUNT(000S) | * | 611 | 108 | 310 | 1031 | 839 | 1870 |
| TOTAL | | | | | | | |
| SAMPLE COUNT | 138 | 7749 | 1320 | 4601 | 13808 | 10123 | 23931 |
| WEIGHTED COUNT(000S) | 44 | 2174 | 345 | 1555 | 4118 | 2433 | 6551 |

SOURCE: HOUSEHOLD FACILITIES & EQUIPMENT SURVEY
NOTE: * INDICATES ESTIMATED NUMBER LESS THAN 4000 HOUSEHOLDS

TABLE 3A URBAN HOUSEHOLDS BY TYPE OF TV AND BY PROVINCE, 1980

| | WITH COLOUR TV 1 SET | WITH COLOUR TV 2 OR MORE | TOTAL | WITH B/W ONLY | TOTAL WITH TV | WITHOUT TV | TOTAL |
|---|---|---|---|---|---|---|---|
| NFLD | | | | | | | |
| SAMPLE COUNT | 702 | 52 | 754 | 292 | 1046 | 21 | 1067 |
| WEIGHTED COUNT(000S) | 65 | 6 | 71 | 24 | 96 | * | 97 |
| PEI | | | | | | | |
| SAMPLE COUNT | 249 | 22 | 271 | 78 | 349 | 6 | 355 |
| WEIGHTED COUNT(000S) | 12 | * | 13 | 4 | 17 | * | 17 |
| NS | | | | | | | |
| SAMPLE COUNT | 838 | 100 | 938 | 243 | 1181 | 19 | 1200 |
| WEIGHTED COUNT(000S) | 113 | 13 | 126 | 30 | 157 | 4 | 161 |
| NB | | | | | | | |
| SAMPLE COUNT | 1108 | 117 | 1225 | 316 | 1541 | 27 | 1568 |
| WEIGHTED COUNT(000S) | 94 | 9 | 103 | 27 | 130 | * | 132 |
| PQ | | | | | | | |
| SAMPLE COUNT | 2740 | 394 | 3134 | 713 | 3847 | 51 | 3898 |
| WEIGHTED COUNT(000S) | 1233 | 180 | 1413 | 319 | 1733 | 24 | 1757 |
| ONT | | | | | | | |
| SAMPLE COUNT | 3976 | 519 | 4495 | 826 | 5321 | 110 | 5431 |
| WEIGHTED COUNT(000S) | 1844 | 254 | 2098 | 384 | 2481 | 56 | 2537 |
| MAN | | | | | | | |
| SAMPLE COUNT | 1468 | 182 | 1650 | 371 | 2021 | 56 | 2077 |
| WEIGHTED COUNT(000S) | 201 | 26 | 227 | 50 | 277 | 6 | 283 |
| SASK | | | | | | | |
| SAMPLE COUNT | 1681 | 262 | 1943 | 316 | 2259 | 54 | 2313 |
| WEIGHTED COUNT(000S) | 156 | 24 | 179 | 28 | 208 | 6 | 213 |
| ALTA | | | | | | | |
| SAMPLE COUNT | 2406 | 415 | 2821 | 418 | 3239 | 108 | 3347 |
| WEIGHTED COUNT(000S) | 413 | 70 | 483 | 77 | 560 | 17 | 577 |
| BC | | | | | | | |
| SAMPLE COUNT | 2008 | 255 | 2263 | 318 | 2581 | 94 | 2675 |
| WEIGHTED COUNT(000S) | 594 | 69 | 664 | 90 | 754 | 23 | 776 |
| CANADA | | | | | | | |
| SAMPLE COUNT | 17176 | 2318 | 19494 | 3891 | 23385 | 546 | 23931 |
| WEIGHTED COUNT(000S) | 4725 | 653 | 5378 | 1033 | 6411 | 140 | 6551 |

SOURCE: HOUSEHOLD FACILITIES AND EQUIPMENT SURVEY

NOTE: * INDICATES ESTIMATED NUMBER LESS THAN 4000 HOUSEHOLDS

TABLE 3A URBAN HOUSEHOLDS BY TYPE OF TV AND BY PROVINCE, 1980

| | WITH COLOUR TV 1 SET | WITH COLOUR TV 2 OR MORE | TOTAL | WITH B/W ONLY | TOTAL WITH TV | WITHOUT TV | TOTAL |
|---|---|---|---|---|---|---|---|
| ATLANTIC | | | | | | | |
| SAMPLE COUNT | 2897 | 291 | 3188 | 929 | 4117 | 73 | 4190 |
| WEIGHTED COUNT(000S) | 285 | 29 | 314 | 85 | 399 | 8 | 407 |
| PRAIRIES | | | | | | | |
| SAMPLE COUNT | 5555 | 859 | 6414 | 1105 | 7519 | 218 | 7737 |
| WEIGHTED COUNT(000S) | 769 | 120 | 889 | 155 | 1044 | 29 | 1073 |
| MAN/SASK | | | | | | | |
| SAMPLE COUNT | 3149 | 444 | 3593 | 687 | 4280 | 110 | 4390 |
| WEIGHTED COUNT(000S) | 356 | 50 | 406 | 78 | 484 | 12 | 496 |

SOURCE: HOUSEHOLD FACILITIES AND EQUIPMENT SURVEY

NOTE: * INDICATES ESTIMATED NUMBER LESS THAN 4000 HOUSEHOLDS

TABLE 3B URBAN HOUSEHOLDS BY TYPE OF TV AND BY PROVINCE, 1980

| | WITH COLOUR TV 1 SET | WITH COLOUR TV 2 OR MORE | TOTAL | WITH B/W ONLY | TOTAL WITH TV | WITHOUT TV | TOTAL |
|---|---|---|---|---|---|---|---|
| CMA | | | | | | | |
| SAMPLE COUNT | 9810 | 1454 | 11264 | 2240 | 13504 | 328 | 13832 |
| WEIGHTED COUNT(000S) | 3343 | 481 | 3824 | 756 | 4580 | 102 | 4681 |
| OTHER URBAN | | | | | | | |
| SAMPLE COUNT | 7366 | 864 | 8230 | 1651 | 9881 | 218 | 10099 |
| WEIGHTED COUNT(000S) | 1382 | 172 | 1554 | 277 | 1831 | 39 | 1870 |
| TOTAL | | | | | | | |
| SAMPLE COUNT | 17176 | 2318 | 19494 | 3891 | 23385 | 546 | 23931 |
| WEIGHTED COUNT(000S) | 4725 | 653 | 5378 | 1033 | 6411 | 140 | 6551 |

SOURCE: HOUSEHOLD FACILITIES AND EQUIPMENT SURVEY

NOTE: * INDICATES ESTIMATED NUMBER LESS THAN 4000 HOUSEHOLDS

## 8. CABLE TV AVAILABILITY AND SUBSCRIPTIONS

Data since 1966 on cable TV availability (households "passed" by cable) and subscriptions are published in Statistics Canada's annual report, Cable Television, #56-205. A number of errors in these data, caused by faulty input or transcription, were corrected, largely in consultation with Statistics Canada, before any analysis was attempted. It was also agreed with Statistics Canada and the author of DOC's urban-rural split of households that was used for the rural study that a good approximation to urban numbers (not otherwise available in the data-base) could be achieved by taking only the data referring to systems with over 1,000 subscribers.

Close examination of the data showed, however, that:

i) Certain details, such as number of subscriptions, are of much better quality than others, such as number of households in licensed areas: a system operator will obviously report most accurately what he needs to know to run his business day-to-day.

ii) Particularly in the later years, many rural households in areas such as B.C. are included in the data, as rural systems have increased in extent and acquired over 1,000 subscribers.

iii) The statistics for Manitoba and Saskatchewan cannot be separated, for reasons of confidentiality.

iv) The numbers are at year-end, not mid-year like the rest of our data.

v) There is no basis for separating household types.

These factors made it necessary to supplement the data with the subscription information from the Household Facilities and Equipment study described in the preceding section. This approach necessitated a number of simplifying assumptions and the use of considerable judgment.

Cable TV availability (the proportion of 'passed' households among the total) was indispensable input to the model. Estimates were therefore derived by combining data from the Cable TV and Household Facilities reports. The percentage of all households that subscribe to cable (the 'total subscriber percentage') is the product of the percentage of all households to whom cable is available (the 'total cable TV availability percentage') and the percentage of those with cable available who actually subscribe (the 'subscription rate'). For example, if the cable TV availability percentage is 80% and the subscription rate is 70%, then the total subscriber percentage is 56% (.80 X .70 = .56).

We have the total subscriber percentage (the 56% in our example) from the Household Facilities report. We can therefore find the cable TV availability percentage (the 80% in the example) if we have a reasonable estimate of the subscription rate (the 70%).

This subscription rate we found in the Cable Television report, using the percentage of subscribers among all households passed by large cable systems (over 1,000 subscribers). This percentage is credible because it involves two pieces of information likely to be accurately known to the reporting firms, number of subscribers and number of households passed. Also, any 'contamination' from the inclusion of large rural systems is likely to be insignificant, since the urban and large rural subscriber percentages should not be expected to be radically different.

Projections of the historical regional subscription rates were made statistically by curve-fitting techniques, with limited

amounts of judgment applied as necessary. The national projection was found as a weighted average of the regions. The Territories were assigned the same projection as Saskatchewan, which has a similar level of cable TV availability at present.

Because cable coverage is already so near 100% in most cities, little benefit was foreseen in developing high and low availability projections.

Using the subscription rates thus calculated from the Cable TV report, and the total subscriber percentages obtained from the Household Facilities report, we were able to develop the cable TV availability percentages.

Although the basic data from the Household Facilities report permit analysis of the total subscriber percentage by the four different types of household, this is not the case for the subscription rate, derived from the Cable TV report.

We have assumed that the differences in total subscriber percentages among the different types of household reflect differences in the subscription rate, rather than in cable TV availability, which, with virtually all urban areas now being fully cabled, applies roughly equally to all types of household.

Having thus developed a set of figures for cable TV availability applying to all types of household, we were able to develop a series of subscription rates for each type of household which would be consistent with the known total subscriber percentages in each household category obtained from the Household Facilities report.

The pattern of subscription rates thus derived is consistent with the logical expectation that in the early days of cable TV a higher proportion of apartment dwellers with cable available would become subscribers than would home-owners in the same situation. This is because home-owners have the option of putting up antennas and would also tend to get better off-air reception without antennas, while it would likely pay the cable system operator to concentrate his promotional efforts on apartment dwellers and their landlords. Over the years, the gap between the two should narrow as only the hard core of holdouts are left among apartment dwellers and home-owners become more familiar with the benefits of cable.

There were few significant differences between the subscriber percentages among owned and rental houses. The two were therefore combined. For condominiums the percentages were too variable to project separately, but were clearly higher than for other houses. The same percentages were therefore assigned as to apartments.

As for availability, curve-fitting techniques were used to make projections where possible, with limited and straightforward judgment applied in a few cases.

The only case where it appeared to us necessary to develope alternative subscriber projections was that of Quebec, where historical levels are far lower than in any other region. Although some of our industry contacts put this down to a history of inferior marketing in the Montreal area, which might be remedied now that a more dynamic management was in place, a check of other sizeable systems in the province showed that a number of them too have very low

penetration. Such a finding does not support this argument for an alternative projection for Quebec.

Another interpretation of this anomaly is simply that any additional channels imported to an area - one of the main attractions of cable - would necessarily be in English, and that would not be of great interest to francophones. This we find a more persuasive argument. Our base case for Quebec is therefore a continuation of the low historical trend. A high case, using projections based on curve-fitting, brings future penetration more in line with other regions, and has therefore been included.

Some industry participants believe that the advent of Pay TV will induce a significant number of holdouts to become cable subscribers. But the anticipated extent of this 'lift' is very variable. Some argue that it will be negligible, because the people who want cable in the first place and those who will want Pay TV are basically the same heavy viewers. We agree with this second line of thinking, and do not, therefore, introduce any further high subscriber projections.

In all cases, the subscriber projections for Canada are found as weighted averages of the regions. The Territories are assigned the same projections as B.C., where current subscriber percentages are at comparable levels.

## 9. AVAILABILITY OF DBS SERVICE

The availability of DBS service to those who cannot or do not choose to buy a TVRO will depend on whether others decide to pick up and distribute the signals. Those others may be cable companies or those apartment managers and condominium boards that opt for their own master antenna (MATV) installations. However, our executive interview program indicated little interest in acquiring or maintaining MATV systems: most current owners, in fact, are getting rid of them as fast as they can in favour of cable.

The question, therefore, is essentially whether and when the cable companies will take the DBS service. Our conclusion is essentially that all of them will, but only in the regular course of equipment replacement. We describe below the reasons for this conclusion and how we derived the input data required by the market model.

The dominant attitude found in our executive interviews was that a DBS system would be a very welcome source of improved signals, but that the proposed programming is of little interest as such: most of it is already available, or soon will be. (This applies both to the channels envisaged for the interim service on Anik C-3 and the first dedicated satellite, and to the enlarged package proposed for the second dedicated satellite.) The basic tendency will therefore be to adopt DBS as an evolutionary step, as existing receiving equipment requires replacement or upgrading. It will be particularly attractive for those systems that rely on expensive microwave links.

The few other advantages seen by cable companies were small. Many systems already have 14/12 TVRO's (especially in Quebec, for TVFQ) and are therefore comfortable with the hardware. Some cable operators might be interested in any DBS channels not already carried: they would adopt the service in order to meet competition from consumer TVRO's, even while TVRO's are still expensive and demand therefore limited. Only more isolated systems without microwave or similar feeds would be strongly attracted by the additional programming.

Our availability estimates are therefore based principally on the eventual replacement of all cable equipment, accelerated where the system has most to gain, viz. when it can replace expensive microwave links. The accepted replacement cycle appears to be 7-10 years. We have assumed that the accelerated cycle at the low end of this range would be 5 years, and a delayed cycle (for systems with no problems or no money) might be 15 years at the high end of the range.

Thus, our high estimates assume that equal numbers of subscribers to microwave-fed systems will acquire DBS service each year over a 5-year replacement cycle (there being no usable basis for any other pattern). The remainder of the region's subscribers will be phased in more slowly, over a 7-year cycle. The medium and low estimates are derived similarly, using 7 and 10 years respectively for the microwave systems and 10 and 15 years for non-microwave. The regional and national microwave and non-microwave proportions are estimated from the latest available edition of the Matthews CATV directory (Publicorp Communications, Oct. 1982).

As an example of the calculation of a high estimate, take a region with 60% of its cable subscribers served by systems with microwave feeds, 40% by other systems. The 60% will acquire DBS service over 5 years, the 40% over 7 years, as follows:

Cable Subscribers with DBS Service Available (%)

| Year | On Microwave-fed Systems | On other Systems | Total |
|---|---|---|---|
| 1 | 12.0 | 5.7 | 17.7 |
| 2 | 24.0 | 11.4 | 35.4 |
| 3 | 36.0 | 17.1 | 53.1 |
| 4 | 48.0 | 22.9 | 70.9 |
| 5 | 60.0 | 28.6 | 88.6 |
| 6 | 60.0 | 34.3 | 94.3 |
| 7 | 60.0 | 40.0 | 100.0 |

## 10. URBAN CONSUMER CHOICES

The market model required projections of consumer reaction to nine basic scenarios derived from all possible combinations of three levels of consumer cost and three levels of programming:-

| Cost | Programming: Full | Programming: Reduced | Programming: Minimum |
|---|---|---|---|
| High | | | 9 |
| Medium | | | |
| Low | 1 | | |

Consumer demand would be expected to be greatest in situation 1 and smallest in situation 9.

The levels of cost for TVRO's were $400, $600 and $800, which were expected to bracket the feasible price range (in 1982$) by the time the more powerful dedicated satellite was launched for 1988. It was assumed that a price in the area of $1,200 would be the only feasible one until then.

The Full range of programming was defined as the maximum foreseen being carried on the Canadian DBS service (approximately 16 channels per beam, consisting of Canadian free, pay and special-interest channels plus the US networks), with US DBS channels also accessible. The Reduced level of programming tested would be the same, except that the Canadian special-interest channels would be excluded. The Minimum level would additionally exclude the US networks.

Reaction to these scenarios was also expected to vary according to type of home (however attractive a TVRO to an apartment dweller, it would not be a viable option), whether their local cable company carried the service, whether they had such a company at all and, if so, whether they chose to subscribe or not. The input data for the market model would need to be specified for all these possibly different behaviour patterns.

A full set of 9 forecasts was therefore required in theory for each of the 11 sub-groups of urban consumers (those in the bottom tier of Fig. 20) within each of the 4 different types of household, that is 9 x 11 x 4 = 396 forecasts. This will be seen from the market model structure illustrated in Section 5.

However, the significant possibilities are far fewer. Our executive interview program and general knowledge of the real estate industry convinced us that the number of condominium and apartment households with a genuine TVRO option was negligible, zero for all practical purposes. The only real possibility was that some of these households with cable available but not subscribing might be persuaded by the advent of DBS to take out subscriptions. The requirement in the condominium-apartment area was therefore reduced from twenty-two (2 x 11) sets of 9 forecasts to one, to cover non-subscribers adopting cable (condominiums being so small a group that they could not be separated).

Furthermore, there appeared to be no good basis for separating households living in rented and owned houses. After sub-dividing our consumer market sample of 1,400 so finely on the other

bases (cable availability and subscription, preferred options), it was not possible to distinguish the two with any statistical confidence. These types of households together therefore required only 6 groups of 9 forecasts, the other 5 groups being residuals (i.e. what is left to make up 100% when all others have been specified).

All of the forecasts were developed in approximately the same way. Estimates of the proportion in each group who would ever buy a TVRO (or adopt cable, as appropriate) and the proportion who would buy in the first year were derived from the consumer survey. These numbers were combined with a suitable adoption rate and processed through the diffusion model (see Appendix A) to distribute demand over the years.

Because of the equipment price-break expected with the change from the interim to the full service, the 1984-7 forecasts were made assuming a $1,200 TVRO and, consequently, a slow rate of adoption. The remaining years' forecasts were at the $400, $600 or $800 level, as appropriate ($10, $15, $20/month for cable adoption), with a moderate adoption rate.

The interested reader may refer to the survey questionnaire reproduced in Appendix C. Our basic consumer choice estimates were derived from the appropriate cross-tabulations of questions 10, 13, 18 and 19.

In the case of the "most likely" scenario, described in Section 3.10, it was not possible to develop directly from the consumer survey the consumer-choice percentages required as input to the market model. This is because it involved a programming option not catered for in the survey (inclusion of the free but not the pay channels of US DBS).

The closest survey options were what we have described as Reduced programming and Minimum programming.

The other features of this subsequently-defined 'most likely' scenario were covered by the survey, however. The procedure thus resolved itself into completing the blank columns in Table 14 opposite. As Table 14 shows, all three options under consideration included the Canadian free and pay DBS channels. The differences concerned the US channels. Because announced plans for the free US DBS channels suggested that their programming would be very similar to that of the networks, we concluded that a package containing the networks would not gain much by having the free DBS channels also. Thus the 'real' differences among the three options rested on the relative attractiveness of the US networks and pay DBS channels.

The question remaining was just where relative to Reduced and Minimum programming the "most likely" scenario would cause urban* TVRO demand to settle. The most reasonable basis for this decision was the importance attributed to the different types of programming by those urban market respondents who regarded Option A (Full programming received by TVRO) favourably: it was the only available basis where choices were made entirely in a TVRO context and where comparisons were not confused by extraneous factors such as comparative costs.

From Figure 18 (opposite p. 62) and the supporting data of Table D4, we concluded that the "pulling power" of the 4 US networks.

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*Rural demand is held constant, because the results of the rural study do not allow the impact of different programming packages to be assessed. Differences in total DBS accessibility are relatively small - under 4%.

TABLE 14

"MOST LIKELY" DBS MARKET SCENARIO

(TVRO @ $400, cable @ $15/month, all other model factors at medium/level.)

1. TVRO Demand ('000 units)

| Year | Any Programming | Reduced Programming | | "Most Likely" Programming* | | Minimum Programming | |
|---|---|---|---|---|---|---|---|
| | Rural | Urban | Total | Urban | Total | Urban | Total |
| 1984 | 150 | 57 | 207 | | | 28 | 178 |
| 1988 | 796 | 634 | 1,430 | | | 204 | 1,000 |
| 1992 | 1,735 | 854 | 2,589 | | | 278 | 2,013 |
| 1996 | 1,979 | 896 | 2,875 | | | 290 | 2,269 |
| 2000 | 2,056 | 937 | 2,993 | | | 302 | 2,358 |
| 2004 | 2,129 | 976 | 3,105 | | | 315 | 2,444 |

2. DBS Accessibility ('000 households)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1984 | 150 | 668 | 818 | | | 642 | 792 |
| 1988 | 796 | 3,834 | 4,630 | | | 3,596 | 4,392 |
| 1992 | 1,735 | 5,933 | 7,668 | | | 5,794 | 7,529 |
| 1996 | 1,979 | 6,460 | 8,439 | | | 6,345 | 8,324 |
| 2000 | 2,056 | 6,771 | 8,827 | | | 6,652 | 8,708 |
| 2004 | 2,129 | 7,074 | 9,203 | | | 6,955 | 9,084 |
| Channels Available - | | Cdn. free<br>Cdn. pay<br>US networks<br>US DBS - pay | | Cdn. free<br>Cdn. pay<br>US networks<br>US DBS - free | | Cdn. free<br>Cdn. pay<br>US DBS - pay | |

* Defined by DOC after the development of the planned study outputs.

Source: Woods Gordon Market Projection Model.

would be about double that of the US DBS Pay channels. This is consistent with the dominance of cable subscribers in urban TVRO demand and their having generally good alternative sources for the 4 US networks.

Accordingly, we estimated the urban numbers at the mid-point between the two reference scenarios. The rural numbers were then added back to arrive at the totals. Table 10, in Section 3.10, summarizes the results, which are shown in full in Tables E31 and E32.

## 11. RURAL DEMAND FOR SERVICE

The figures for rural demand included in this report are based on those given in the March 1982 study by Demand Research Consultants (DRC). The original objectives of DRC's study were quite different from ours, and no information beyond that published is available to us. Their forecasts were:

i) National only.

ii) Calculated on a constant 1976 population.

iii) Based on only one level of programming.

DRC used the diffusion model described in Appendix A, which we also adopted to project market development. The three essential inputs to this model, the eventual level of saturation, the number adopting DBS in the first year, and the rate at which adoption proceeds from the first year to the eventual level, were derived as follows: -

Eventual saturation at each price-level of TVRO's is expressed in the rural study in thousands of households. Since we lack the necessary background details for a critical examination of these numbers, we used them as they stand. In order to allow for a changing population, we converted them to percentages of total rural households.

The first-year adopters numbers in the rural study are treated similarly to the eventual saturation levels.

The adoption rate used in the rural report appears, as discussed in Appendix A, too high by comparison with analogous products. We have preferred a 25% slower rate as our base case (0.6 instead of 0.8), with a 50% slower rate (0.4) as our low estimate, 0.8 being used as our high estimate.

We have combined the various levels of the three factors discussed above into high, medium and low rural market scenarios, in two steps:

i) We assume the consumer cost of a TVRO will approximate $1,200 while the interim DBS service is in operation, 1983-88.Eventual saturation (57%) and first-year adopters

(8.1%) are taken from DRC's report. The first (full) year is assumed to be 1984, and the adoption rate, because of the high product cost, is assumed to be low (0.4).

ii) For the full service, 1988 on, we assume the cost of a TVRO to be at a 'consumer' level, $400, $600 or $800, associated with a moderate adoption rate (0.6). The eventual saturation and first-year adopter percentages are taken directly from the rural study:

| Scenario | TVRO Cost | Saturation % | First Year % |
|---|---|---|---|
| High | $400 | 97.7 | 20.2 |
| Medium | $600 | 76.0 | 13.3 |
| Low | $800 | 65.1 | 10.3 |

The time-scales and starting levels of the demand curves derived in this way are adjusted to reflect adoptions already made during the interim service and calculated in step i) above.

The requirement for regional forecasts was met by building regional versions of the main market projection model. No adjustment of the base data was possible to cater for possible regional differences in programming.

## 12. ALTERNATIVE SCENARIOS

The data input to the market model are the best presently available. However, a number of uncertainties will be resolved as time passes, possibly early enough to make possible significant differences in approach to the projected market. These uncertainties relate to such factors as:

- physical and legal availability of U.S. DBS and Pay TV signals
- improved performance and cost of DBS and CATV equipment
- extent and effectiveness of promotion of DBS and complementary and competitive services

Other influential trends also may change or be better defined, e.g.

- demographics, following full publication of 1981 census data
- the requirements of apartment/condominium managements in providing TV service to tenants

There may possibly be worthwhile alternative sources of information: for instance, it was learned late in the study that the CRTC has an improved version of the data bank on which the Statistics Canada report on Cable Television is based.

With this in mind, the market model was designed to accept further variants of the input data, beyond the three (high, medium, and low) used for this report. The model can therefore be rerun using not only many more combinations of the present data but a virtually unlimited number of combinations of additional variants.

The market model was designed for and run on a Canadian-made microcomputer, the MCM/900, and can be run by any operator

experienced in the use of the APL language on this machine. Such an operator will need only a program listing and operating instructions, which will be supplied to DOC on request.

## APPENDICES

A. THE DIFFUSION MODEL

B. THE EXECUTIVE INTERVIEW PROGRAM

C. THE CONSUMER SURVEY - TECHNICAL REPORT

D. CONSUMER SURVEY TABLES

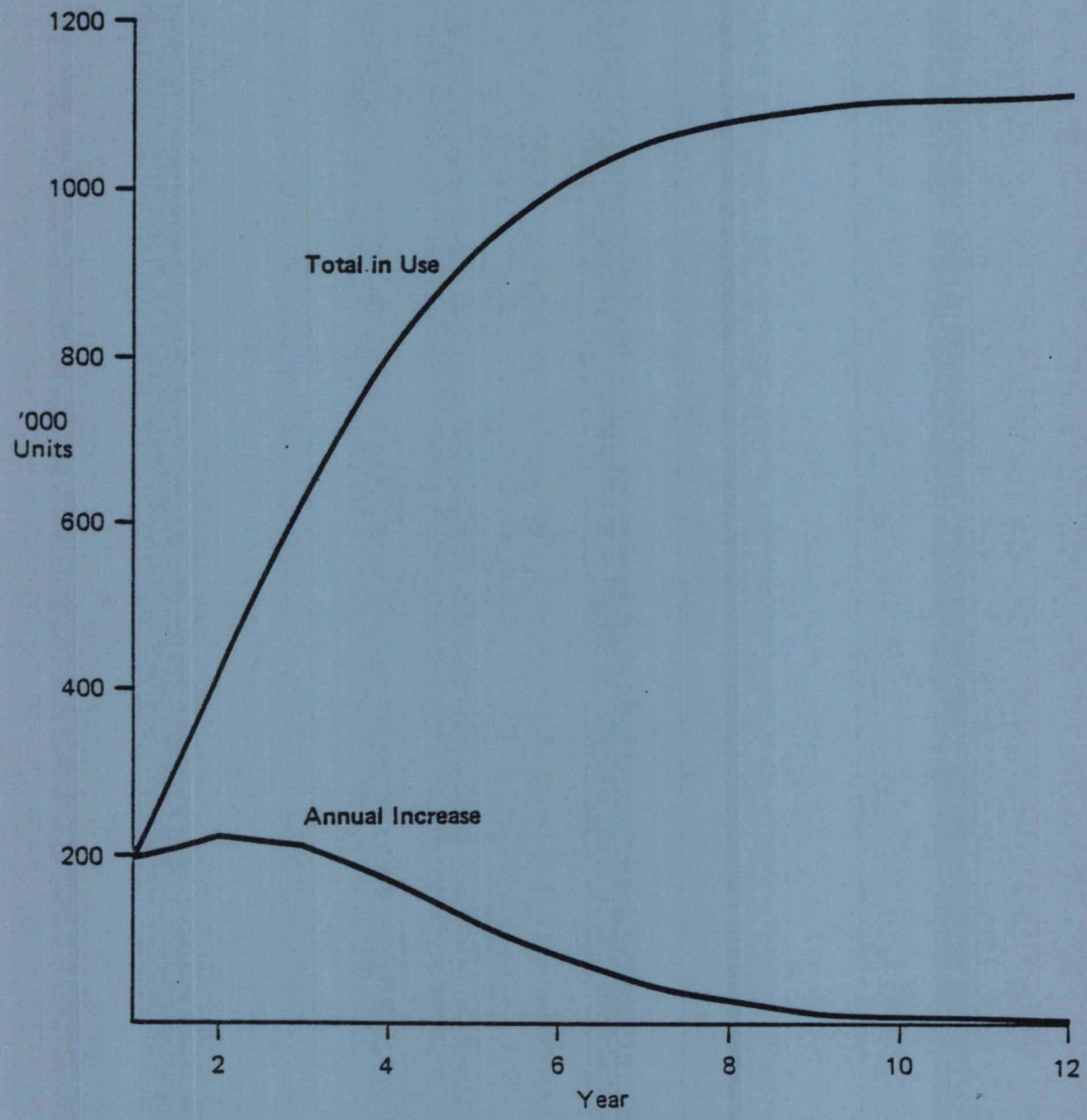
E. MARKET MODEL TABLES

F. MISCELLANEOUS TABLES

G. DEFINITIONS

Figure 21

PROJECTED RURAL OWNERSHIP
OF DBS TVRO's
(Assuming $600 TVRO cost and medium rate of spread)



# APPENDIX A

## THE DIFFUSION MODEL

The model we have used to project urban consumer adoption of TVRO's from the results of the Market Facts survey is the same one used by Demand Research Consultants for their rural projections, which are incorporated in this study. It is one of a family of models which treat the spread of market innovations as an analogy to chemical chain reactions or epidemics.

The intuitive rationale of diffusion models is that a process like new product adoption starts from a 'seed', which may be some such impetus as advertising or a demonstration program. Once the seed gets the process going, it will spread at a rate depending on the product's attractiveness. It will grow more and more quickly at first, while the number of potential adopters is still big enough to present no obstacle in the form of a shortage of customers. As the number who have already adopted begins to approach its limit (the number who ever will adopt), a shortage of customers develops and market growth slackens.

Figure 21 illustrates the process. It shows both cumulative ownership and the year-over-year increases, or annual demand. (The numbers are taken from the sample run of the diffusion model shown at the end of this section.)

This kind of model is particularly appropriate to the type of phenomenon we are studying here. It is a once-only event (adoption, as against replacement purchases) concerning a distinct new product. There are also a number of analogies available as guides from past introductions of comparable products.

Use of this (or any other) model with no 'real' (i.e. historical) data to go on will not result in pinpoint acccuracy. The authors of this particular model (Prof. Stephen B. Lawton of the Ontario Institute for Studies in Education, and Mr. William H. Lawton, the Director of Corporate Commercial Analysis for Eastman Kodak) consider that up to 30% margins of error would be normal in such forecasts. This model's great advantage is that as soon as any real data do become available, e.g. first year's sales, improved projections are immediately possible.

Technically, the model is entirely defined by the three factors mentioned earlier: the 'seed', the rate of spread, and the limit. The number of adopters in any year, including the first, can be found from these three. Fortunately, the reverse also applies. In practical marketing terms, the rate of spread, the limit and the first year's adopters are the three easiest items to estimate reasonably, and it is these we use.

The actual derivation for this study of the three key estimates, and the problems attached to each and their solution are outlined below.

The rate of spread can be estimated only from the actual history of analogous products. In their rural study, DRC used the rate of spread for rural cable companies to arrive at a rate for DBS (specifically 0.8). This produces very rapid saturation: virtually the whole potential market is predicted to be saturated in the first 10 years. The diffusion model's authors, however, state that in their experience comparable consumer products tend to range from around 0.6

ESTIMATED TVRO OWNERS ('000)
AMONG RURAL HOUSEHOLDS, TVRO @ $600,
AT VARIOUS DIFFUSION RATES

| | LOW RATE | | MEDIUM RATE | | HIGH RATE | |
|---|---|---|---|---|---|---|
| PERIOD | CUM. | NEW | CUM. | NEW | CUM. | NEW |
| 1 | 196.7 | 196.7 | 196.7 | 196.7 | 196.7 | 196.7 |
| 2 | 388.5 | 191.8 | 420.7 | 224.0 | 456.4 | 259.7 |
| 3 | 561.7 | 173.2 | 635.3 | 214.6 | 712.2 | 255.8 |
| 4 | 707.7 | 145.9 | 809.5 | 174.2 | 901.0 | 188.8 |
| 5 | 823.6 | 115.9 | 932.8 | 123.3 | 1012.8 | 111.8 |
| 6 | 911.4 | 87.8 | 1011.8 | 79.1 | 1070.5 | 57.7 |
| 7 | 975.6 | 64.2 | 1059.4 | 47.5 | 1098.2 | 27.7 |
| 8 | 1021.3 | 45.7 | 1086.8 | 27.5 | 1111.0 | 12.8 |
| 9 | 1053.3 | 31.9 | 1102.4 | 15.5 | 1116.9 | 5.8 |
| 10 | 1075.3 | 22.0 | 1111.0 | 8.7 | 1119.5 | 2.6 |
| 11 | 1090.4 | 15.1 | 1115.8 | 4.8 | 1120.7 | 1.2 |
| 12 | 1100.6 | 10.2 | 1118.5 | 2.6 | 1121.3 | .5 |
| 13 | 1107.5 | 6.9 | 1119.9 | 1.5 | 1121.5 | .2 |
| 14 | 1112.2 | 4.7 | 1120.7 | .8 | 1121.6 | .1 |
| 15 | 1115.3 | 3.1 | 1121.2 | .4 | .0 | .0 |
| 16 | 1117.4 | 2.1 | 1121.4 | .2 | .0 | .0 |
| 17 | 1118.8 | 1.4 | 1121.5 | .1 | .0 | .0 |
| 18 | 1119.8 | 1. | 1121.6 | .1 | .0 | .0 |
| 19 | 1120.4 | .6 | .0 | .0 | .0 | .0 |
| 20 | 1120.8 | .4 | .0 | .0 | .0 | .0 |
| 21 | 1121.1 | .3 | .0 | .0 | .0 | .0 |
| 22 | 1121.3 | .2 | .0 | .0 | .0 | .0 |
| 23 | 1121.4 | .1 | .0 | .0 | .0 | .0 |
| 24 | 1121.5 | .1 | .0 | .0 | .0 | .0 |
| 25 | 1121.6 | .1 | .0 | .0 | .0 | .0 |
| 26 | 1121.6 | .0 | .0 | .0 | .0 | .0 |
| RATE | .4 | | .6 | | .8 | |
| SEED | 854. | | 391. | | 235. | |

for quick adoptions (such as colour TV and cable TV) through an average of about 0.5 (reel tape recorders, room air conditioners, LP record players) down to about 0.4 for slower adoptions (stereo record players, black-and-white television). The rate will vary with the risks and benefits of the product perceived by potential buyers. As a general rule, the more familiar the product's basic concept is to them, the simpler they find it to understand and the less expensive it is, the quicker they will be prepared to commit themselves. Likewise, the greater and more obvious the product's advantages, the more readily it will be accepted.

Bearing all these factors in mind, we conclude that a rate of spread of 0.8 is on the high side for DBS and 0.4 may be too low. 0.6 appears to be the most plausible level. On this basis, we have chosen rates of 0.4, 0.6 and 0.8 as elements of our low, medium and high market penetration scenarios. They have been applied to the rural as well as the urban market.

The limits, in this case the percentages of households who will eventually buy TVRO's, are taken directly from the consumer survey.

The first year's adopter percentages also are direct outputs from the consumer survey.

The sample run of the diffusion model shown opposite illustrates how it works. The rate of spread is shown under 'Rate' at the end of the table. The limit is the final number in the 'Cum.' (Cumulative) columns. The first year's adopters are shown in the Period 1 line. The 'Cum.' column shows the total number of subscribers, 'New' shows the year-over-year increase.

## APPENDIX B

## THE EXECUTIVE INTERVIEW PROGRAM

When and even whether consumers will be able to adopt DBS depends very much on a number of factors basically outside their own control. The plans and attitudes of various other interested parties will be influential in both this and the "commercial" demand for TVRO's. These sectors include -

- program producers, packagers, carriers and exhibitors
- equipment makers and installers
- apartment owners and condominium corporations.

We therefore interviewed over 70 knowledgable and senior officials in these and other sectors, using as a starting point the timetable shown at the end of this Appendix. The individuals contacted by sector were as follows: -

| Organization, Location | Contact, Position |
|---|---|
| **Cable** | |
| Association des Cablodistributeurs du Quebec, Montreal, P.Q. | Rejean Myre, Exec. Director |
| CUC, Scarborough, Ontario | Juris Silkans, V.P. Programming |
| Cable Management, St. John, N.B. | Fred Manzer, Manager |
| Cable Telecommunications Research Institute, Ottawa, Ontario | Terry Shepherd, Gen. Manager |
| Cablecasting, Toronto, Ontario | Larry Smith, V.P. Cdn. Operations |
| Cablestrie, Drummondville, P.Q. | Conrad Tourigny, Exec. Director |
| Cablevision du Nord du Quebec, Val d'Or, P.Q. | Roland Hamel, Exec. Director |
| Canadian Cable Telecommunications Association, Ottawa, Ontario | Roger Poirier, Tech. Director |
| K-Right Communications, Halifax, N.S. | Tom Laughlin, V.P. |

| Organization, Location | Contact, Position |
|---|---|
| La Belle Vision, Shawinigan, P.Q. | Jean Brousseau, V.P., Dir. of Operations |
| Maclean Hunter, Toronto, Ontario | Barry Gage, President |
| Ontario Cable Telecommunications Association, Toronto, Ontario | Arnold Stinson, Exec. Director |
| Rogers Cablesystems, Toronto, Ont. | Bill Rogers, V.P. Cdn. Operations East<br>Phil Lind, Senior V.P. Prog./ Planning |
| Selkirk Communications, Toronto, Ontario | Stuart MacKay, President |
| Societe d'Edition et de Transcodage (La Sette), Montreal, P.Q. | Rejean Myre, Exec. Director |
| Videotron, Montreal, P.Q. | Jean-Pascal Lion, Marketing Dir.<br>Raymond Cousineau, Tech. Dir. |
| **Pay TV/DBS** | |
| Cablecom, Saskatoon, Sask. | Cheryl Ince, Admin. Asst. |
| Canadian Satellite Communications, Toronto, Ontario | John Barnes, V.P. Marketing |
| Conestoga Satellite, Layton, N.S. | John Forbes, President |
| Direct Broadcast Satellites Corp., Bethesda, Maryland, U.S.A. | William Pritchard, President |
| Bernard Hickey, Avondale, Nfld. | Bernard Hickey, President |
| Lively Arts, Toronto, Ontario | Ed Cowan, Pres. & CEO |
| Northstar Home Theatre, Mississauga, Ontario | Claude Lewis, Exec. V.P. |
| RCA, Princeton, New Jersey, U.S.A. | Donald Quinn, Market Director |
| Star Channel, Halifax, N.S. | Finlay MacDonald, President |
| U.S. Broadcasting, St. Paul, Minn., U.S.A. | F. Fransen, V.P. |
| Westman Media Co-operative, Brandon, Man. | Terry Gunnlaugson, GM/Buyer |
| World View TV, Vancouver, B.C. | Hayne Wai, Advertising Mgr. |
| **Broadcasting** | |
| Bushnell Communications, Ottawa, Ontario | Ted Billo, Exec. V.P./GM |
| CFCF, Montreal, P.Q. | Don Martz, Exec. Director |
| CTV Television Network | John Coleman, V.P. Planning & Development<br>David Basskin, Mgr. Regulatory & Legal Affairs |

| Organization, Location | Contact, Position |
|---|---|
| Canadian Association of Broadcasters, Ottawa, Ont. | Wayne Stacey, GM/Exec. Director |
| Canadian Broadcasting Corp., Ottawa, Ontario | Paul Gaffney, Corporate Dir. Planning |
| Radio Quebec, Montreal, P.Q. | Claude Robert, V.P. Technical |
| TVA Network, Montreal, P.Q. | Claude Blain, Pres. & Exec. Dir. |
| TV Ontario, Toronto, Ont. | Peter Bowers, Managing Dir., Educational Telecommunications |
| | Sandra Birkenmayer, GM Corporate Development |
| **MATV** | |
| Leecraft Industries, Toronto, Ont. | Denis Keagan, Sales Mgr. |
| North Park Electronics, Toronto, Ont. | Larry Rampone, Partner |
| **Apartments and Condominiums** | |
| Building Owners & Managers Assn. of Metro Toronto, Toronto, Ont. | Doreen Wilkinson, Exec. Sec. |
| Cadillac-Fairview, Toronto, Ont. | Bob Strom, Pres. of UDI Cable TV Committee |
| Campeau, Ottawa, Ontario | Mike Wilson, Director, Residential |
| Condominium Magazine, Toronto, Ont. | Elizabeth Schier, Editor |
| | Patty McKellar, Advertising Mgr. |
| Halifax Developments, Halifax, N.S. | David Hyndman, General Manager |
| Homestead Land Holdings, Kingston, Ontario | Gordon Sellar, General Manager |
| Housing and Urban Development Association, Toronto, Ont. | Dave Stupart, Exec. Director, Toronto Association |
| Imperial Group, Winnipeg, Manitoba | Larry Moulder, Property Mgr. |
| International Land, Vancouver, B.C. | Brian Stonnell, Property Manager |
| A.E. LePage, Toronto, Ont. | Daryl Watts, Condominium Consultant |
| Maclab Enterprises, Edmonton, Alta. | Dale Melin, Propety Manager |
| Market Square, Toronto, Ontario | Hunter Milborne, Sales Exec. |
| Metro Toronto Apartment Builders Association, Toronto, Ontario | Karl Mallette, General Manager |
| Metro Toronto Housing Authority, Toronto, Ontario | Betty Niddrie, General Manager |
| Ontario Housing Corp., Toronto, Ont. | Steve Shapiro, Operations Officer |
| Shear Associates, Toronto, Ontario | Mel Shear, Principal |
| Shelter Corp., Winnipeg, Man. | Dick Blair, Property Manager |

# DBS INTERVIEW PROGRAM - INTRODUCTORY DESCRIPTION

DBS = Direct Broadcast Satellite

DBS satellites will eventually beam 'perfect' TV signals directly to small dish antennas on homes or redistributors' premises (such as cable companies or other shared systems). Homes will use 0.8-1.2 metre dishes costing about $500. "Commercial" versions will be at least 1.2-1.8 metres.

DOC is investigating the possibilities of a Canadian DBS system.

Timetable. DBS will develop in stages. See the attached diagram.

Notes on Timetable

(1) Electronics used with the dish antenna and accounting for about one-third of the total cost will have to be replaced when the full system starts.

(2) Canadian dishes may be able to pick up US DBS signals. It is not known yet whether this will be legal and/or useful (if those signals are scrambled).

(3) Canada will be covered by 4-6 beams. Broadcast times and languages will therefore be appropriate for all regions.

(4) This programming will not be available elsewhere.

(5) To include national and regional movies/entertainment and national arts and culture.

(6) Open channels will be general entertainment. Pay channels will be movies, sports and special events.

(7) Some Pay TV (e.g. children, sports, special events), some open (e.g. native, religious).

## APPENDIX C

### THE CONSUMER SURVEY TECHNICAL REPORT

Market Facts of Canada conducted the consumer survey segment of the DBS market study program. Through its Consumer Mail Panel (CMP) Omnibus service, Market Facts contacted a nationally representative sample of 4,000 households from the total panel of 19,000, to screen them for cable TV availability and subscriptions. Households not classified as urban for the purposes of the study (i.e. those living in population centres with under 2,500 inhabitants or population density below 1,000 per square mile) were eliminated, and three separate samples suitable to the purposes of the study were drawn: -

- cable subscribers
- non-subscribers in areas where cable is available
- households in uncabled areas.

Because of the preponderance of cable subscribers in the screened group, one-half of them were discarded, while the 'uncabled' sample was supplemented by other CMP households from urban areas known to have no cable systems. A total of 1,783 questionnaires (copies of which are reproduced at the end of this appendix) were mailed out 22-24 November, 1982.

After a reminder to those who had not returned their questionnaires by December 10, field was closed on December 23, when a 79% return rate had been achieved, as follows:

| | | |
|---|---|---|
| Cable subscribers | - | 661 |
| Non-subscribers | - | 432 |
| Uncabled | - | 307 |
| | | 1,400 |

The table below illustrates the statistical confidence that can be placed in the responses of properly selected samples of these sizes:

Maximum Margin of Error
(in Percentage Points, at 95% Confidence)
Where the Proportion in a Random Sample is ...

| Size of Sample | 50% | 25% or 75% | 10% or 90% |
|---|---|---|---|
| 661 | 3.8 | 3.3 | 2.3 |
| 432 | 4.7 | 4.1* | 2.8 |
| 307 | 5.6 | 4.8 | 3.4 |

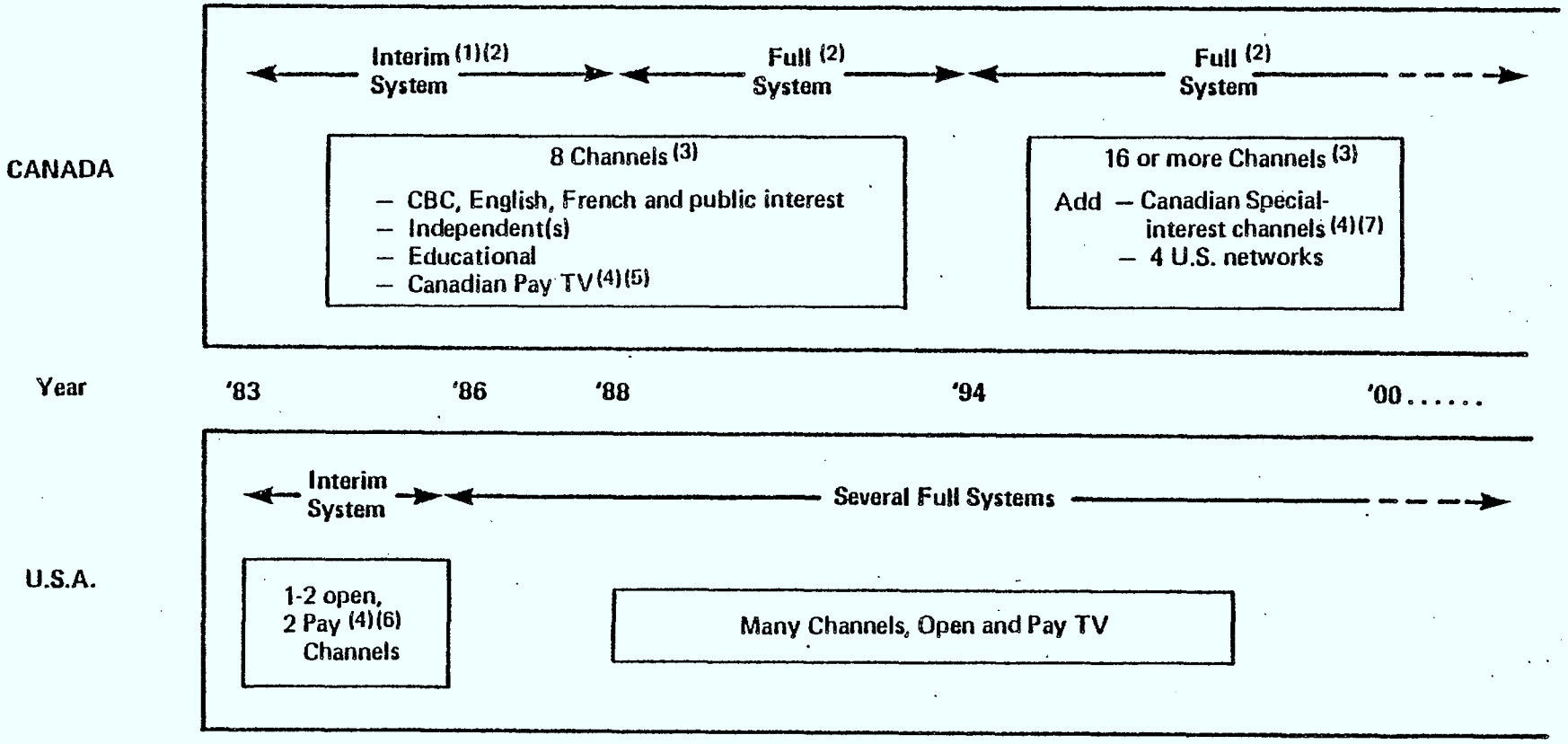
* Read: "If 25% (or 75%) of a random sample of 432 make the same answer to a yes/no question, then in 95 cases out of 100 the proportion in the total population will be within 4.1 percentage points of 25% (or 75%), i.e. in the range of 20.9%-29.1% (or 70.9%-79.1%)."

This table refers, of course, to statistical accuracy only. It is quite independent of the accuracy of the opinions expressed by respondents. Table 19 in Appendix D details the demographics of the three samples.

Market Facts edited and coded the returned questionnaires and processed the data into four tabular reports (one for each sample plus a combined report), which have been delivered separately to DOC.

| Organization, Location | Contact, Position |
|---|---|
| **Manufacturers/Installers** | |
| Anixter Microsat, Pickering, Ont. | Mark Beggs, President |
| Fleet Industries, Fort Erie, Ont. | Jack O'Brien, Dir. of Marketing |
| Microdyne, Orlando, Florida, U.S.A. | Earl Currier, Marketing Manager |
| RF Communications, Markham, Ont. | Shelley Rittenberg, President |
| SED Systems, Saskatoon, Sask. | Alex Curran, President |
| SaTel Consultants, Ottawa, Ont. | David Prentice, V.P. Marketing |
| Scientific Atlanta, Mississauga, Ontario | John Fazackerley, General Mgr. |
| Spar Aerospace, Montreal, P.Q. | Leo Arsenault, Sales Mgr., Communications Systems |
| Zenith Radio, Chicago, Ill., U.S.A. | Bob Hansen, Senior V.P., Colour TV & Cable Division |
| **Regulators** | |
| BC Dept. of Communications, Victoria, B.C. | Peter Templeton |
| CRTC, Ottawa, Ontario | L. Durr, Manager, Research |
| Ontario Ministry of Transportation & Communications, Downsview, Ont. | Leah Myers, Policy Advisor, Cable/Broadcast Policy Office |
| **Others** | |
| BBM Bureau of Measurement, Toronto, Ontario | Tom Clement |
| Dept. of Communications, Ottawa, Ont. | Len Endemann, Senior Policy Advisor, Broadcasting Policy Branch |
| NWT Government, Yellowknife, NWT | Ross Harvey, Asst. Dir. of Information<br>Ralph Joyce, Territorial Statistician |
| Publicorp Communications, Pointe Claire, P.Q. | Neil Oakley, Partner |
| Scriptonics Corp., Toronto, Ont. | Noel Moore, President |

## DBS TIMETABLE




(1) (2) (3) (4) (5) (6) (7) See Description Sheet for Notes.

# CONSUMER MAIL PANELS

Market Facts of Canada Limited
1240 Bay Street, Toronto, Ontario, M5R 3L9
550 Sherbrooke Street West, Montreal 111, Quebec.


DBS #8455

This study is about T.V. RECEPTION.

Please treat this as a family project if your household includes others besides yourself. Act as family spokesperson, or choose some other adult in the family to act as spokesperson. This person should read out each question and record the answer that the family decides on.

If there is a question that everyone cannot agree on, choose the answer picked by the majority. If there is no majority, the person who pays the household bills should decide.

To say "Thank you for your co-operation" I have enclosed a little gift to help you get ready for Christmas.

Marie Brighton

SECTION I

1a) Which ONE of the following ways best describes how you receive T.V. programs in your home? (PLEASE "X" ONE BOX ONLY)

-14

- Subscription to a local cable company that you pay for monthly or annually --- []1 → GO TO QU.1c
- Subscription to a local cable company that is paid for by your landlord or a condominium organization ---------- []2 → GO TO QU.2
- Outdoor antenna or tower (not including rabbit ears) that was installed for your own household use ---------- []3
- Outdoor antenna or tower that was installed for a number of households to use (e.g. apartment building or condominium complex) ---------- []4
- No special hook-up to receive T.V. programs (e.g. only use rabbit ears) --- []5
- No T.V. in home ---------- []6 → RETURN QUESTIONNAIRE
- Other (PLEASE DESCRIBE)_____

1b) Is cable T.V. available in your area if you wanted to subscribe to it?

-15

- Yes ------- []1
- No -------- []2 → GO TO QU.2
- Not sure -- []3

1c) What is the cost of this cable service on a per month basis? (e.g. if $8.50, please write in [0|8|5|0] )

WRITE IN AMOUNT HERE → $[ | | . | | ] per month
16 17 18 19

2. Thinking about the TV set that is watched most often in your household, about how many channels can you usually get satisfactorily? (e.g. if seven channels, please write in [0|7] )

WRITE IN NUMBER HERE → [ | ]
20 21

PLEASE TURN OVER →

3. Thinking of the channels that you watch most often, how would you describe the quality of the picture? ("X" ONE BOX ONLY) Is it ...

... excellent quality? ------ []4 -22
... just good quality? ------ []3
... only fair quality? ------ []2
... poor quality? ---------- []1

4a) All things considered, how satisfied are you and your family with your present arrangements for T.V. reception? Are you ...

Very satisfied ---------- []4 -23 → GO TO QU.5
Somewhat satisfied -------- []3
Somewhat unsatisfied ------ []2
Very unsatisfied ---------- []1

4b) And why is that?

| | |
|---|---|
| | 24- |
| | 25- |
| | 26- |

5. How many, if any, colour T.V. sets in working order do you have in your home?

WRITE IN NUMBER HERE → [ ][ ] 27 28

6. And how many, if any, black and white T.V. sets in working order do you have in your home?

WRITE IN NUMBER HERE → [ ][ ] 29 30

7. Do you have a video recorder like a Betamax or a VHS in your home, or not?

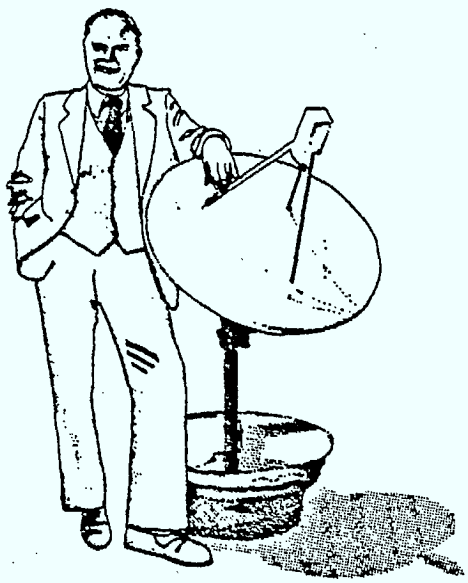
Yes ----- []1 -31
No ------ []2

## SECTION II

In this section are descriptions of some other ways to receive T.V. programs on your T.V. Please imagine as you read about them, that these options are available now. Read the options and answer the questions with your family.

### OPTION A

This would need a special antenna and adapter to receive signals from a Canadian satellite. (The special antenna would be a small dish, two to three feet across, that would go in the yard or on the roof. It would be very reliable and easy to service. A picture of this equipment is shown below.)



Using this method of T.V. reception, you would receive the following Canadian channels free, in your own language:

- CBC
- one or two independent commercial channels such as CTV or TVA
- an educational channel
- a public interest channel such as live broadcasts from the House of Commons

You would be able to receive three Canadian Pay T.V.* channels in your own language:

- a national channel of movies, entertainment, etc.
- a national channel of special arts and culture programs
- a regional channel of movies, entertainment, etc.

Various Canadian special-interest channels would be available:

- free channels such as native or religious programming
- Pay T.V.* channels such as children's programs, movies or sports

The U.S. channels that you could receive would be:

- the U.S. networks: ABC, NBC, CBS and PBS (the educational network)
- Pay T.V.* channels (3 or more) which would include movies, sports and family entertainment

The reception on all these channels would be of the highest quality and would be very sharp and clear.

* Pay T.V. provides quality programs you pay extra for by renting a special adapter for your set. The monthly rental is $15 for one channel, $25 for two channels, $30 for three, in addition to your regular cable charge, if any.

PLEASE TURN OVER ⟶

8. Comparing Option A with what you have now, do you think Option A would be ...

-32

Much better ---------- []5 → GO TO QU.9b
Slightly better ------- []4
About the same -------- []3 → GO TO QU.10a
Slightly worse -------- []2
Much worse ------------ []1

9a) Why do you think that it would be worse?

33-
34-
35-

GO TO QU.10a

9b) The different kinds of channels described on the previous page may or may not have been important in attracting you to the new service. For each kind of channel listed below, "X" one box to say whether it was extremely important, of some importance or not at all important in making you decide that the service would be better than what you have now.

| | Extremely important | Of some importance | Not at all important | |
|---|---|---|---|---|
| Canadian free channels ---------- | []3 | []2 | []1 | -36 |
| Canadian Pay T.V. channels ---------- | []3 | []2 | []1 | -37 |
| Canadian special interest ---------- | []3 | []2 | []1 | -38 |
| The U.S. networks ---------- | []3 | []2 | []1 | -39 |
| U.S. Pay T.V. channels ---------- | []3 | []2 | []1 | -40 |

9c) Apart from the different kinds of channels you could receive, what else about this service, if anything, was important in making you decide it would be better than what you have now?

41-
42-
43-

10a) If you had the opportunity to buy this special dish for $400 would you ... ("X" ONE BOX ONLY)

Buy it for $400 ---------- []1 -44

Or Keep what you have now ----- []2 → SKIP TO OPTION B

10b) If it cost $600 would you ... ("X" ONE BOX ONLY)

Buy it for $600 ---------- []1 -45

Or Keep what you have now ----- []2 → SKIP TO OPTION B

10c) If it cost $800 would you ... ("X" ONE BOX ONLY)

Buy it for $800 ---------- []1 -46

Or Keep what you have now ----- []2 → SKIP TO OPTION B

10d) And if it cost $1,200 would you ... ("X" ONE BOX ONLY)

Buy it for $1,200 ---------- []1 -47

Or Keep what you have now ----- []2

PLEASE TURN OVER ⟶

OPTION B

This service would be exactly the same as Option A, except you would subscribe to it through a cable company, or something very similar, instead of having a special dish and adapter. You could still get all the channels the cable company provides.

11. Comparing Option B with what you have now, do you think Option B would be ... ("X" ONE BOX ONLY)

Much better -------- []5 -48 → GO TO QU.12b
Slightly better ---- []4
About the same ----- []3 → GO TO QU.13a
Slightly worse ----- []2
Much worse --------- []1

12a) Why do you think that it would be worse?

49-
50-
51-

GO TO QU.13a

12b) What about this service would make it better than what you have now?

52-
53-
54-

13a) If you could get Option B as part of a cable subscription of $10* per month, would you ... ("X" ONE BOX ONLY)

Subscribe for $10 per month ------ []1 -55
Or Keep what you have now ---------- []2 → SKIP TO OPTION C

13b) If the subscription cost $15* per month, would you ... ("X" ONE BOX ONLY)

Subscribe for $15 per month ------ []1 -56
Or Keep what you have now ---------- []2 → SKIP TO OPTION C

13c) If the subscription cost $20* per month would you ... ("X" ONE BOX ONLY)

Subscribe for $20 per month ------ []1 -57
Or Keep what you have now ---------- []2 → SKIP TO OPTION C

13d) And if the subscription cost $25* per month would you ... ("X" ONE BOX ONLY)

Subscribe for $25 per month ------ []1 -58
Or Keep what you have now ---------- []2

* REMEMBER: Any Pay T.V. costs would be in addition to the costs I've asked you about here.

OPTION C

This service would be exactly the same as Option B, except that you would not be able to receive the U.S. Pay T.V. channels.

14. Comparing Option C with what you have now, do you think Option C would be ... ("X" ONE BOX ONLY)

-59

Much better ---------- []5 → GO TO QU.15b
Slightly better --------- []4
About the same ---------- []3 → GO TO QU.16a
Slightly worse ---------- []2
Much worse ---------- []1

15a) Why do you think that it would be worse?

60-
61-
62-

GO TO QU.16a

15b) What about this service would make it better than what you have now?

63-
64-
65-

16a) If you could get Option C as part of a cable subscription of $10* per month, would you ... ("X" ONE BOX ONLY)

Subscribe for $10 per month ------ []1 -66
Or Keep what you have now ---------- []2 → SKIP TO SECTION III

16b) If the subscription cost $15* per month, would you ... ("X" ONE BOX ONLY)

Subscribe for $15 per month ------ []1 -67
Or Keep what you have now ---------- []2 → SKIP TO SECTION III

16c) If the subscription cost $20* per month, would you ... ("X" ONE BOX ONLY)

Subscribe for $20 per month ------ []1 -68
Or Keep what you have now ---------- []2 → SKIP TO SECTION III

16d) And if the subscription cost $25* per month, would you ... ("X" ONE BOX ONLY)

Subscribe for $25 per month ------ []1 -69
Or Keep what you have now ---------- []2

* REMEMBER: Any Pay T.V. costs would be in addition to the costs I've asked you about here.

79-0
80-1

PLEASE TURN OVER →

## SECTION III

This is where you use the numbered stickers I have enclosed. Please imagine that all the methods of T.V. reception that have been described are available and you can choose whichever one you would like to have in your home.

As you can see, each option is shown below with several prices. Think about all the options at each price and choose which one would be your first choice. Please take the label with the number "1" on it and cover up the circle that contains your first choice.

Now, you must imagine that the choice you have just selected is unavailable, and from the choices left uncovered select the one you would like. This one is your second choice. Place the label with the number "2" on it over the circle which contains your second choice. Please continue choosing until all the circles are covered. Your last choice will be the one with sticker number "12" on it.

This should be fun for you and your family to do, but please make your choices carefully.

| OPTION A | OPTION B | OPTION C |
|---|---|---|
| To remind you: This is a special dish which you could buy. Using it you could receive Canadian free and Pay T.V.* channels AND U.S. free and Pay T.V.* channels | To remind you: This is similar to cable T.V. Using it you could receive Canadian free and Pay T.V.* channels AND U.S. free and Pay T.V.* channels | To remind you: This is similar to cable T.V. Using it you could receive Canadian free and Pay T.V.* channels AND U.S. free channels only |
| Buy for $400 | Subscribe for $10 per month | Subscribe for $10 per month |
| Buy for $600 | Subscribe for $15 per month | Subscribe for $15 per month |
| Buy for $800 | Subscribe for $20 per month | Subscribe for $20 per month |
| Buy for $1,200 | Subscribe for $25 per month | Subscribe for $25 per month |

* REMEMBER: Any Pay T.V. costs would be in addition to the costs I've asked you about here.

14- 15- 16- 17- 18- 19- 20- 21- 22- 23- 24- 25- 26- 27- 28- 29- 30- 31- 32- 33- 34- 35- 36- 37-

17. Thinking of the choice which has sticker "1" over it, why did you choose that one as your first choice?

38-
39-
40-

18. When your first choice becomes available, when would you switch to it from what you have in your home now, if at all? ("X" ONE BOX ONLY)

Right away ---------- []1 -41
Within one year of its introduction --- []2
One year to three years after its introduction ---------- []3
Over three years after its introduction []4
Never, would not switch ---------- []5 → SKIP TO QU.20a

19. Depending on how many channels the first satellites can handle, not all of the channels that have been described may be included in this service right at the beginning. In this case, the first channels to be available would be:

Canadian free channels
AND
Canadian Pay T.V.*
AND
U.S. Pay T.V.*

After some time, (for example in five years), the four U.S. networks would be added. Later, say in ten years, the Canadian special-interest channels would be added.

If this happened, when would you plan to switch to this service from what you have now, if at all? ("X" ONE BOX ONLY)

While only Canadian free channels, Canadian Pay T.V.* and U.S. Pay T.V.* are available ---------- []1 -42
Not until the four U.S. networks become available ---------- []2
Not until the Canadian special-interest channels become available ---------- []3
Never, would not switch ---------- []4

*Don't forget about the extra charges for Pay T.V.

PLEASE TURN OVER →

20. Another possibility is that a "package" of American channels would be the only programs you could get with one of the special dishes we have been talking about. This package would consist of:

Four regular type channels, with commercials, carrying family entertainment programs not available on any other channel

AND

Two Pay T.V.* channels, carrying movies, sports, and special events

20a) Would you consider buying a dish just to get this package of channels?

Yes -------- []1 -43→ SKIP TO QU.20c
No --------- []2 → SKIP TO QU.21a
Not sure --- []3 → ANSWER QU.20b

20b) Please write down the reason(s) why you are not sure about buying a dish to get this package of channels.

44-
45-
46-

SKIP TO QU.21a

20c) Would you pay $400 for this dish, or not?

Yes ----- []1-47
No ------ []2 → SKIP TO QU.21a

20d) Would you pay $600 for this dish, or not?

Yes ----- []1-48
No ------ []2 → SKIP TO QU.21a

20e) Would you pay $800 for this dish, or not?

Yes ----- []1-49
No ------ []2 → SKIP TO QU.21a

20f) Would you pay $1,200 for this dish, or not?

Yes ----- []1-50
No ------ []2

And now just a few questions about your family.

21a) Including yourself, how many members of your household are aged 18 or older?

WRITE IN NUMBER HERE → [ ][ ] 51 52

21b) How many of these people are working full time now?

WRITE IN NUMBER HERE → [ ][ ] 53 54

21c) How many of these people are working part-time now?

WRITE IN NUMBER HERE → [ ][ ] 55 56

21d) And of the remainder who would normally be employed, how many, if any, are not working now?

WRITE IN NUMBER HERE → [ ][ ] 57 58

22. Who in the household completed this questionnaire?

Panel member ---------- []1 59

Panel member's spouse ---------- []2

Other adult (PLEASE DESCRIBE WHO)_____

_____

I HOPE YOU ENJOYED BEING INVOLVED IN PLANNING FOR THE FUTURE.

THANK YOU FOR YOUR TIME.

79-0
80-2

**PANEL POSTAL DES CONSOMMATEURS**
Market Facts du Canada Limitée
550 rue Sherbrooke ouest, Montréal, Québec, H3A 1B9
1240 Bay Street, Toronto, Ontario, M5R 3L9
DBS N°8455

Il sera question dans cette étude de RÉCEPTION d'ÉMISSIONS TÉLÉVISÉES.

S'il y a chez vous d'autres personnes que vous, veuillez faire de cette étude un projet familial. C'est vous qui serez le porte-parole de la famille, à moins que vous ne choisissiez un autre adulte comme porte-parole de votre famille. C'est le porte-parole qui lit chaque question aux autres et qui inscrit la réponse sur laquelle les membres de la famille se sont mis d'accord.

S'il y a une question à propos de laquelle vous n'arrivez pas à vous mettre tous d'accord, choisissez la réponse donnée par la majorité. S'il n'y a pas de majorité, c'est la personne qui paie les factures de la maison qui devra décider de la réponse.

Pour vous remercier de votre aimable collaboration, je vous envoie ci-joint un petit cadeau qui vous aidera, je l'espère, dans vos préparatifs de Noël.

Marie Brighton

## SECTION 1

1a) LAQUELLE des descriptions suivantes correspond de plus près à la façon dont vous captez chez vous les émissions télévisées? (VEUILLEZ COCHER «X» UNE SEULE CASE)

-14

- Abonnement à un service local de câblodistribution que vous payez mensuellement ou annuellement ( )1 → PASSEZ À LA QU.1c
- Abonnement à un service local de câblodistribution payé par votre propriétaire ou votre administration de condominiums ( )2 → PASSEZ À LA QU.2
- Antenne extérieure ou antenne-pylône (ne pas inclure l'antenne intérieure) installée uniquement pour l'usage de votre foyer ( )3
- Antenne extérieure ou antenne-pylône installée pour l'usage d'un certain nombre de foyers (tel qu'immeuble à appartements ou un ensemble de résidences condominium ( )4
- Pas de connexion spéciale pour capter les émissions télévisées (ex. «antenne intérieure» seulement) ( )5
- Pas de téléviseur chez nous ( )6 → RENVOYEZ LE QUESTIONNAIRE
- Autre (VEUILLEZ DÉCRIRE)_____

1b) Est-ce que la télédistribution par câble est disponible dans votre région au cas où vous voudriez vous y abonner?

-15

- Oui ( )1
- Non ( )2 → PASSEZ À LA QU.2
- N'en suis pas sûr(e) ( )3

1c) Combien coûte par mois ce service de câblodistribution? (si 8,50$, par exemple, veuillez inscrire [0|8|5|0] )

INSCRIVEZ ICI LE MONTANT → [ | | | ] $ par mois
16 17 18 19

2. Avec le téléviseur que l'on regarde le plus souvent chez vous, combien de canaux pouvez-vous habituellement obtenir avec une image et un son satisfaisants? (Si sept canaux, par exemple, veuillez inscrire [0|7] )

INSCRIVEZ ICI LE NOMBRE → [ | ]
20 21

PASSEZ AU VERSO

3. En ce qui concerne les canaux que vous regardez le plus souvent, comment en décriviez-vous la qualité de l'image? (COCHEZ UNE SEULE CASE) Est-elle ...

-22

... d'excellente qualité? ---------- ( )4
... de bonne qualité? ---------- ( )3
... de qualité passable seulement? ------ ( )2
... de qualité inférieure? ---------- ( )1

4a) Tout bien considéré, dans quelle mesure êtes-vous et votre famille satisfaits des dispositions que vous avez actuellement pour la réception d'émissions télévisées? Êtes-vous ...

-23

très satisfaits ------- ( )4 → PASSEZ À LA QU.5
assez satisfaits ------ ( )3
assez peu satisfaits -- ( )2
très peu satisfaits --- ( )1

4b) Pourquoi?

24-
25-
26-

Combien y a-t-il chez vous, s'il y en a, de téléviseurs couleur en état de marche?

INSCRIVEZ ICI LE NOMBRE → [ ][ ]
27 28

Combien y a-t-il chez vous, s'il y en a, de téléviseurs noir et blanc en état de marche?

INSCRIVEZ ICI LE NOMBRE → [ ][ ]
29 30

7. Y a-t-il chez-vous un magnétoscope du genre Betamax ou VHS, ou non?

-31

Oui ---------- ( )1
Non ---------- ( )2

## SECTION II

Vous trouverez dans cette section la description d'autres moyens de capter les émissions télévisées avec votre téléviseur. Au fur et à mesure que vous en lisez la description, veuillez imaginer que ces options sont actuellement disponibles. Lisez les options et répondez aux questions avec vogre famille.

### OPTION A

Il faudrait pour ceci une antenne spéciale et un adapteur pour capter les signaux d'un satellite canadien. (Cette antenne spéciale serait une antenne parabolique en forme de soucoupe, de deux à trois pieds de diamètre qui pourrait être installée dans la cour ou sur le toit. Elle serait très fiable et facile à entretenir. Voici un croquis de cette installation).

En utilisant cette méthode de réception d'émissions télévisées, vous pourriez capter gratuitement dans votre langue les canaux canadiens suivants:

- Radio Canada
- un ou deux canaux indépendants tels que CTV ou TVA
- un canal éducatif
- un canal d'émissions d'intérêt public telles que les émissions provenant de la chambre des communes.

Vous auriez accès dans votre langue à trois canaux canadiens de télévision payante:*

- un canal national pour le cinéma, les variétés, etc.
- un canal national d'émissions spéciales de culture et d'art
- un canal régional pour le cinéma, les variétés, etc.

Vous auriez à votre disposition différents canaux canadiens d'intérêt spécial:

- canaux gratuits pour émissions religieuses ou autochtones, par exemple.
- canaux de télévision payante* d'émissions pour enfants, films ou sports.

Les canaux américains que vous pourriez capter seraient:

- les réseaux américains: ABC, NBC, CBS et PBS (le réseau éducatif)
- les canaux de T.V. payante (3 ou plus) qui comprendraient le cinéma, les sports et des spectacles de variété et autres pour toute la famille.

La réception de tous ces canaux serait de la meilleure qualité, très nette et très claire.

* La télévision payante offre des émissions de qualité pour lesquelles on paie un supplément en louant un adapteur spécial pour son téléviseur. Le prix mensuel de location est de 15$ pour un canal, 25$ pour deux canaux et 30$ pour trois canaux en plus de vos frais habituels de câblodistribution, s'il y a lieu.



PASSEZ AU VERSO →

8. En comparant l'option 'A' à ce que vous avez actuellement, êtes-vous d'avis que l'option A serait ...

-32

| | | |
|---|---|---|
| bien meilleure | ( )5 | → PASSEZ À LA QU.9b |
| légèrement meilleure | ( )4 | |
| à peu près équivalente | ( )3 | → PASSEZ À LA QU.10a |
| légèrement moins bonne | ( )2 | |
| bien pire | ( )1 | |

9a) Pourquoi pensez-vous que ce serait pire?

33-
34-
35-

PASSEZ À LA QU. 10a

9b) Les différents genres de canaux décrits à la page précédente vous ont peut-être intéressé(e) à ce nouveau service. Pour chaque genre de canal ci-dessous, cochez la case qui indique s'il a été extrêmement important, d'une certaine importance ou pas important du tout pour vous aider à décider que ce service serait meilleur que ce que vous avez actuellement.

| | Extrêmement important | D'une certaine importance | Pas important du tout | |
|---|---|---|---|---|
| Canaux canadiens gratuits | ( )3 | ( )2 | ( )1 | -36 |
| Canaux canadiens de télévision payante | ( )3 | ( )2 | ( )1 | -37 |
| Canadien d'intérêt spécial | ( )3 | ( )2 | ( )1 | -38 |
| Réseaux américains | ( )3 | ( )2 | ( )1 | -39 |
| Canaux américains de télévision payante | ( )3 | ( )2 | ( )1 | -40 |

10a) Les différents canaux que vous pourriez capter mis à part, qu'y a-t-il d'autre à propos de ce service, s'il y a lieu, qui ait été important pour vous aider à décider qu'il serait meilleur que ce que vous avez actuellement?

41-
42-
43-

10a) Si vous aviez l'occasion d'acheter cette antenne parabolique pour 400$, est-ce que vous (COCHEZ UNE SEULE CASE)

l'achèteriez pour 400$ ---------- ( )1 -44

ou garderiez ce que vous avez actuellement - ( )2 → PASSEZ À L'OPTION B

10b) Si elle coûtait 600$, est-ce que vous ... (COCHEZ UNE SEULE CASE)

l'achèteriez pour 600$ ---------- ( )1 -45

ou garderiez ce que vous avez actuellement - ( )2 → PASSEZ À L'OPTION B

10c) Si elle coûtait 800$, est-ce que vous ... (COCHEZ UNE SEULE CASE)

l'achèteriez pour 800$ ---------- ( )1 -46

ou garderiez ce que vous avez actuellement - ( )2 → PASSEZ À L'OPTION B

10d) Et si elle coûtait 1 200$, est-ce que vous ... (COCHEZ UNE SEULE CASE)

l'achèteriez pour 1 200$ ---------- ( )1 -47

ou garderiez ce que vous avez actuellement - ( )2



PASSEZ AU VERSO →

OPTION B

Ce service serait exactement le même que l'option A, mais au lieu d'avoir une antenne parabolique et un adapteur, vous vous y abonneriez par l'intermédiaire d'un service de câblodistribution, ou quelque chose de ce genre au lieu d'avoir une antenne parabolique et un adapteur. Vous pourriez toujours avoir accès à tous les canaux que votre service de câblodistribution vous offre.

11. En comparant l'option 'B' à ce que vous avez actuellement, êtes-vous d'avis que l'option B serait ...

-48

| | | |
|---|---|---|
| bien meilleure | ( )5 | → PASSEZ À LA QU.12b |
| légèrement meilleure | ( )4 | |
| à peu près équivalente | ( )3 | → PASSEZ À LA QU.13a |
| légèrement moins bonne | ( )2 | |
| bien pire | ( )1 | |

12a) Pourquoi pensez-vous que ce serait pire?

49-
50-
51-

PASSEZ À LA QU.13a

Qu'est-ce que vous trouvez à ce service qui le rende meilleur que ce que vous avez actuellement?

52-
53-
54-

Si vous pouviez obtenir l'option B comme faisant partie d'un abonnement de 10$* par mois à la câblodistribution, est-ce que vous ... (COCHEZ UNE SEULE CASE)

| | | |
|---|---|---|
| vous abonneriez pour 10$ par mois | ( )1 -55 | |
| ou garderiez ce que vous avez actuellement | ( )2 | → PASSEZ À L'OPTION C |

13b) Si l'abonnement coûtait 15$* par mois, est-ce que vous ... (COCHEZ UNE SEULE CASE)

| | | |
|---|---|---|
| vous abonneriez pour 15$ par mois | ( )1 -56 | |
| ou garderiez ce que vous avez actuellement | ( )2 | → PASSEZ À L'OPTION C |

13c) Si l'abonnement coûtait 20$* par mois, est-ce que vous ... (COCHEZ UNE SEULE CASE)

| | | |
|---|---|---|
| vous abonneriez pour 20$ par mois | ( )1 -57 | |
| ou garderiez ce que vous avez actuellement | ( )2 | → PASSEZ À L'OPTION C |

13d) Et si l'abonnement coûtait 25$* par mois, est-ce que vous ... (COCHEZ UNE SEULE CASE)

| | | |
|---|---|---|
| vous abonneriez pour 25$ par mois | ( )1 -58 | |
| ou garderiez ce que vous avez actuellement | ( )2 | |

*N'OUBLIEZ PAS que tous frais de télévision payante s'ajouteraient aux frais dont il a été question ici.

OPTION C

Ce service serait exactement le même que l'option B, sauf que vous ne pourriez pas avoir accès aux canaux américains de télévision payante.

14. En comparant l'option 'C' à ce que vous avez actuellement, êtes-vous d'avis que l'option C serait ...

-59

bien meilleure ---------- ( )5 → PASSEZ À LA QU. 15b
légèrement meilleure ---------- ( )4 → PASSEZ À LA QU. 15b
à peu près équivalente ---------- ( )3 → PASSEZ À LA QU. 16a
légèrement moins bonne ---------- ( )2
bien pire ---------- ( )1

15a) Pourquoi pensez-vous que ce serait pire?

60-
61-
62-

PASSEZ À LA QU. 16a

15b) Qu'est-ce que vous trouvez à ce service qui le rende meilleur que ce que vous avez actuellement?

63-
64-
65-

16a) Si vous pouviez obtenir l'option C comme faisant partie d'un abonnement de 10$* par mois à la câblodistribution, est-ce que vous ... (COCHEZ UNE SEULE CASE)

-66

vous abonneriez pour 10$ par mois ---------- ( )
ou garderiez ce que vous avez actuellement ---------- ( )2 → PASSEZ À LA SECTION III

16b) Si l'abonnement coûtait 15$* par mois, est-ce que vous ... (COCHEZ UNE SEULE CASE)

-67

vous abonneriez pour 15$ par mois ---------- ( )1
ou garderiez ce que vous avez actuellement ---------- ( )2 → PASSEZ À LA SECTION III

16c) Si l'abonnement coûtait 20$* par mois, est-ce que vous ... (COCHEZ UNE SEULE CASE)

-68

vous abonneriez pour 20$ par mois ---------- ( )1
ou garderiez ce que vous avez actuellement ---------- ( )2 → PASSEZ À LA SECTION III

Et si l'abonnement coûtait 25$* par mois, est-ce que vous ... (COCHEZ UNE SEULE CASE)

-69

vous abonneriez pour 25$ par mois ---------- ( )1
ou garderiez ce que vous avez actuellement ---------- ( )2

*N'OUBLIEZ PAS que tous frais de télévision payante s'ajouteraient aux frais dont il a été question ici.

79-0
80-1



PASSEZ AU VERSO →

## SECTION III

C'est ici que vous allez utiliser les auto-collants numérotés ci-joints. Veuillez imaginer que toutes les méthodes de réception d'émissions télévisées que nous venons de décrire sont disponibles et que vous pouvez choisir celle que vous voulez pour votre demeure.

Comme vous voyez, chaque option figure ci-dessous à plusieurs prix. Considérez toutes les options à chaque prix et choisissez celle qui serait votre premier choix. Veuillez prendre l'étiquette avec le numéro '1' et en couvrir le cercle qui contient votre premier choix.

Imaginez à présent que le choix que vous venez de faire n'est pas disponible et choisissez parmi les options qui restent celle que vous préférez. Ce sera votre deuxième choix. Mettez l'étiquette avec le numéro '2' sur le cercle qui contient votre deuxième choix. Veuillez continuer de choisir jusqu'à ce que tous les cercles aient été couverts. Votre dernier choix sera le cercle recouvert du numéro '12'

J'imagine que vous et les vôtres aurez du plaisir à faire votre choix mais je vous prie de le faire après mûre réflexion.

| OPTION A | OPTION B | OPTION C |
|---|---|---|
| Rappel de description: | Rappel de description: | Rappel de description: |
| Il s'agit d'une antenne parabolique que vous pourriez acheter. Avec cette antenne, vous pourriez capter les canaux de télévision canadienne gratuite et payante* AINSI QUE les canaux de télévision américaine gratuite et payante*. | Ceci ressemble à la télévision par câblodistribution. Avec cette option, vous pourriez avoir les canaux de télévision canadienne gratuite et payante* AINSI QUE les canaux de télévision américaine gratuite et payante*. | Ceci ressemble à la télévision par câblodistribution. Avec cette option, vous pourriez avoir les canaux de télévision canadienne gratuite et payante* AINSI QUE les canaux de télévision américaine gratuite seulement. |
| Achat de 400$ | Abonnement de 10$ par mois | Abonnement de 10$ par mois |
| Achat de 600$ | Abonnement de 15$ par mois | Abonnement de 15$ par mois |
| Achat de 800$ | Abonnement de 20$ par mois | Abonnement de 20$ par mois |
| Achat de 1 200$ | Abonnement de 25$ par mois | Abonnement de 25$ par mois |

*N'OUBLIEZ PAS que tous frais de télévision payante s'ajouteraient aux frais dont il a été question ici.

14- 15- 16- 17- 18- 19- 20- 21- 22- 23- 24- 25- 26- 27- 28- 29- 30- 31- 32- 33- 34- 35- 36- 37-

17. Songeant au choix recouvert de l'auto-collant numéro '1', pourquoi en avez-vous fait votre premier choix?

38-
39-
40-

18. Lorsque votre premier choix devient disponible, quand passerez-vous de ce que vous avez actuellement chez vous à ce premier choix, si vous le faites? (COCHEZ UNE SEULE CASE)

-41

Tout de suite ---------- ( )1
Moins d'un an après son introduction ---- ( )2
Un à trois ans après son introduction --- ( )3
Plus de trois ans après son introduction- ( )4
Jamais, ne changerions pas ---------- ( )5 → PASSEZ À LA QU. 20a

19. Selon le nombre de canaux que les premiers satellites pourront avoir, il est possible qu'on ne puisse pas inclure dès le début dans ce service tous les canaux décrits dans les pages précédentes. Dans ce cas-là, les premiers canaux disponibles seraient:

les canaux canadiens gratuits

ET

la télévision canadienne payante*

ET

la télévision américaine payante*

Après un certain temps, (dans cinq ans par exemple), on y ajouterait les quatre réseaux américains. Plus tard, disons dans dix ans, on y ajouterait les canaux canadiens d'intérêt spécial.

Si cela arrivait, quand passeriez-vous de ce que vous avez actuellement chez vous à ce service, si vous le faites? (COCHEZ UNE SEULE CASE)

Alors que seuls les canaux canadiens gratuits, la télévision canadienne payante* et la télévision américaine payante* seront disponible ---------- ( )1 -42

Pas avant que les quatre réseaux américains deviennent disponibles ---------- ( )2

Pas avant que les canaux canadiens d'intérêt spécial deviennent disponibles ---------- ( )3

Jamais, ne changerions pas ---------- ( )4

*N'oubliez pas le supplément à payer pour la télévision payante.



PASSEZ AU VERSO →

20. Il y a une autre possibilité: elle consiste en un «ensemble» de canaux américains qui seraient les seules émissions que l'on pourrait capter avec les antennes paraboliques dont il a été question plus haut. Cet ensemble comprendrait:

Quatre canaux du genre habituel, avec publicité, et offrant des émissions dites d'intérêt familial n'étant disponibles à aucun autre canal

ET

Deux canaux de télévision payante*, spécialisés en cinéma, sports et manifestations spéciales

20a) Envisageriez-vous d'acheter une antenne parabolique uniquement pour capter cet ensemble de canaux?

-43

Oui ---------- ( )1 → PASSEZ À LA QU.20c
Non ---------- ( )2 → PASSEZ À LA QU.21a
Pas sûr(e) ------ ( )3 → RÉPONDEZ À LA QU.20b

20b) Veuillez inscrire les raisons pour lesquelles vous n'êtes pas sûr(e) d'acheter une antenne parabolique pour capter cet ensemble de canaux.

44-
45-
46-

PASSEZ À LA QU. 21a

20c) Paieriez-vous 400$ pour cette antenne parabolique, ou non?

Oui ---------- ( )1 -47
Non ---------- ( )2 → PASSEZ À LA QU.21a

20d) Paieriez-vous 600$ pour cette antenne parabolique, ou non?

Oui ---------- ( )1 -48
Non ---------- ( )2 → PASSEZ À LA QU.21a

20e) Paieriez-vous 800$ pour cette antenne parabolique, ou non?

Oui ---------- ( )1 -49
Non ---------- ( )2 → PASSEZ À LA QU.21a

20f) Paieriez-vous 1 200$ pour cette antenne parabolique, ou non?

Oui ---------- ( )1 -50
Non ---------- ( )2

J'aimerais vous poser quelques questions de classification.

21a) Vous compris, combien de membres de votre foyer ont 18 ans ou plus?

INSCRIVEZ LE NOMBRE ICI → [ ][ ] 51 52

21b) Combien d'entre-eux ont actuellement un emploi à plein temps?

INSCRIVEZ LE NOMBRE ICI → [ ][ ] 53 54

21c) Combien d'entre-eux ont actuellement un emploi à temps partiel?

INSCRIVEZ LE NOMBRE ICI → [ ][ ] 55 56

21d) De ceux qui restent et qui normalement auraient un emploi, combien y en a-t-il, s'il y a lieu, qui n'ont pas d'emploi en ce moment?

INSCRIVEZ LE NOMBRE ICI → [ ][ ] 57 58

22. Qui a rempli ce questionnaire? -59

Le membre du panel ---------- ( )1

Le (la) conjoint(e) du membre du panel --------- ( )2

Un(e) autre adulte (VEUILLEZ INSCRIRE QUI)_____

_____

J'ESPÈRE QUE D'AVOIR PRIS PART AU PLANNING DE L'AVENIR VOUS AURA AMUSÉS.

JE VOUS REMERCIE DU TEMPS QUE VOUS M'AVEZ ACCORDÉ.

79-0
80-2

N°8455

# APPENDIX D

## CONSUMER SURVEY TABLES

Note: Some percentages in Tables D15-D18 are calculated on very small bases (under 25) and should therefore be treated with particular caution. They are marked 'X' in the tables.

TABLE D1

## SATISFACTION WITH PRESENT TV SERVICES
(% of respondents)

### 1. No. of Channels Received Satisfactorily

| No. of Channels | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| 1 - 3 | 1 | 28 | 22 |
| 4 - 6 | 6 | 38 | 22 |
| 7 - 11 | 41 | 23 | 37 |
| 12 or more | 51 | 10 | 17 |
| No answer | 2 | 1 | 2 |
| | 100 | 100 | 100 |
| Average number | 13.4 | 6.0 | 7.1 |

### 2. Quality of Channels Watched Most Often

| | | | |
|---|---|---|---|
| Fair/poor | 6 | 8 | 9 |
| Good | 42 | 39 | 37 |
| Excellent | 52 | 52 | 52 |
| No answer | 1 | 1 | 1 |
| | 100 | 100 | 100 |

### 3. General Satisfaction with Present TV Arrangements

| | | | |
|---|---|---|---|
| Very/somewhat unsatisfied | 9 | 9 | 18 |
| Somewhat satisfied | 39 | 40 | 35 |
| Very satisfied | 51 | 50 | 46 |
| No answer | 1 | 1 | 1 |
| | 100 | 100 | 100 |

### 4. Problems* Causing Dissatisfaction (Unsatisfied respondents only)

| | | | |
|---|---|---|---|
| Reception quality | 56 | 43 | 42 |
| No. of channels | 16 | 30 | 40 |
| Programming | 28 | 25 | 16 |
| Cable arrangements | 33 | 10 | 16 |
| Others | 5 | 8 | 9 |
| No answer | 2 | 5 | 4 |

* Some people mentioned several problems. The columns therefore total more than 100%.

Source: Consumer Survey, questions 2, 3, 4.

TABLE D2

## PRESENT TV FACILITIES
(% of households)

### 1. Sets in Operation

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| B/W set(s) only | 3 | 14 | 9 |
| 1 colour set only | 28 | 30 | 28 |
| All others (more than 1 set, at least one colour) | 70 | 56 | 63 |
| | 100 | 100 | 100 |
| Av. no. of colour sets | 1.3 | 1.1 | 1.2 |
| Av. no. of B/W sets | 0.7 | 0.7 | 0.8 |
| Total | 2.0 | 1.8 | 2.0 |

### 2. Video Recorder Ownership

| | | | |
|---|---|---|---|
| Yes | 6.8 | 2.5 | 2.3 |

Source: Consumer Survey, questions 5,6,7.

TABLE D3

ASSESSMENT OF DBS OPTIONS
COMPARED WITH PRESENT
TV ARRANGEMENTS
(% of households)

1. Option A (TVRO, full programming)

| Would be... | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| Slightly/much worse | 16 | 12 | 8 |
| About the same | 34 | 29 | 23 |
| Slightly better | 24 | 23 | 25 |
| Much better | 25 | 33 | 41 |
| Don't know/no answer | 1 | 2 | 2 |
| | 100 | 100 | 100 |

2. Option B (Cable, full programming)

| | | | |
|---|---|---|---|
| Slightly/much worse | 12 | 20 | 14 |
| About the same | 48 | 38 | 32 |
| Slightly better | 23 | 20 | 25 |
| Much better | 16 | 20 | 27 |
| Don't know/no answer | 1 | 2 | 2 |
| | 100 | 100 | 100 |

3. Option C (Cable, no US Pay TV channels).

| | | | |
|---|---|---|---|
| Slightly/much worse | 28 | 27 | 24 |
| About the same | 56 | 46 | 43 |
| Slightly better | 12 | 14 | 18 |
| Much better | 4 | 11 | 13 |
| Don't know/no answer | 1 | 3 | 2 |
| | 100 | 100 | 100 |

Source: Consumer Survey, questions 8, 11, 14.

TABLE D4

## REASONS FOR ASSESSMENTS OF OPTION A

1. Unfavourable Assessments (households judging much or slightly worse than present service only)
(% of households)**

| Type of Reason | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| Cost | 73 | 51 | 54 |
| No improvement on present service | 18 | 23 | 31 |
| Anti-TV in general | 8 | 30 | 19 |
| Anti-Canadian TV | 10 | - | 4 |
| Anti-TVRO | 10 | 9 | 4 |
| Other | 2 | 8 | 8 |
| No answer | 6 | 4 | - |

2. Favourable Assessments (households judging much or slightly better than present service only)

a) Importance of Various Types of Channel
(% judging each 'extremely important')

| | | | | |
|---|---|---|---|---|
| Canadian | - Free | 32 | 37 | 38 |
| | - Pay | 14 | 7 | 18 |
| | - Special interest | 21 | 22 | 24 |
| U.S. | - Free | 40 | 26 | 36 |
| | - Pay | 25 | 9 | 22 |

b) Other Important Factors
(% of households)**

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| Choice of channels | 24 | 22 | 23 |
| Improved reception | 19 | 16 | 24 |
| Improved programming | 19 | 17 | 16 |
| Cost | 10 | 5 | 2 |
| Content - pro-pay TV | 4 | 1 | 3 |
| - pro-Canadian | 2 | 0 | 8 |
| - anti-commercials | 2 | 2 | 1 |
| Delivery mechanism - | | | |
| - anti-cable | 3 | 2 | 3 |
| - pro-TVRO | 2 | 3 | 1 |
| Others | 3 | 1 | 3 |
| None | 7 | 9 | 10 |
| No answer | 27 | 36 | 27 |

**Some mentioned more than one item. Columns may therefore total over 100%

Source: Consumer Survey, question 9.

TABLE D5

## REASONS FOR ASSESSMENTS OF OPTION B
(% of households)**

1. Unfavourable Assessments (households judging much or slightly worse than present service only)

| Type of Reason | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| Cost | 58 | 45 | 43 |
| No improvement on present service | 9 | 11 | 25 |
| Anti-TV in general | 4 | 16 | 7 |
| Anti-Canadian TV | 5 | - | - |
| Ownership preferred | 14 | 14 | 20 |
| Delivery mechanism | 17 | 24 | 23 |
| Other | 2 | 5 | - |
| No answer | 5 | 5 | 2 |

2. Favourable Assessments (households judging much or slightly better than present service only)

| | | | |
|---|---|---|---|
| Choice of channels | 47 | 63 | 60 |
| Improved reception | 11 | 21 | 21 |
| Improved programming | 18 | 10 | 9 |
| Cost | 10 | 6 | 9 |
| Content - pro-pay TV | 10 | 1 | 2 |
| Delivery mechanism - - anti-TVRO | 16 | 10 | 14 |
| Others | 2 | 1 | 1 |
| Don't know/no answer | 12 | 12 | 11 |

**Some mentioned several reasons, so columns may add to more than 100%.

Source: Consumer Survey, question 12.

TABLE D6

## REASONS FOR ASSESSMENTS OF OPTION C
(% of households)**

1. Unfavourable Assessments (households judging much or slightly worse than present service only)

| Type of Reason | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| Cost | 15 | 23 | 12 |
| No improvement on present service | 6 | 12 | 16 |
| Anti-TV in general | 1 | 11 | 1 |
| Anti-Canadian TV | 10 | 11 | 9 |
| Anti-cable | - | 3 | 1 |
| Anti-US TV | - | 3 | 1 |
| Pro-US TV | 32 | 10 | 30 |
| Lack of choice | 28 | 17 | 19 |
| Other | 4 | 3 | 4 |
| No answer | 13 | 19 | 11 |

2. Favourable Assessments (households judging much or slightly better than present service only)

| | | | |
|---|---|---|---|
| Choice of channels | 46 | 56 | 64 |
| Improved reception | 18 | 20 | 26 |
| Improved programming | 14 | 11 | 13 |
| Cost | 3 | 3 | - |
| Content - pro-Canadian | 18 | 4 | 10 |
| - anti-US | 10 | 2 | 1 |
| Delivery mechanism - anti-TVRO | 2 | 2 | 2 |
| Other | 2 | 1 | 1 |
| Don't know/no answer | 12 | 18 | 12 |

**Some mentioned several reasons, so columns may add to more than 100%.

Source: Consumer Survey, question 15.

TABLE D7

## WILLINGNESS TO PAY FOR OPTIONS
(% of all households)

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| **1. Option A** | | | |
| Would not buy | 70 | 76 | 65 |
| *Would pay $400 | 30 | 24 | 35 |
| $600 | 13 | 7 | 11 |
| $800 | 6 | 2 | 3 |
| $1200 | 3 | 1 | 1 |
| **2. Option B** | | | |
| Would not subscribe | 51 | 75 | 56 |
| *Would subscribe at - | | | |
| - $10/month | 49 | 25 | 44 |
| - $15 | 20 | 9 | 28 |
| - $20 | 4 | 2 | 9 |
| - $25 | 2 | 0 | 5 |
| **3. Option C** | | | |
| Would not subscribe | 71 | 82 | 67 |
| *Would subscribe at - | | | |
| - $10/month | 29 | 18 | 33 |
| - $15 | 9 | 5 | 16 |
| - $20 | 2 | 0 | 4 |
| - $25 | 0 | - | 2 |

*Positive answers only. Don't know/no answer treated as negatives.

Source: Consumer Survey, questions 10, 13, 16.

TABLE D8

## HOUSEHOLDS WILLING* TO BUY TVRO'S
(house-dwellers only)

### 1. With Full (Option A) Programming

| % would buy at... | Cable Subscribers | Non-Subscribers | Uncabled | Total |
|---|---|---|---|---|
| $400 | 28 | 19 | 31 | |
| $600 | 12 | 5 | 9 | |
| $800 | 5 | 1 | 3 | |
| $1200 | 2 | 0 | 1 | |
| Total Households ('000 1983) | 2851 | 952 | 266 | 4069 |
| '000 would buy at... | | | | |
| $400 | 802 | 185 | 81 | 1068 |
| $600 | 345 | 46 | 24 | 415 |
| $800 | 142 | 11 | 9 | 162 |
| $1200 | 65 | 2 | 3 | 70 |

### 2. With US DBS Only Available

| | | | | |
|---|---|---|---|---|
| % would buy at... | | | | |
| $400 | 14 | 9 | 18 | |
| $600 | 7 | 3 | 6 | |
| $800 | 3 | 1 | 2 | |
| $1200 | 2 | - | 1 | |
| '000 would buy at... | | | | |
| $400 | 405 | 88 | 48 | 541 |
| $600 | 207 | 31 | 16 | 254 |
| $800 | 86 | 9 | 4 | 99 |
| $1200 | 52 | - | 2 | 54 |

* Regardless whether TVRO's are their first choice or not. The %'s relate house-dwellers to total households.

Source: Consumer Survey, positive responses only, questions 10 and 20.

TABLE D9

## HOUSEHOLDS WILLING TO TAKE DBS ON CABLE

### 1. With Full (Option B) Programming

| % would subscribe at... | Cable Subscribers | Non-Subscribers | Uncabled | Total |
|---|---|---|---|---|
| $10/month | 49 | 25 | 44 | |
| $15 | 20 | 9 | 28 | |
| $20 | 4 | 2 | 9 | |
| $25 | 2 | 0 | 5 | |
| Total Households ('000 1983) | 4,689 | 1,527 | 434 | 6,650 |
| '000 would subscribe at... | | | | |
| $10 | 2,291 | 385 | 192 | 2,868 |
| $15 | 922 | 141 | 120 | 1,183 |
| $20 | 206 | 28 | 41 | 275 |
| $25 | 177 | 4 | 23 | 204 |

### 2. With Reduced (Option C) Programming

| % would subscribe at... | | | | |
|---|---|---|---|---|
| $10/month | 29 | 18 | 33 | |
| $15 | 9 | 5 | 16 | |
| $20 | 2 | 0 | 4 | |
| $25 | 0 | 0 | 2 | |
| '000 would subscribe at... | | | | |
| $10 | 1,355 | 272 | 141 | 1,768 |
| $15 | 419 | 71 | 71 | 561 |
| $20 | 92 | 7 | 18 | 117 |
| $25 | 14 | 4 | 10 | 28 |

Source: Consumer Survey, positive responses only, questions 13 and 16.

TABLE D10

## RANKING OF OPTIONS (AT LOWEST PRICE)
(% of households)

1. Option A

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| First choice | 32 | 40 | 43 |
| Second choice | 5 | 2 | 4 |
| Third choice | 10 | 8 | 7 |
| 1 - 3 | 47 | 50 | 53 |

2. Option B

| | | | |
|---|---|---|---|
| First choice | 53 | 38 | 41 |
| Second choice | 23 | 27 | 30 |
| Third choice | 11 | 11 | 12 |
| 1 - 3 | 80 | 63 | 74 |

3. Option C

| | | | |
|---|---|---|---|
| First choice | 12 | 15 | 11 |
| Second choice | 24 | 24 | 20 |
| Third choice | 17 | 23 | 21 |
| 1 - 3 | 49 | 51 | 46 |

Source: Consumer Survey, Section III choices.

TABLE D11

## REASONS FOR FIRST CHOICES OF OPTION
(% of households top-ranking the option)**

| Type of Reason | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| **1. Option A** | | | |
| Cost/value | 51 | 45 | 40 |
| Choice of channels | 24 | 18 | 28 |
| One-time purchase | 31 | 33 | 43 |
| Anti-cable | 12 | 9 | 5 |
| Pro-TVRO | 1 | 2 | 2 |
| Pro-Canadian TV | - | - | 2 |
| Pro-US TV | 0 | 1 | 1 |
| Reception quality | 7 | 9 | 5 |
| Others | 5 | 12 | 3 |
| Don't know/no answer | 5 | 5 | 8 |
| **2. Option B** | | | |
| Cost/value | 73 | 80 | 71 |
| Choice of channels | 29 | 30 | 32 |
| Adequate service | 6 | 5 | 6 |
| Familiar system | 9 | - | 2 |
| Pro-cable | 5 | 8 | 9 |
| Anti-TVRO | 7 | 10 | 11 |
| Pro-Canadian TV | 3 | 1 | 4 |
| Pro-US TV | 10 | 6 | 6 |
| Reception quality | 1 | - | 1 |
| Others | 5 | 5 | 8 |
| Don't know/no answer | 5 | 3 | 9 |
| **3. Option C** | | | |
| Cost/value | 64 | 67 | 68 |
| Choice of channels | 12 | 27 | 19 |
| Adequate service | 21 | 12 | 13 |
| Familiar system | 9 | 2 | - |
| Pro-cable | 1 | 6 | 10 |
| Anti-TVRO | 7 | 8 | 3 |
| Pro-Canadian TV | 3 | 13 | 10 |
| Pro-US TV | 2 | 15 | 10 |
| Reception quality | 1 | - | - |
| Others | - | 4 | 6 |
| Don't know/no answer | 4 | 2 | 6 |

** Some mentioned several reasons, so the columns may add to over 100%.

Source: Consumer Survey, question 17.

TABLE D12

## TIMING OF SWITCH TO FIRST CHOICE OPTION - FULL PROGRAMMING IMMEDIATELY
(% of households)

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| **1. Respondents Choosing Option A** | | | |
| Right away | 21 | 9 | 23 |
| Within a year | 31 | 19 | 27 |
| In 1-3 years | 29 | 33 | 24 |
| Over 3 years | 8 | 13 | 7 |
| Never | 11 | 25 | 18 |
| Don't know/no answer | 0 | 2 | 2 |
| | 100 | 100 | 100 |
| **2. Respondents Choosing Option B** | | | |
| Right away | 16 | 8 | 20 |
| Within a year | 31 | 19 | 29 |
| In 1-3 years | 25 | 24 | 16 |
| Over 3 years | 9 | 13 | 7 |
| Never | 19 | 36 | 25 |
| Don't know/no answer | 1 | - | 3 |
| | 100 | 100 | 100 |
| **3. Respondents Choosing Option C** | | | |
| Right away | 9 | 4 | 23 |
| Within a year | 21 | 17 | 6 |
| In 1-3 years | 24 | 19 | 29 |
| Over 3 years | 4 | 4 | 13 |
| Never | 41 | 56 | 26 |
| Don't know/no answer | - | - | 3 |
| | 100 | 100 | 100 |

Source: Consumer Survey, question 18.

TABLE D13

## TIMING OF SWITCH TO FIRST CHOICE OPTION IF PROGRAMMING DELAYED
(% of households)

| Would switch for..... | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| **1. Option A** | | | |
| Stage 1 - Cdn. and US DBS | 22 | 26 | 41 |
| Stage 2 - US networks also | 61 | 46 | 41 |
| Stage 3 - Cdn. special-interest also | 10 | 17 | 10 |
| Never | 6 | 6 | 6 |
| No answer | 1 | 5 | 3 |
| | 100 | 100 | 100 |
| **2. Option B** | | | |
| Stage 1 - Cdn. and US DBS | 21 | 26 | 31 |
| Stage 2 - US networks also | 56 | 40 | 40 |
| Stage 3 - Cdn. special-interest also | 10 | 24 | 17 |
| Never | 9 | 9 | 10 |
| No answer | 4 | 1 | 2 |
| | 100 | 100 | 100 |
| **3. Option C** | | | |
| Stage 1 - Cdn. and US DBS | 2 | 17 | 39 |
| Stage 2 - US networks also | 55 | 39 | 26 |
| Stage 3 - Cdn. special-interest also | 23 | 35 | 22 |
| Never | 18 | 9 | 13 |
| No answer | 2 | - | - |
| | 100 | 100 | 100 |

Source: Consumer Survey, question 19.

TABLE D14

## WILLINGNESS TO BUY TVRO FOR US DBS ONLY
(% of households)

1. Willingness

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| * No | 68 | 75 | 58 |
| * Yes - under $400 | 2 | 0 | 3 |
| * - $400 | 15 | 12 | 20 |
| - $600 | 8 | 5 | 7 |
| - $800 | 3 | 2 | 2 |
| - $1200 | 1 | 2 | 0 |
| * Unsure | 14 | 10 | 17 |
| * No answer | 2 | 2 | 2 |
| Total of *'d lines | 100 | 100 | 100 |

2. Reasons** for Being Unsure

| | | | |
|---|---|---|---|
| Programming - need to know more | 35 | 29 | 36 |
| - other | 19 | 26 | 15 |
| Cost | 27 | 21 | 23 |
| Have enough choice now | 8 | 10 | 17 |
| Anti-TV | 8 | 10 | 2 |
| Anti-TVRO | 5 | 2 | 6 |
| Others | 7 | - | - |
| Don't know/no answer | 9 | 17 | 9 |

**Some mentioned several reasons. Hence, the columns may total more than 100%.

Source: Consumer Survey, question 20.

TABLE D15

## WILLINGNESS TO PAY $400 FOR OPTION A* - CROSS-TABULATIONS
(% of households)

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| Total | 30 | 24 | 35 |
| Atlantic | 20 | 27 | 56 |
| Quebec | 26 | 21 | 39 |
| Ontario | 31 | 23 | 28 |
| Prairies | 34 | 29 | 60X |
| B.C. | 30 | 20X | 40X |
| French | 22 | 23 | 34 |
| English | 31 | 24 | 35 |
| Small city (under 100,000) | 32 | 28 | 41 |
| Large city | 29 | 25 | 27 |
| Metropolis (over 1,000,000) | 29 | 19 | 38X |
| Age of Head - under 35 | 40 | 28 | 41 |
| - 35-44 | 40 | 38 | 39 |
| - 45 + | 23 | 17 | 27 |
| Education of Head | | | |
| - not highschool grad. | 24 | 19 | 27 |
| - highschool grad. | 32 | 26 | 34 |
| - university | 33 | 26 | 46 |
| Occupation of Head | | | |
| - prof./exec. | 36 | 31 | 43 |
| - white collar | 27 | 19 | 42 |
| - blue collar | 34 | 27 | 34 |
| - other | 11 | 12 | 16 |
| Income ($000)- under 15 | 14 | 13 | 25 |
| - 15-30 | 33 | 27 | 39 |
| - 30 + | 36 | 35 | 36 |
| Family Size - 1-2 | 25 | 21 | 32 |
| - 3-4 | 34 | 26 | 36 |
| - 5 + | 28 | 29 | 37 |
| VCR Owners | 44 | 9X | 71X |
| TV Sets - B/W only | 29X | 8 | 28 |
| - 1 colour only | 27 | 21 | 35 |
| - several, incl. colour | 31 | 29 | 35 |
| Satisfaction with Present Method | | | |
| - very satified | 23 | 13 | 20 |
| - somewhat satisfied | 35 | 32 | 36 |
| - unsatisfied | 49 | 45 | 67 |

* TVRO, full programming

X - Small sample. Caution.

Source: Consumer Survey, question 10

TABLE D16

## WILLINGNESS TO PAY $10/MONTH FOR OPTION B* - CROSS-TABULATIONS
(% of households)

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| Total | 49 | 25 | 44 |
| Atlantic | 55 | 36 | 75 |
| Quebec | 52 | 27 | 37 |
| Ontario | 45 | 18 | 40 |
| Prairies | 58 | 29 | 60X |
| B.C. | 42 | 33X | 60X |
| French | 48 | 27 | 39 |
| English | 49 | 24 | 45 |
| Small city | 55 | 21 | 48 |
| Large city | 49 | 24 | 41 |
| Metropolis | 43 | 29 | 38X |
| Age of Head - under 35 | 66 | 34 | 61 |
| - 35-44 | 58 | 22 | 49 |
| - 45 + | 40 | 22 | 28 |
| Education of Head | | | |
| - not highschool grad. | 46 | 16 | 36 |
| - highschool grad. | 49 | 28 | 52 |
| - university | 51 | 33 | 47 |
| Occupation of Head | | | |
| - prof./exec. | 53 | 32 | 51 |
| - white collar | 52 | 26 | 42 |
| - blue collar | 52 | 24 | 51 |
| - other | 28 | 18 | 18 |
| Income ($000)- under 15 | 37 | 21 | 30 |
| - 15-30 | 48 | 25 | 50 |
| - 30 + | 56 | 33 | 48 |
| Family Size - 1-2 | 38 | 28 | 38 |
| - 3-4 | 54 | 23 | 46 |
| - 5 + | 60 | 22 | 54 |
| VCR Owners | 71 | 18X | 86X |
| TV Sets - B/W only | 47X | 20 | 45 |
| - 1 colour only | 43 | 24 | 44 |
| - several, incl. colour | 51 | 27 | 45 |
| Satisfaction with Present Method | | | |
| - very satisfied | 43 | 12 | 27 |
| - somewhat satisfied | 55 | 38 | 52 |
| - unsatisfied | 59 | 43 | 75 |

* Cable subscription, full programming

X - Small sample. Caution.

Source: Consumer Survey, question 13

TABLE D17

## WILLINGNESS TO PAY $10 /MONTH FOR OPTION C* - CROSS-TABULATIONS
(% of households)

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| Total | 29 | 18 | 33 |
| Atlantic | 35 | 33 | 66 |
| Quebec | 29 | 15 | 31 |
| Ontario | 25 | 14 | 26 |
| Prairies | 34 | 25 | 47X |
| B.C. | 29 | 20X | 60X |
| French | 26 | 16 | 34 |
| English | 29 | 19 | 32 |
| Small city | 36 | 17 | 41 |
| Large city | 25 | 21 | 22 |
| Metropolis | 26 | 16 | 38X |
| Age of Head - under 35 | 39 | 22 | 47 |
| - 35-44 | 36 | 18 | 39 |
| - 45 + | 23 | 16 | 17 |
| Education of Head | | | |
| - not highschool grad. | 25 | 10 | 26 |
| - highschool grad. | 33 | 19 | 35 |
| - university | 28 | 26 | 38 |
| Occupation of Head | | | |
| - prof./exec. | 31 | 23 | 40 |
| - white collar | 37 | 24 | 27 |
| - blue collar | 31 | 13 | 37 |
| - other | 14 | 14 | 12 |
| Income ($000)- under 15 | 24 | 16 | 16 |
| - 15-30 | 26 | 18 | 38 |
| - 30 + | 35 | 22 | 39 |
| Family Size - 1-2 | 22 | 20 | 27 |
| - 3-4 | 32 | 15 | 34 |
| - 5 + | 35 | 18 | 41 |
| VCR Owners | 38 | 9X | 86X |
| TV Sets - B/W only | 29X | 12 | 34 |
| - 1 colour only | 29 | 16 | 35 |
| - several, incl. colour | 29 | 20 | 31 |
| Satisfaction with Present Method | | | |
| - very satisfied | 26 | 8 | 16 |
| - somewhat satisfied | 32 | 28 | 37 |
| - unsatisfied | 30 | 28 | 65 |

* Cable subscription, no US Pay TV

X - Small sample. Caution.

Source: Consumer Survey, question 16.

TABLE D18

## WILLINGNESS TO PAY $400 for TVRO, ONLY US DBS AVAILABLE - CROSS-TABULATIONS
(% of households)

| | Cable Subscribers | Non-Subscribers | Uncabled |
|---|---|---|---|
| Total | 15 | 12 | 20 |
| Atlantic | 13 | 21 | 34 |
| Quebec | 5 | 10 | 15 |
| Ontario | 15 | 15 | 17 |
| Prairies | 22 | 9 | 20X |
| B.C. | 18 | 7X | 60X |
| French | 3 | 8 | 9 |
| English | 17 | 14 | 21 |
| Small city | 17 | 14 | 23 |
| Large city | 14 | 12 | 16 |
| Metropolis | 13 | 11 | 21X |
| Age of Head - under 35 | 20 | 17 | 21 |
| - 35-44 | 23 | 16 | 27 |
| - 44 + | 10 | 9 | 14 |
| Education of Head | | | |
| - not highschool grad. | 11 | 10 | 17 |
| - highschool grad. | 21 | 13 | 23 |
| - university | 13 | 14 | 20 |
| Occupation of Head | | | |
| - prof./exec. | 17 | 16 | 23 |
| - white collar | 13 | 9 | 21 |
| - blue collar | 16 | 17 | 22 |
| - other | 11 | 4 | 6 |
| Income ($000)- under 15 | 9 | 6 | 13 |
| - 15-30 | 16 | 13 | 22 |
| - 30 + | 18 | 20 | 22 |
| Family Size - 1-2 | 13 | 11 | 14 |
| - 3-4 | 16 | 14 | 21 |
| - 5 + | 17 | 12 | 26 |
| VCR Owners | 27 | 9X | 57X |
| TV Sets - B/W only | 18X | 2 | 7 |
| - 1 colour only | 15 | 7 | 16 |
| - several, incl. colour | 15 | 18 | 23 |
| Satisfaction with Present Method | | | |
| - very satisfied | 13 | 9 | 11 |
| - somewhat satisfied | 17 | 16 | 22 |
| - unsatified | 18 | 13 | 35 |

X - Small sample. Caution.

Source: Consumer Survey, question 20

TABLE D19

## SAMPLE CHARACTERISTICS

| | Cable Subscribers | | Non-Subscribers | | Uncabled | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Region - Atlantic | 40 | 6 | 33 | 8 | 32 | 10 |
| - Quebec | 125 | 19 | 174 | 40 | 54 | 18 |
| - Ontario | 265 | 40 | 142 | 33 | 201 | 65 |
| - Prairies | 131 | 20 | 68 | 16 | 15 | 5 |
| - B.C. | 100 | 15 | 15 | 3 | 5 | 2 |
| | 661 | 100 | 432 | 100 | 307 | 100 |
| Language - French | 100 | 15 | 143 | 33 | 44 | 14 |
| - English | 561 | 85 | 289 | 67 | 263 | 86 |
| | 661 | 100 | 432 | 100 | 307 | 100 |
| City - small (under 100,000) | 213 | 32 | 133 | 31 | 155 | 50 |
| - large | 218 | 33 | 129 | 30 | 128 | 42 |
| - metropolis (over 1mm.) | 230 | 35 | 170 | 39 | 24 | 8 |
| | 661 | 100 | 432 | 100 | 307 | 100 |
| Dwelling - single-family - owned | 605 | 92 | 283 | 66 | 248 | 81 |
| - rented | 18 | 3 | 54 | 13 | 27 | 9 |
| - apartment or flat | 24 | 4 | 81 | 19 | 16 | 5 |
| - other | 11 | 2 | 7 | 2 | 14 | 5 |
| - N.A. | 3 | 0 | 7 | 2 | 2 | 1 |
| | 661 | 100 | 432 | 100 | 307 | 100 |
| Family size - 1-2 | 244 | 37 | 200 | 46 | 111 | 36 |
| - 3-4 | 308 | 47 | 183 | 42 | 142 | 46 |
| - 5+ | 109 | 16 | 49 | 11 | 54 | 18 |
| | 661 | 100 | 432 | 100 | 307 | 100 |
| Age of household head - under 35 | 122 | 18 | 119 | 28 | 100 | 33 |
| - 35-44 | 151 | 23 | 77 | 18 | 79 | 26 |
| - 45+ | 338 | 59 | 236 | 55 | 128 | 42 |
| | 661 | 100 | 432 | 100 | 307 | 100 |
| Occupation of head - | | | | | | |
| - prof./exec. | 252 | 38 | 127 | 29 | 100 | 33 |
| - white collar | 104 | 16 | 70 | 16 | 33 | 11 |
| - blue collar | 183 | 28 | 135 | 31 | 121 | 39 |
| - other | 114 | 17 | 95 | 22 | 50 | 16 |
| - N.A. | 8 | 1 | 5 | 1 | 3 | 1 |
| | 661 | 100 | 432 | 100 | 307 | 100 |
| Education of head - | | | | | | |
| - below high school grad. | 219 | 33 | 154 | 36 | 114 | 37 |
| - high school grad. | 228 | 34 | 136 | 31 | 100 | 33 |
| - university | 210 | 32 | 140 | 32 | 90 | 29 |
| - N.A. | 4 | 1 | 2 | 0 | 3 | 1 |
| | 661 | 100 | 432 | 100 | 307 | 100 |
| Household income ($000) - | | | | | | |
| - under 15 | 141 | 21 | 154 | 36 | 77 | 25 |
| - 15-30 | 287 | 43 | 186 | 43 | 153 | 50 |
| - 30+ | 233 | 35 | 92 | 21 | 77 | 25 |
| | 661 | 100 | 432 | 100 | 307 | 100 |

# APPENDIX E

# MARKET MODEL TABLES

TABLE E1

HOUSEHOLDS IN UNCABLED AREAS ('000)
(medium projections)

| | Urban* | | | | | |
|---|---|---|---|---|---|---|
| | | | Total | | | |
| | Houses | Others** | '000 | % | Rural | Total |
| 1982 | 279 | 177 | 456 | 20 | 1,797 | 2,253 |
| 1984 | 259 | 164 | 423 | 19 | 1,847 | 2,270 |
| 1988 | 240 | 153 | 393 | 17 | 1,922 | 2,315 |
| 1992 | 239 | 152 | 391 | 17 | 1,974 | 2,365 |
| 1996 | 246 | 156 | 402 | 16 | 2,042 | 2,444 |
| 2000 | 257 | 163 | 420 | 17 | 2,106 | 2,526 |
| 2004 | 261 | 166 | 427 | 16 | 2,180 | 2,607 |

* TV households only
** Condominiums, apartments and flats

Source: Woods Gordon Market Model

TABLE E2

PROJECTED TVRO's IN USE IN UNCABLED AREAS
(base case)

| | Urban | | | | Rural | |
|---|---|---|---|---|---|---|
| | Full Programming* | | Min.Programming* | | | |
| | '000 | % ** | '000 | % ** | '000 | % |
| 1984 | 2 | 1 | 2 | 1 | 150 | 8 |
| 1988 | 21 | 9 | 12 | 5 | 827 | 43 |
| 1992 | 25 | 10 | 14 | 6 | 1,417 | 72 |
| 1996 | 27 | 11 | 14 | 6 | 1,544 | 76 |
| 2000 | 28 | 11 | 15 | 6 | 1,601 | 76 |
| 2004 | 28 | 11 | 15 | 6 | 1,656 | 76 |

* See Appendix G
** Of houses only

Source: Woods Gordon Market Model

TABLE E3

## RURAL TVRO PROJECTIONS
('000 units)

| | 'A' Projection* | | Base Case | | 'C' Projection* | |
|---|---|---|---|---|---|---|
| | In Use | Increase | In Use | Increase | In Use | Increase |
| 1984 | 151 | 151 | 150 | 150 | 148 | 148 |
| 1985 | 317 | 166 | 312 | 162 | 308 | 160 |
| 1986 | 482 | 165 | 476 | 164 | 464 | 156 |
| 1987 | 635 | 153 | 622 | 146 | 606 | 142 |
| 1988 | 814 | 179 | 827 | 205 | 725 | 119 |
| 1989 | 1,187 | 373 | 1,061 | 234 | 846 | 121 |
| 1990 | 1,481 | 294 | 1,232 | 171 | 991 | 145 |
| 1991 | 1,685 | 204 | 1,344 | 112 | 1,086 | 95 |
| 1992 | 1,792 | 107 | 1,417 | 73 | 1,144 | 58 |
| 1993 | 1,916 | 124 | 1,469 | 52 | 1,178 | 34 |
| 1994 | 1,974 | 58 | 1,500 | 31 | 1,204 | 26 |
| 1995 | 2,024 | 50 | 1,521 | 21 | 1,216 | 12 |
| 1996 | 2,053 | 29 | 1,544 | 23 | 1,222 | 6 |
| 1997 | 2,088 | 35 | 1,556 | 12 | 1,232 | 10 |
| 1998 | 2,109 | 21 | 1,574 | 18 | 1,234 | 2 |
| 1999 | 2,137 | 28 | 1,583 | 9 | 1,240 | 6 |
| 2000 | 2,164 | 27 | 1,601 | 18 | 1,241 | 1 |
| 2001 | 2,182 | 18 | 1,617 | 16 | 1,246 | 5 |
| 2002 | 2,209 | 27 | 1,625 | 8 | 1,252 | 6 |
| 2003 | 2,236 | 27 | 1,641 | 16 | 1,251 | -1 |
| 2004 | 2,252 | 16 | 1,656 | 15 | 1,256 | 5 |

* Defined in Appendix G.

Source: Woods Gordon Market Model.

TABLE E4

URBAN CABLE SUBSCRIBERS WITH TVRO'S
(base-case projections)

| | Total Subscribers* | With TVRO's | | | |
|---|---|---|---|---|---|
| | | Full Programming | | Min. Programming | |
| | '000 | '000 | % | '000 | % |
| 1982 | 2,722 | - | - | - | - |
| 1984 | 2,971 | 61 | 2 | 26 | 1 |
| 1988 | 3,349 | 314 | 9 | 82 | 2 |
| 1992 | 3,606 | 369 | 10 | 95 | 3 |
| 1996 | 3,813 | 386 | 10 | 100 | 3 |
| 2000 | 4,007 | 405 | 10 | 104 | 3 |
| 2004 | 4,198 | 424 | 10 | 109 | 3 |

* In houses only. Demand in condominiums and apartments or flats is expected to be minimal.

Source: Woods Gordon Market Model

TABLE E5

DBS ACCESSIBILITY TO URBAN CABLE SUBSCRIBERS
(base-case projections)

| | Total Subscribers* | DBS Accessible | | | |
|---|---|---|---|---|---|
| | | Full Programming | | Min.Programming | |
| | '000 | '000 | % | '000 | % |
| 1982 | 4,474 | - | - | - | - |
| 1984 | 4,890 | 670 | 14 | 640 | 13 |
| 1988 | 5,494 | 3,592 | 65 | 3,491 | 64 |
| 1992 | 5,880 | 5,665 | 96 | 5,651 | 96 |
| 1996 | 6,199 | 6,199 | 100 | 6,199 | 100 |
| 2000 | 6,501 | 6,501 | 100 | 6,501 | 100 |
| 2004 | 6,800 | 6,800 | 100 | 6,800 | 100 |

* All types of household. Excludes those subscribing because of the accessibility of DBS.

Source: Woods Gordon Market Model

TABLE E6

## BASE-CASE PROJECTIONS FOR CABLE SUBSCRIBERS ('000)

| | Full Programming Available | | | | Min. Programming Available | | | |
|---|---|---|---|---|---|---|---|---|
| | Owning TVRO's | | Total with DBS Accessible* | | Owning TVRO's | | Total with DBS Accessible* | |
| | Current | Increase | Current | Increase | Current | Increase | Current | Increase |
| 1984 | 61 | 61 | 670 | 670 | 26 | 26 | 640 | 640 |
| 1985 | 73 | 12 | 1,330 | 660 | 30 | 4 | 1,297 | 657 |
| 1986 | 78 | 5 | 2,023 | 693 | 32 | 2 | 1,993 | 696 |
| 1987 | 80 | 2 | 2,745 | 722 | 32 | 0 | 2,720 | 727 |
| 1988 | 314 | 234 | 3,592 | 847 | 82 | 50 | 3,491 | 771 |
| 1989 | 349 | 35 | 4,325 | 733 | 92 | 10 | 4,249 | 758 |
| 1990 | 354 | 5 | 5,066 | 741 | 94 | 2 | 5,027 | 778 |
| 1991 | 364 | 10 | 5,362 | 296 | 94 | 0 | 5,334 | 307 |
| 1992 | 369 | 5 | 5,665 | 303 | 95 | 1 | 5,651 | 317 |
| 1993 | 370 | 1 | 5,956 | 291 | 95 | 0 | 5,955 | 304 |
| 1994 | 376 | 6 | 6,045 | 89 | 96 | 1 | 6,043 | 88 |
| 1995 | 381 | 5 | 6,127 | 82 | 98 | 2 | 6,127 | 84 |
| 1996 | 386 | 5 | 6,199 | 72 | 100 | 2 | 6,199 | 72 |
| 1997 | 391 | 5 | 6,283 | 84 | 101 | 1 | 6,283 | 84 |
| 1998 | 395 | 4 | 6,352 | 69 | 102 | 1 | 6,352 | 69 |
| 1999 | 401 | 6 | 6,431 | 79 | 103 | 1 | 6,430 | 78 |
| 2000 | 405 | 4 | 6,501 | 70 | 104 | 1 | 6,501 | 71 |
| 2001 | 410 | 5 | 6,577 | 76 | 105 | 1 | 6,576 | 75 |
| 2002 | 415 | 5 | 6,659 | 82 | 107 | 2 | 6,659 | 83 |
| 2003 | 420 | 5 | 6,730 | 71 | 108 | 1 | 6,730 | 71 |
| 2004 | 424 | 4 | 6,800 | 70 | 109 | 1 | 6,800 | 70 |

* Via cable or TVRO

Source: Woods Gordon Market Model

TABLE E7

'A' PROJECTIONS* FOR CABLE SUBSCRIBERS ('000)

| | Full Programming Available | | | | Min. Programming Available | | | |
|---|---|---|---|---|---|---|---|---|
| | Owning TVRO's | | Total with DBS Accessible** | | Owning TVRO's | | Total with DBS Accessible** | |
| | Current | Increase | Current | Increase | Current | Increase | Current | Increase |
| 1984 | 65 | 65 | 488 | 488 | 27 | 27 | 453 | 453 |
| 1985 | 75 | 10 | 948 | 460 | 31 | 4 | 911 | 458 |
| 1986 | 81 | 6 | 1,439 | 491 | 32 | 1 | 1,402 | 491 |
| 1987 | 83 | 2 | 1,946 | 507 | 34 | 2 | 1,914 | 512 |
| 1988 | 664 | 581 | 2,846 | 900 | 165 | 131 | 2,524 | 610 |
| 1989 | 803 | 139 | 3,419 | 573 | 198 | 33 | 3,080 | 556 |
| 1990 | 852 | 49 | 3,939 | 520 | 210 | 12 | 3,636 | 556 |
| 1991 | 870 | 18 | 4,443 | 504 | 216 | 6 | 4,194 | 558 |
| 1992 | 871 | 1 | 4,952 | 509 | 216 | 0 | 4,768 | 574 |
| 1993 | 863 | -8 | 5,470 | 518 | 213 | -3 | 5,356 | 588 |
| 1994 | 875 | 12 | 5,699 | 229 | 216 | 3 | 5,605 | 249 |
| 1995 | 884 | 9 | 5,923 | 224 | 217 | 1 | 5,852 | 247 |
| 1996 | 889 | 5 | 6,155 | 232 | 218 | 1 | 6,106 | 254 |
| 1997 | 894 | 5 | 6,385 | 230 | 219 | 1 | 6,359 | 253 |
| 1998 | 898 | 4 | 6,625 | 240 | 220 | 1 | 6,624 | 265 |
| 1999 | 910 | 12 | 6,713 | 88 | 224 | 4 | 6,714 | 90 |
| 2000 | 923 | 13 | 6,802 | 89 | 226 | 2 | 6,802 | 88 |
| 2001 | 937 | 14 | 6,908 | 106 | 230 | 4 | 6,908 | 106 |
| 2002 | 950 | 13 | 7,002 | 94 | 233 | 3 | 7,002 | 94 |
| 2003 | 962 | 12 | 7,093 | 91 | 236 | 3 | 7,093 | 91 |
| 2004 | 977 | 15 | 7,193 | 100 | 240 | 4 | 7,194 | 101 |

* Defined in Appendix G.

**Via cable or TVRO

Source: Woods Gordon Market Model.

TABLE E8

## 'C' PROJECTIONS* FOR CABLE SUBSCRIBERS ('000)

| | Full Programming Available | | | | Min. Programming Available | | | |
|---|---|---|---|---|---|---|---|---|
| | Owning TVRO's | | Total with DBS Accessible** | | Owning TVRO's | | Total with DBS Accessible** | |
| | Current | Increase | Current | Increase | Current | Increase | Current | Increase |
| 1984 | 59 | 59 | 884 | 884 | 25 | 25 | 856 | 856 |
| 1985 | 68 | 9 | 1,766 | 882 | 28 | 3 | 1,740 | 884 |
| 1986 | 71 | 3 | 2,685 | 919 | 30 | 2 | 2,665 | 925 |
| 1987 | 74 | 3 | 3,636 | 951 | 31 | 1 | 3,623 | 958 |
| 1988 | 132 | 58 | 4,618 | 982 | 42 | 11 | 4,608 | 985 |
| 1989 | 153 | 21 | 4,991 | 373 | 48 | 6 | 4,985 | 377 |
| 1990 | 162 | 9 | 5,373 | 382 | 51 | 3 | 5,373 | 388 |
| 1991 | 164 | 2 | 5,460 | 87 | 52 | 1 | 5,460 | 87 |
| 1992 | 170 | 6 | 5,543 | 83 | 54 | 2 | 5,544 | 84 |
| 1993 | 172 | 2 | 5,619 | 76 | 54 | 0 | 5,620 | 76 |
| 1994 | 175 | 3 | 5,695 | 76 | 55 | 1 | 5,694 | 74 |
| 1995 | 177 | 2 | 5,767 | 72 | 56 | 1 | 5,767 | 73 |
| 1996 | 178 | 1 | 5,850 | 83 | 56 | 0 | 5,850 | 83 |
| 1997 | 181 | 3 | 5,903 | 53 | 57 | 1 | 5,902 | 52 |
| 1998 | 183 | 2 | 5,973 | 70 | 57 | 0 | 5,973 | 71 |
| 1999 | 184 | 1 | 6,030 | 57 | 58 | 1 | 6,031 | 58 |
| 2000 | 186 | 2 | 6,101 | 71 | 58 | 0 | 6,100 | 69 |
| 2001 | 188 | 2 | 6,163 | 62 | 59 | 1 | 6,164 | 64 |
| 2002 | 189 | 1 | 6,224 | 61 | 59 | 0 | 6,224 | 60 |
| 2003 | 191 | 2 | 6,289 | 65 | 59 | 0 | 6,288 | 64 |
| 2004 | 192 | 1 | 6,346 | 57 | 61 | 2 | 6,347 | 59 |

*Defined in Appendix G.

**Via cable or TVRO

Source: Woods Gordon Market Model.

TABLE E9

URBAN NON-SUBSCRIBERS WITH TVRO'S
(base-case projections)

| | Total Non-Subscribers* '000 | With TVRO's — Full Programming '000 | % | Min. Programming '000 | % |
|---|---|---|---|---|---|
| 1982 | 986 | - | - | - | - |
| 1984 | 924 | 5 | 1 | 0 | 0 |
| 1988 | 844 | 37 | 4 | 14 | 2 |
| 1992 | 826 | 47 | 6 | 19 | 2 |
| 1996 | 833 | 49 | 6 | 20 | 2 |
| 2000 | 845 | 49 | 6 | 20 | 2 |
| 2004 | 861 | 50 | 6 | 20 | 2 |

* In houses. Demand in condominiums and apartments or flats is expected to be minimal.

Source: Woods Gordon Market Model

TABLE E10

DBS ACCESSIBILITY TO URBAN NON-SUBSCRIBERS
(base-case projections)

| | Total Non-Subscribers* '000 | DBS Accessible — Full Programming '000 | % | Min.Programming '000 | % |
|---|---|---|---|---|---|
| 1982 | 1,585 | - | - | - | - |
| 1984 | 1,478 | 6 | 0 | 0 | 0 |
| 1988 | 1,364 | 72 | 5 | 27 | 2 |
| 1992 | 1,367 | 120 | 9 | 47 | 3 |
| 1996 | 1,400 | 127 | 9 | 51 | 4 |
| 2000 | 1,433 | 129 | 9 | 52 | 4 |
| 2004 | 1,472 | 133 | 9 | 52 | 4 |

* In all kinds of dwellings. Includes those who would have remained non-subscribers in the absence of DBS.

Source: Woods Gordon Market Model

TABLE E11

## BASE-CASE PROJECTIONS FOR NON-SUBSCRIBERS ('000)

| | Full Programming Available | | | | Min. Programming Available | | | |
|---|---|---|---|---|---|---|---|---|
| | Owning TVRO's | | Total with DBS Accessible* | | Owning TVRO's | | Total with DBS Accessible* | |
| | Current | Increase | Current | Increase | Current | Increase | Current | Increase |
| 1984 | 5 | 5 | 6 | 6 | 0 | 0 | 0 | 0 |
| 1985 | 6 | 1 | 8 | 2 | 0 | 0 | 0 | 0 |
| 1986 | 7 | 1 | 11 | 3 | 0 | 0 | 0 | 0 |
| 1987 | 6 | -1 | 11 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 37 | 31 | 72 | 61 | 14 | 14 | 27 | 27 |
| 1989 | 44 | 7 | 95 | 23 | 18 | 4 | 37 | 10 |
| 1990 | 46 | 2 | 108 | 13 | 18 | 0 | 42 | 5 |
| 1991 | 48 | 2 | 116 | 8 | 18 | 0 | 44 | 2 |
| 1992 | 47 | -1 | 120 | 4 | 19 | 1 | 47 | 3 |
| 1993 | 47 | 0 | 122 | 2 | 19 | 0 | 49 | 2 |
| 1994 | 48 | 1 | 124 | 2 | 19 | 0 | 49 | 0 |
| 1995 | 48 | 0 | 125 | 1 | 19 | 0 | 49 | 0 |
| 1996 | 49 | 1 | 127 | 2 | 20 | 1 | 51 | 2 |
| 1997 | 49 | 0 | 127 | 0 | 20 | 0 | 51 | 0 |
| 1998 | 49 | 0 | 127 | 0 | 20 | 0 | 51 | 0 |
| 1999 | 49 | 0 | 129 | 2 | 20 | 0 | 51 | 0 |
| 2000 | 49 | 0 | 129 | 0 | 20 | 0 | 52 | 1 |
| 2001 | 49 | 0 | 130 | 1 | 20 | 0 | 52 | 0 |
| 2002 | 50 | 1 | 132 | 2 | 20 | 0 | 52 | 0 |
| 2003 | 50 | 0 | 132 | 0 | 20 | 0 | 52 | 0 |
| 2004 | 50 | 0 | 133 | 1 | 20 | 0 | 52 | 0 |

* Via cable or TVRO

Source: Woods Gordon Market Model

TABLE E12

## 'A' PROJECTIONS* FOR NON-SUBSCRIBERS ('000)

| | Full Programming Available | | | | Min. Programming Available | | | |
|---|---|---|---|---|---|---|---|---|
| | Owning TVRO's | | Total with DBS Accessible** | | Owning TVRO's | | Total with DBS Accessible** | |
| | Current | Increase | Current | Increase | Current | Increase | Current | Increase |
| 1984 | 5 | 5 | 5 | 5 | - | - | - | - |
| 1985 | 7 | 2 | 9 | 4 | - | - | - | - |
| 1986 | 8 | 1 | 11 | 2 | - | - | - | - |
| 1987 | 7 | -1 | 10 | -1 | - | - | - | - |
| 1988 | 100 | 93 | 165 | 155 | 26 | 26 | 39 | 39 |
| 1989 | 142 | 42 | 239 | 74 | 38 | 12 | 60 | 21 |
| 1990 | 161 | 19 | 283 | 44 | 42 | 4 | 72 | 12 |
| 1991 | 171 | 10 | 317 | 34 | 46 | 4 | 83 | 11 |
| 1992 | 174 | 3 | 341 | 24 | 48 | 2 | 94 | 11 |
| 1993 | 176 | 2 | 364 | 23 | 47 | -1 | 98 | 4 |
| 1994 | 177 | 1 | 373 | 9 | 49 | 2 | 102 | 4 |
| 1995 | 176 | -1 | 381 | 8 | 49 | 0 | 104 | 2 |
| 1996 | 177 | 1 | 389 | 8 | 49 | 0 | 107 | 3 |
| 1997 | 178 | 1 | 398 | 9 | 48 | -1 | 109 | 2 |
| 1998 | 179 | 1 | 407 | 9 | 49 | 1 | 112 | 3 |
| 1999 | 180 | 1 | 410 | 3 | 50 | 1 | 114 | 2 |
| 2000 | 181 | 1 | 414 | 4 | 50 | 0 | 115 | 1 |
| 2001 | 182 | 1 | 417 | 3 | 50 | 0 | 115 | 0 |
| 2002 | 183 | 1 | 420 | 3 | 51 | 1 | 116 | 1 |
| 2003 | 185 | 2 | 424 | 4 | 51 | 0 | 117 | 1 |
| 2004 | 186 | 1 | 426 | 2 | 51 | 0 | 118 | 1 |

* Defined in Appendix G.

**Via cable or TVRO

Source: Woods Gordon Market Model.

TABLE E13

## 'C' PROJECTIONS* FOR NON-SUBSCRIBERS ('000)

| | Full Programming Available | | | | Min. Programming Available | | | |
|---|---|---|---|---|---|---|---|---|
| | Owning TVRO's | | Total with DBS Accessible** | | Owning TVRO's | | Total with DBS Accessible** | |
| | Current | Increase | Current | Increase | Current | Increase | Current | Increase |
| 1984 | 5 | 5 | 7 | 7 | - | - | - | - |
| 1985 | 7 | 2 | 10 | 3 | - | - | - | - |
| 1986 | 7 | 0 | 13 | 3 | - | - | - | - |
| 1987 | 7 | 0 | 15 | 2 | - | - | - | - |
| 1988 | 13 | 6 | 25 | 10 | 7 | 7 | 12 | 12 |
| 1989 | 16 | 3 | 30 | 5 | 8 | 1 | 15 | 3 |
| 1990 | 17 | 1 | 32 | 2 | 9 | 1 | 16 | 1 |
| 1991 | 17 | 0 | 31 | -1 | 8 | -1 | 16 | 0 |
| 1992 | 17 | 0 | 32 | 1 | 8 | 0 | 16 | 0 |
| 1993 | 17 | 0 | 32 | 0 | 8 | 0 | 16 | 0 |
| 1994 | 17 | 0 | 32 | 0 | 9 | 1 | 17 | 1 |
| 1995 | 16 | -1 | 30 | -2 | 8 | -1 | 16 | -1 |
| 1996 | 16 | 0 | 29 | -1 | 8 | 0 | 16 | 0 |
| 1997 | 16 | 0 | 29 | 0 | 8 | 0 | 16 | 0 |
| 1998 | 16 | 0 | 29 | 0 | 8 | 0 | 16 | 0 |
| 1999 | 15 | -1 | 28 | -1 | 8 | 0 | 15 | -1 |
| 2000 | 15 | 0 | 28 | 0 | 8 | 0 | 14 | -1 |
| 2001 | 15 | 0 | 28 | 0 | 8 | 0 | 14 | 0 |
| 2002 | 15 | 0 | 28 | 0 | 8 | 0 | 14 | 0 |
| 2003 | 14 | -1 | 25 | -3 | 7 | -1 | 13 | -1 |
| 2004 | 14 | 0 | 25 | 0 | 7 | 0 | 13 | 0 |

*Defined in Appendix G.

**Via cable or TVRO

Source: Woods Gordon Market Model.

TABLE E14

TOTAL HOUSEHOLDS ('000)
(medium projections)

| | Urban* | | | | | |
|---|---|---|---|---|---|---|
| | | | Total | | | |
| | Houses | Others** | '000 | % | Rural | Total |
| 1982 | 3,987 | 2,528 | 6,515 | 78 | 1,797 | 8,312 |
| 1984 | 4,154 | 2,635 | 6,789 | 79 | 1,847 | 8,636 |
| 1988 | 4,435 | 2,812 | 7,247 | 79 | 1,922 | 9,169 |
| 1992 | 4,672 | 2,963 | 7,635 | 79 | 1,974 | 9,609 |
| 1996 | 4,894 | 3,102 | 7,996 | 80 | 2,042 | 10,038 |
| 2000 | 5,110 | 3,241 | 8,351 | 80 | 2,106 | 10,457 |
| 2004 | 5,321 | 3,375 | 8,696 | 80 | 2,180 | 10,876 |

* TV households only
** Condominiums, apartments and flats

Source: Woods Gordon Market Model

TABLE E15

PROJECTED TOTAL TVRO'S IN USE
(base case)

| | Urban | | | | Rural | |
|---|---|---|---|---|---|---|
| | Full Programming* | | Min.Programming* | | | |
| | '000 | % ** | '000 | % ** | '000 | % |
| 1984 | 68 | 2 | 28 | 1 | 150 | 8 |
| 1988 | 372 | 8 | 108 | 2 | 827 | 43 |
| 1992 | 441 | 9 | 128 | 3 | 1,417 | 72 |
| 1996 | 462 | 9 | 134 | 3 | 1,544 | 76 |
| 2000 | 482 | 9 | 139 | 3 | 1,601 | 76 |
| 2004 | 502 | 9 | 144 | 3 | 1,656 | 76 |

* See footnote in text, Section 3.2
** Of houses only

Source: Woods Gordon Market Model

TABLE E16

## AGGREGATE BASE-CASE PROJECTIONS ('000)

| | Full Programming Available | | | | Min. Programming Available | | | |
|---|---|---|---|---|---|---|---|---|
| | Owning TVRO's | | Total with DBS Accessible* | | Owning TVRO's | | Total with DBS Accessible* | |
| | Current | Increase | Current | Increase | Current | Increase | Current | Increase |
| 1984 | 218 | 218 | 828 | 828 | 178 | 178 | 792 | 792 |
| 1985 | 393 | 175 | 1,652 | 924 | 344 | 166 | 1,611 | 819 |
| 1986 | 564 | 171 | 2,513 | 861 | 510 | 166 | 2,471 | 860 |
| 1987 | 711 | 147 | 3,381 | 868 | 656 | 146 | 3,344 | 873 |
| 1988 | 1,199 | 488 | 4,512 | 1,131 | 935 | 279 | 4,357 | 1,013 |
| 1989 | 1,478 | 279 | 5,505 | 993 | 1,184 | 249 | 5,360 | 1,003 |
| 1990 | 1,656 | 178 | 6,430 | 925 | 1,357 | 173 | 6,314 | 954 |
| 1991 | 1,780 | 124 | 6,846 | 416 | 1,470 | 113 | 6,736 | 422 |
| 1992 | 1,858 | 78 | 7,227 | 381 | 1,545 | 75 | 7,129 | 393 |
| 1993 | 1,912 | 54 | 7,573 | 346 | 1,597 | 52 | 7,487 | 358 |
| 1994 | 1,950 | 38 | 7,695 | 122 | 1,629 | 32 | 7,606 | 119 |
| 1995 | 1,976 | 26 | 7,799 | 104 | 1,652 | 23 | 7,711 | 105 |
| 1996 | 2,006 | 30 | 7,897 | 98 | 1,678 | 26 | 7,808 | 97 |
| 1997 | 2,023 | 17 | 7,993 | 96 | 1,692 | 14 | 7,905 | 97 |
| 1998 | 2,045 | 22 | 8,080 | 87 | 1,711 | 19 | 7,992 | 87 |
| 1999 | 2,061 | 16 | 8,171 | 91 | 1,721 | 10 | 8,079 | 87 |
| 2000 | 2,083 | 22 | 8,259 | 88 | 1,740 | 19 | 8,169 | 90 |
| 2001 | 2,104 | 21 | 8,352 | 93 | 1,757 | 17 | 8,260 | 91 |
| 2002 | 2,118 | 14 | 8,444 | 92 | 1,767 | 10 | 8,351 | 91 |
| 2003 | 2,139 | 21 | 8,531 | 87 | 1,784 | 17 | 8,438 | 87 |
| 2004 | 2,158 | 19 | 8,616 | 85 | 1,800 | 16 | 8,523 | 85 |

* Via cable or TVRO

Source: Woods Gordon Market Model

TABLE E17

## AGGREGATE 'A' PROJECTIONS* ('000)

| | Full Programming Available | | | | Min. Programming Available | | | |
|---|---|---|---|---|---|---|---|---|
| | Owning TVRO's | | Total with DBS Accessible** | | Owning TVRO's | | Total with DBS Accessible** | |
| | Current | Increase | Current | Increase | Current | Increase | Current | Increase |
| 1984 | 223 | 223 | 646 | 646 | 180 | 180 | 606 | 606 |
| 1985 | 401 | 178 | 1,276 | 630 | 350 | 170 | 1,230 | 624 |
| 1986 | 574 | 173 | 1,935 | 659 | 516 | 166 | 1,886 | 656 |
| 1987 | 728 | 154 | 2,594 | 659 | 671 | 155 | 2,551 | 665 |
| 1988 | 1,643 | 915 | 3,890 | 1,296 | 1,037 | 366 | 3,409 | 858 |
| 1989 | 2,208 | 565 | 4,921 | 1,031 | 1,461 | 424 | 4,365 | 956 |
| 1990 | 2,575 | 367 | 5,784 | 863 | 1,773 | 312 | 5,229 | 864 |
| 1991 | 2,808 | 233 | 6,527 | 743 | 1,988 | 215 | 6,003 | 774 |
| 1992 | 2,921 | 113 | 7,169 | 642 | 2,099 | 111 | 6,697 | 694 |
| 1993 | 3,042 | 121 | 7,837 | 668 | 2,219 | 120 | 7,413 | 716 |
| 1994 | 3,113 | 71 | 8,133 | 296 | 2,282 | 63 | 7,724 | 311 |
| 1995 | 3,172 | 59 | 8,416 | 283 | 2,334 | 52 | 8,024 | 300 |
| 1996 | 3,208 | 36 | 8,686 | 270 | 2,365 | 31 | 8,311 | 287 |
| 1997 | 3,250 | 42 | 8,961 | 275 | 2,400 | 35 | 8,601 | 290 |
| 1998 | 3,277 | 27 | 9,232 | 271 | 2,424 | 24 | 8,891 | 290 |
| 1999 | 3,319 | 42 | 9,352 | 120 | 2,457 | 33 | 9,011 | 120 |
| 2000 | 3,362 | 43 | 9,474 | 122 | 2,487 | 30 | 9,128 | 117 |
| 2001 | 3,394 | 32 | 9,600 | 126 | 2,509 | 22 | 9,252 | 124 |
| 2002 | 3,437 | 43 | 9,726 | 126 | 2,540 | 31 | 9,374 | 122 |
| 2003 | 3,479 | 42 | 9,849 | 123 | 2,571 | 31 | 9,494 | 120 |
| 2004 | 3,512 | 33 | 9,968 | 119 | 2,591 | 20 | 9,612 | 118 |

* Defined in Appendix G.

**Via cable or TVRO

Source: Woods Gordon Market Model.

TABLE E18

## AGGREGATE 'C' PROJECTIONS* ('000)

| | Full Programming Available | | | | Min. Programming Available | | | |
|---|---|---|---|---|---|---|---|---|
| | Owning TVRO's | | Total with DBS Accessible** | | Owning TVRO's | | Total with DBS Accessible** | |
| | Current | Increase | Current | Increase | Current | Increase | Current | Increase |
| 1984 | 214 | 214 | 1,041 | 1,041 | 174 | 174 | 1,005 | 1,005 |
| 1985 | 385 | 171 | 2,086 | 1,045 | 338 | 164 | 2,050 | 1,045 |
| 1986 | 544 | 159 | 3,164 | 1,078 | 496 | 158 | 3,131 | 1,081 |
| 1987 | 690 | 146 | 4,260 | 1,096 | 639 | 143 | 4,231 | 1,100 |
| 1988 | 877 | 187 | 5,375 | 1,115 | 777 | 138 | 5,348 | 1,117 |
| 1989 | 1,022 | 145 | 5,874 | 499 | 906 | 129 | 5,850 | 502 |
| 1990 | 1,177 | 155 | 6,403 | 529 | 1,055 | 149 | 6,384 | 534 |
| 1991 | 1,274 | 97 | 6,584 | 181 | 1,149 | 94 | 6,565 | 181 |
| 1992 | 1,338 | 64 | 6,726 | 142 | 1,209 | 60 | 6,707 | 142 |
| 1993 | 1,374 | 36 | 6,836 | 110 | 1,244 | 35 | 6,818 | 111 |
| 1994 | 1,403 | 29 | 6,938 | 102 | 1,271 | 27 | 6,918 | 100 |
| 1995 | 1,416 | 13 | 7,020 | 82 | 1,283 | 12 | 7,002 | 84 |
| 1996 | 1,423 | 7 | 7,108 | 88 | 1,290 | 7 | 7,092 | 90 |
| 1997 | 1,436 | 13 | 7,171 | 63 | 1,301 | 11 | 7,154 | 62 |
| 1998 | 1,440 | 4 | 7,243 | 72 | 1,303 | 2 | 7,227 | 73 |
| 1999 | 1,446 | 6 | 7,305 | 62 | 1,310 | 7 | 7,290 | 63 |
| 2000 | 1,449 | 3 | 7,377 | 72 | 1,311 | 1 | 7,359 | 69 |
| 2001 | 1,456 | 7 | 7,444 | 67 | 1,317 | 6 | 7,428 | 69 |
| 2002 | 1,463 | 7 | 7,511 | 67 | 1,323 | 6 | 7,494 | 66 |
| 2003 | 1,463 | 0 | 7,572 | 61 | 1,321 | -2 | 7,556 | 62 |
| 2004 | 1,469 | 6 | 7,634 | 62 | 1,328 | 7 | 7,620 | 64 |

*Defined in Appendix G.

**Via cable or TVRO

Source: Woods Gordon Market Model.

TABLE E19

BASE-CASE REGIONAL PROJECTIONS - URBAN households
(selected years) - FULL programming
- TVRO's IN USE

| Region | Total Urban Households 1981 | | Households with TVRO's | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1984 | | 1988 | | 1992 | | 1996 | | 2000 | | 2004 | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Atlantic | 378 | 6 | 4 | 6 | 27 | 7 | 31 | 7 | 33 | 7 | 36 | 7 | 37 | 7 |
| Quebec | 1,752 | 27 | 10 | 15 | 62 | 17 | 73 | 17 | 77 | 17 | 79 | 16 | 81 | 16 |
| Ontario | 2,482 | 38 | 28 | 41 | 151 | 41 | 177 | 40 | 182 | 39 | 190 | 39 | 198 | 39 |
| Manitoba | 270 | 4 | 2 | 3 | 16 | 4 | 19 | 4 | 21 | 5 | 22 | 5 | 22 | 4 |
| Saskatchewan | 205 | 3 | 2 | 3 | 17 | 5 | 18 | 4 | 21 | 5 | 23 | 5 | 24 | 5 |
| Alberta | 607 | 9 | 7 | 10 | 43 | 12 | 55 | 12 | 61 | 13 | 66 | 14 | 71 | 14 |
| B.C. | 799 | 12 | 10 | 15 | 58 | 16 | 65 | 15 | 67 | 15 | 70 | 15 | 73 | 15 |
| Territories | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| CANADA* | 6,506 | 100 | 68 | 100 | 372 | 100 | 441 | 100 | 462 | 100 | 482 | 100 | 502 | 100 |

*Calculated independently. Columns may not sum exactly.

Sources: Total households - Census
TVRO projections - Woods Gordon Market Model

TABLE E20

BASE-CASE REGIONAL PROJECTIONS - URBAN households
(selected years) - MIN. programming
- TVRO's IN USE

| Region | Total Urban Households 1981 | | Households with TVRO's | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1984 | | 1988 | | 1992 | | 1996 | | 2000 | | 2004 | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Atlantic | 378 | 6 | 2 | 6 | 8 | 7 | 9 | 7 | 10 | 7 | 10 | 7 | 11 | 7 |
| Quebec | 1,752 | 27 | 4 | 15 | 18 | 17 | 21 | 17 | 22 | 17 | 23 | 16 | 23 | 16 |
| Ontario | 2,482 | 38 | 12 | 41 | 44 | 41 | 51 | 40 | 53 | 39 | 55 | 39 | 57 | 39 |
| Manitoba | 270 | 4 | 1 | 3 | 5 | 4 | 6 | 4 | 6 | 5 | 6 | 5 | 6 | 4 |
| Saskatchewan | 205 | 3 | 1 | 3 | 5 | 5 | 5 | 4 | 6 | 5 | 7 | 5 | 7 | 5 |
| Alberta | 607 | 9 | 3 | 10 | 12 | 12 | 16 | 12 | 18 | 13 | 19 | 14 | 20 | 14 |
| B.C. | 799 | 12 | 4 | 15 | 17 | 16 | 19 | 15 | 19 | 15 | 20 | 15 | 21 | 15 |
| Territories | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CANADA* | 6,506 | 100 | 28 | 100 | 108 | 100 | 128 | 100 | 134 | 100 | 139 | 100 | 144 | 100 |

*Calculated independently. Columns may not sum exactly.

Sources: Total households - Census
TVRO projections - Woods Gordon Market Model

TABLE E21

BASE-CASE REGIONAL PROJECTIONS - URBAN households
(selected years) - FULL programming
- DBS ON CABLE

| Region | Total Urban Households 1981 | | Households with DBS Available on Cable | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1984 | | 1988 | | 1992 | | 1996 | | 2000 | | 2004 | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Atlantic | 378 | 6 | 35 | 6 | 196 | 6 | 298 | 6 | 314 | 5 | 333 | 5 | 351 | 5 |
| Quebec | 1,752 | 27 | 144 | 24 | 844 | 25 | 1,299 | 24 | 1,380 | 23 | 1,420 | 23 | 1,465 | 23 |
| Ontario | 2,482 | 38 | 243 | 40 | 1,291 | 39 | 2,102 | 39 | 2,311 | 39 | 2,429 | 39 | 2,537 | 39 |
| Manitoba | 270 | 4 | 29 | 5 | 148 | 4 | 220 | 4 | 232 | 4 | 243 | 4 | 255 | 4 |
| Saskatchewan | 205 | 3 | 9 | 1 | 49 | 1 | 94 | 2 | 114 | 2 | 124 | 2 | 132 | 2 |
| Alberta | 607 | 9 | 69 | 11 | 381 | 12 | 593 | 11 | 655 | 11 | 705 | 11 | 755 | 12 |
| B.C. | 799 | 12 | 79 | 13 | 411 | 12 | 752 | 14 | 873 | 15 | 911 | 15 | 949 | 15 |
| Territories | 12 | 0 | 0 | 0 | 4 | 0 | 6 | 0 | 8 | 0 | 9 | 0 | 10 | 0 |
| CANADA* | 6,506 | 100 | 610 | 100 | 3,313 | 100 | 5,369 | 100 | 5,891 | 100 | 6,176 | 100 | 6,458 | 100 |

*Calculated independently. Columns may not sum exactly.

Sources: Total households - Census
Cable projections - Woods Gordon Market Model

TABLE E22

BASE-CASE REGIONAL PROJECTIONS - URBAN households
(selected years) - MIN. programming
- DBS ON CABLE

| Region | Total Urban Households 1981 | | Households with DBS Available on Cable | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1984 | | 1988 | | 1992 | | 1996 | | 2000 | | 2004 | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Atlantic | 378 | 6 | 35 | 6 | 202 | 6 | 310 | 6 | 327 | 5 | 347 | 5 | 365 | 5 |
| Quebec | 1,752 | 27 | 145 | 24 | 872 | 25 | 1,351 | 24 | 1,436 | 23 | 1,478 | 23 | 1,525 | 23 |
| Ontario | 2,482 | 38 | 245 | 40 | 1,333 | 39 | 2,186 | 39 | 2,405 | 39 | 2,529 | 39 | 2,641 | 39 |
| Manitoba | 270 | 4 | 29 | 5 | 153 | 4 | 229 | 4 | 241 | 4 | 253 | 4 | 265 | 4 |
| Saskatchewan | 205 | 3 | 9 | 1 | 51 | 1 | 98 | 2 | 119 | 2 | 129 | 2 | 137 | 2 |
| Alberta | 607 | 9 | 69 | 11 | 394 | 12 | 617 | 11 | 682 | 11 | 734 | 11 | 786 | 12 |
| B.C. | 799 | 12 | 80 | 13 | 425 | 12 | 782 | 14 | 908 | 15 | 948 | 15 | 988 | 15 |
| Territories | 12 | 0 | 0 | 0 | 4 | 0 | 6 | 0 | 8 | 0 | 9 | 0 | 10 | 0 |
| CANADA* | 6,506 | 100 | 614 | 100 | 3,422 | 100 | 5,584 | 100 | 6,130 | 100 | 6,429 | 100 | 6,723 | 100 |

*Calculated independently. Columns may not sum exactly.

Sources: Total households - Census
Cable projections - Woods Gordon Market Model

TABLE E23

BASE-CASE REGIONAL PROJECTIONS - URBAN households
(selected years) - FULL programming
- TOTAL DBS AVAILABILITY

| Region | Total Urban Households 1981 | | Households with DBS Available (cable or TVRO) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1984 | | 1988 | | 1992 | | 1996 | | 2000 | | 2004 | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Atlantic | 378 | 6 | 39 | 6 | 223 | 6 | 329 | 6 | 343 | 5 | 369 | 6 | 388 | 6 |
| Quebec | 1,752 | 27 | 154 | 23 | 906 | 25 | 1,372 | 24 | 1,457 | 23 | 1,499 | 23 | 1,546 | 22 |
| Ontario | 2,482 | 38 | 271 | 40 | 1,442 | 39 | 2,279 | 39 | 2,493 | 39 | 2,619 | 39 | 2,735 | 39 |
| Manitoba | 270 | 4 | 31 | 5 | 164 | 4 | 239 | 4 | 253 | 4 | 265 | 4 | 277 | 4 |
| Saskatchewan | 205 | 3 | 11 | 2 | 66 | 2 | 112 | 2 | 135 | 2 | 147 | 2 | 156 | 2 |
| Alberta | 607 | 9 | 76 | 11 | 424 | 12 | 648 | 11 | 716 | 11 | 771 | 12 | 826 | 12 |
| B.C. | 799 | 12 | 89 | 13 | 469 | 13 | 817 | 14 | 940 | 15 | 981 | 15 | 1,022 | 15 |
| Territories | 12 | 0 | 0 | 0 | 4 | 0 | 6 | 0 | 8 | 0 | 10 | 0 | 11 | 0 |
| CANADA* | 6,506 | 100 | 678 | 100 | 3,685 | 100 | 5,810 | 100 | 6,353 | 100 | 6,658 | 100 | 6,960 | 100 |

*Calculated independently. Columns may not sum exactly.

Sources: Total households - Census
DBS projections - Woods Gordon Market Model

TABLE E24

BASE-CASE REGIONAL PROJECTIONS - URBAN households
(selected years) - MIN. programming
- TOTAL DBS AVAILABILITY

| Region | Total Urban Households 1981 | | Households with DBS Available (cable or TVRO) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1984 | | 1988 | | 1992 | | 1996 | | 2000 | | 2004 | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Atlantic | 378 | 6 | 37 | 6 | 210 | 6 | 319 | 6 | 337 | 5 | 357 | 5 | 376 | 5 |
| Quebec | 1,752 | 27 | 149 | 23 | 890 | 25 | 1,372 | 24 | 1,458 | 23 | 1,501 | 23 | 1,548 | 23 |
| Ontario | 2,482 | 38 | 257 | 40 | 1,377 | 39 | 2,237 | 39 | 2,458 | 39 | 2,584 | 39 | 2,698 | 39 |
| Manitoba | 270 | 4 | 30 | 5 | 158 | 4 | 235 | 4 | 247 | 4 | 259 | 4 | 271 | 4 |
| Saskatchewan | 205 | 3 | 10 | 2 | 56 | 2 | 103 | 2 | 125 | 2 | 136 | 2 | 144 | 2 |
| Alberta | 607 | 9 | 72 | 11 | 406 | 12 | 633 | 11 | 700 | 11 | 753 | 11 | 806 | 12 |
| B.C. | 799 | 12 | 84 | 13 | 442 | 13 | 801 | 14 | 927 | 15 | 968 | 15 | 1,009 | 15 |
| Territories | 12 | 0 | 0 | 0 | 4 | 0 | 6 | 0 | 8 | 0 | 9 | 0 | 10 | 0 |
| CANADA* | 6,506 | 100 | 642 | 100 | 3,530 | 100 | 5,712 | 100 | 6,264 | 100 | 6,568 | 100 | 6,867 | 100 |

*Calculated independently. Columns may not sum exactly.

Sources: Total households - Census
DBS projections - Woods Gordon Market Model

TABLE E25

BASE-CASE REGIONAL PROJECTIONS (selected years)
- RURAL households
- BASIC programming
- TVRO's IN USE

| Region | Total Rural Households 1981 | | Households with TVRO's | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1984 | | 1988 | | 1992 | | 1996 | | 2000 | | 2004 | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Atlantic | 296 | 17 | 25 | 17 | 141 | 17 | 248 | 18 | 272 | 18 | 287 | 18 | 300 | 18 |
| Quebec | 421 | 24 | 36 | 24 | 198 | 24 | 340 | 24 | 371 | 24 | 384 | 24 | 395 | 24 |
| Ontario | 487 | 27 | 41 | 27 | 227 | 27 | 390 | 28 | 425 | 28 | 445 | 28 | 461 | 28 |
| Manitoba | 88 | 5 | 7 | 5 | 40 | 5 | 67 | 5 | 73 | 5 | 76 | 5 | 79 | 5 |
| Saskatchewan | 127 | 7 | 10 | 7 | 56 | 7 | 95 | 7 | 101 | 7 | 104 | 6 | 107 | 6 |
| Alberta | 151 | 9 | 13 | 9 | 69 | 8 | 116 | 8 | 123 | 8 | 120 | 7 | 118 | 7 |
| B.C. | 197 | 11 | 17 | 11 | 91 | 11 | 157 | 11 | 169 | 11 | 177 | 11 | 185 | 11 |
| Territories | 7 | 0 | 1 | 1 | 4 | 0 | 7 | 0 | 8 | 1 | 8 | 0 | 8 | 0 |
| CANADA* | 1,775 | 100 | 150 | 100 | 827 | 100 | 1,417 | 100 | 1,544 | 100 | 1,601 | 100 | 1,656 | 100 |

*Calculated independently. Columns may not sum exactly.

Sources: Total households - Census
TVRO projections - Woods Gordon Market Model

TABLE E26

BASE-CASE REGIONAL PROJECTIONS - TOTAL households
(selected years) - FULL programming
- TVRO's IN USE

| Region | Total Households 1981 | | Households with TVRO's | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1984 | | 1988 | | 1992 | | 1996 | | 2000 | | 2004 | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Atlantic | 674 | 8 | 29 | 13 | 168 | 14 | 279 | 15 | 305 | 15 | 323 | 16 | 337 | 16 |
| Quebec | 2,173 | 26 | 46 | 21 | 260 | 22 | 413 | 22 | 448 | 22 | 463 | 22 | 476 | 22 |
| Ontario | 2,969 | 36 | 69 | 32 | 378 | 32 | 567 | 31 | 607 | 30 | 635 | 30 | 659 | 31 |
| Manitoba | 358 | 4 | 9 | 4 | 56 | 5 | 86 | 5 | 94 | 5 | 98 | 5 | 101 | 5 |
| Saskatchewan | 332 | 4 | 12 | 6 | 73 | 6 | 113 | 6 | 122 | 6 | 127 | 6 | 131 | 6 |
| Alberta | 758 | 9 | 20 | 9 | 112 | 9 | 171 | 9 | 184 | 9 | 186 | 9 | 189 | 9 |
| B.C. | 996 | 12 | 27 | 12 | 149 | 12 | 222 | 12 | 236 | 12 | 247 | 12 | 258 | 12 |
| Territories | 19 | 0 | 1 | 0 | 4 | 0 | 7 | 0 | 8 | 0 | 9 | 0 | 9 | 0 |
| CANADA* | 8,281 | 100 | 218 | 100 | 1,199 | 100 | 1,858 | 100 | 2,006 | 100 | 2,083 | 100 | 2,158 | 100 |

*Calculated independently. Columns may not sum exactly.

Sources: Total households - Census
TVRO projections - Woods Gordon Market Model

TABLE E27

BASE-CASE REGIONAL PROJECTIONS (selected years) - TOTAL households
- MIN. programming
- TVRO's IN USE

| Region | Total Households 1981 | | Households with TVRO's | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1984 | | 1988 | | 1992 | | 1996 | | 2000 | | 2004 | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Atlantic | 674 | 8 | 27 | 15 | 149 | 16 | 257 | 17 | 282 | 17 | 297 | 17 | 311 | 17 |
| Quebec | 2,173 | 26 | 40 | 22 | 216 | 23 | 361 | 23 | 393 | 23 | 407 | 23 | 418 | 23 |
| Ontario | 2,969 | 36 | 53 | 30 | 271 | 29 | 441 | 29 | 478 | 28 | 500 | 29 | 518 | 29 |
| Manitoba | 358 | 4 | 8 | 4 | 45 | 5 | 73 | 5 | 79 | 5 | 82 | 5 | 85 | 5 |
| Saskatchewan | 332 | 4 | 11 | 6 | 61 | 7 | 100 | 6 | 107 | 6 | 111 | 6 | 114 | 6 |
| Alberta | 758 | 9 | 16 | 9 | 81 | 9 | 132 | 9 | 141 | 8 | 139 | 8 | 138 | 8 |
| B.C. | 996 | 12 | 21 | 12 | 108 | 12 | 176 | 11 | 188 | 11 | 197 | 11 | 206 | 11 |
| Territories | 19 | 0 | 1 | 1 | 4 | 0 | 7 | 0 | 8 | 0 | 8 | 0 | 8 | 0 |
| CANADA* | 8,281 | 100 | 178 | 100 | 935 | 100 | 1,545 | 100 | 1,678 | 100 | 1,740 | 100 | 1,800 | 100 |

*Calculated independently. Columns may not sum exactly.

Sources: Total households - Census
TVRO projections - Woods Gordon Market Model

TABLE E28

BASE-CASE REGIONAL PROJECTIONS - TOTAL households
(selected years) - FULL programming
- TOTAL DBS AVAILABILITY

| Region | Total Households 1981 | | Households with DBS Available (cable or TVRO) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1984 | | 1988 | | 1992 | | 1996 | | 2000 | | 2004 | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Atlantic | 674 | 8 | 64 | 8 | 364 | 8 | 577 | 8 | 619 | 8 | 656 | 8 | 688 | 8 |
| Quebec | 2,173 | 26 | 190 | 23 | 1,104 | 24 | 1,712 | 24 | 1,828 | 23 | 1,883 | 23 | 1,941 | 23 |
| Ontario | 2,969 | 36 | 312 | 38 | 1,669 | 37 | 2,669 | 37 | 2,918 | 37 | 3,064 | 37 | 3,196 | 37 |
| Manitoba | 358 | 4 | 38 | 5 | 204 | 5 | 306 | 4 | 326 | 4 | 341 | 4 | 356 | 4 |
| Saskatchewan | 332 | 4 | 21 | 3 | 122 | 3 | 207 | 3 | 236 | 3 | 251 | 3 | 263 | 3 |
| Alberta | 758 | 9 | 89 | 11 | 493 | 11 | 764 | 11 | 839 | 11 | 891 | 11 | 944 | 11 |
| B.C. | 996 | 12 | 106 | 13 | 560 | 12 | 974 | 13 | 1,109 | 14 | 1,158 | 14 | 1,207 | 14 |
| Territories | 19 | 0 | 1 | 0 | 8 | 0 | 13 | 0 | 16 | 0 | 18 | 0 | 19 | 0 |
| CANADA* | 8,281 | 100 | 828 | 100 | 4,512 | 100 | 7,227 | 100 | 7,897 | 100 | 8,259 | 100 | 8,616 | 100 |

*Calculated independently. Columns may not sum exactly.

Sources: Total households - Census
DBS projections - Woods Gordon Market Model

TABLE E29

BASE-CASE REGIONAL PROJECTIONS - TOTAL households
(selected years) - MIN. programming
- TOTAL DBS AVAILABILITY

| Region | Total Households 1981 | | Households with DBS Available (cable or TVRO) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1984 | | 1988 | | 1992 | | 1996 | | 2000 | | 2004 | |
| | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % | '000 | % |
| Atlantic | 674 | 8 | 62 | 8 | 351 | 8 | 567 | 8 | 609 | 8 | 644 | 8 | 676 | 8 |
| Quebec | 2,173 | 26 | 185 | 23 | 1,088 | 25 | 1,712 | 24 | 1,829 | 23 | 1,885 | 23 | 1,943 | 23 |
| Ontario | 2,969 | 36 | 298 | 38 | 1,604 | 37 | 2,627 | 37 | 2,883 | 37 | 3,029 | 37 | 3,159 | 37 |
| Manitoba | 358 | 4 | 37 | 5 | 198 | 5 | 302 | 4 | 320 | 4 | 335 | 4 | 350 | 4 |
| Saskatchewan | 332 | 4 | 20 | 3 | 112 | 3 | 198 | 3 | 226 | 3 | 240 | 3 | 251 | 3 |
| Alberta | 758 | 9 | 85 | 11 | 475 | 11 | 749 | 11 | 823 | 11 | 873 | 11 | 924 | 11 |
| B.C. | 996 | 12 | 101 | 13 | 533 | 12 | 958 | 13 | 1,096 | 14 | 1,145 | 14 | 1,194 | 14 |
| Territories | 19 | 0 | 1 | 0 | 8 | 0 | 13 | 0 | 16 | 0 | 17 | 0 | 18 | 0 |
| CANADA* | 8,281 | 100 | 792 | 100 | 4,357 | 100 | 7,129 | 100 | 7,808 | 100 | 8,169 | 100 | 8,523 | 100 |

*Calculated independently. Columns may not sum exactly.

Sources: Total households - Census
DBS projections - Woods Gordon Market Model

TABLE E30

PROJECTED DEVELOPMENT OF REPLACEMENT DEMAND FOR CONSUMER TVRO'S
('000 UNITS)

| YEAR | HIGH (A) PROJECTION* | | | BASE-CASE PROJECTION* | | | LOW (C) PROJECTION* | | |
|---|---|---|---|---|---|---|---|---|---|
| | NEW DEMAND | REPL' MENTS | TOTAL | NEW DEMAND | REPL' MENTS | TOTAL | NEW DEMAND | REPL' MENTS | TOTAL |
| 1984 | 223 | 0 | 223 | 218 | 0 | 218 | 214 | 0 | 214 |
| 1985 | 178 | 0 | 178 | 175 | 0 | 175 | 171 | 0 | 171 |
| 1986 | 173 | 0 | 173 | 171 | 0 | 171 | 159 | 0 | 159 |
| 1987 | 154 | 1 | 155 | 147 | 1 | 148 | 146 | 1 | 147 |
| 1988 | 915 | 2 | 917 | 488 | 2 | 490 | 187 | 1 | 188 |
| 1989 | 565 | 4 | 569 | 279 | 3 | 282 | 145 | 3 | 148 |
| 1990 | 367 | 6 | 373 | 178 | 5 | 183 | 155 | 5 | 160 |
| 1991 | 233 | 10 | 243 | 124 | 9 | 133 | 97 | 8 | 105 |
| 1992 | 113 | 17 | 130 | 78 | 14 | 92 | 64 | 12 | 76 |
| 1993 | 121 | 27 | 148 | 54 | 22 | 76 | 36 | 19 | 55 |
| 1994 | 71 | 40 | 111 | 38 | 32 | 70 | 29 | 27 | 56 |
| 1995 | 59 | 58 | 117 | 26 | 45 | 71 | 13 | 37 | 50 |
| 1996 | 36 | 80 | 116 | 30 | 60 | 90 | 7 | 49 | 56 |
| 1997 | 42 | 107 | 149 | 17 | 78 | 95 | 13 | 62 | 75 |
| 1998 | 27 | 137 | 164 | 22 | 97 | 119 | 4 | 75 | 79 |
| 1999 | 42 | 169 | 211 | 16 | 116 | 132 | 6 | 88 | 94 |
| 2000 | 43 | 200 | 243 | 22 | 134 | 156 | 3 | 99 | 102 |
| 2001 | 32 | 228 | 260 | 21 | 149 | 170 | 7 | 108 | 115 |
| 2002 | 43 | 251 | 294 | 14 | 160 | 174 | 7 | 114 | 121 |
| 2003 | 42 | 265 | 307 | 21 | 166 | 187 | 0 | 116 | 116 |
| 2004 | 33 | 272 | 305 | 19 | 166 | 185 | 6 | 115 | 121 |

* ASSUMING FULL PROGRAMMING

SOURCES - NEW DEMAND - TABLES E16-E18
- REPLACEMENTS - NORMAL MORTALITY CURVE (AV.LIFE = 15 YEARS, STD.DEV.= 4.35 YEARS) APPLIED TO EARLIER TOTALS
- TOTAL - NEW DEMAND + REPLACEMENTS

TABLE E31

"MOST LIKELY" SCENARIO*
TVRO PROJECTIONS ('000)

| | Households with TVRO's | | | | | |
|---|---|---|---|---|---|---|
| | Urban | | | | | |
| | Cable Subscribers | Non-Subscribers | Uncabled | Total | Rural | Total |
| 1984 | 39 | 1 | 2 | 42 | 150 | 192 |
| 1985 | 44 | 2 | 2 | 48 | 312 | 360 |
| 1986 | 47 | 2 | 2 | 51 | 476 | 527 |
| 1987 | 50 | 2 | 2 | 54 | 622 | 676 |
| 1988 | 332 | 45 | 42 | 419 | 796 | 1,215 |
| 1989 | 392 | 65 | 50 | 507 | 1,163 | 1,670 |
| 1990 | 407 | 75 | 52 | 534 | 1,448 | 1,982 |
| 1991 | 420 | 70 | 54 | 553 | 1,644 | 2,197 |
| 1992 | 428 | 82 | 56 | 566 | 1,735 | 2,301 |
| 1993 | 430 | 83 | 57 | 570 | 1,861 | 2,431 |
| 1994 | 439 | 84 | 56 | 579 | 1,912 | 2,491 |
| 1995 | 445 | 84 | 57 | 586 | 1,946 | 2,532 |
| 1996 | 451 | 85 | 57 | 593 | 1,979 | 2,572 |
| 1997 | 457 | 86 | 58 | 601 | 1,998 | 2,599 |
| 1998 | 461 | 86 | 59 | 606 | 2,023 | 2,629 |
| 1999 | 468 | 86 | 60 | 614 | 2,035 | 2,649 |
| 2000 | 473 | 86 | 61 | 620 | 2,056 | 2,676 |
| 2001 | 479 | 87 | 60 | 626 | 2,078 | 2,704 |
| 2002 | 485 | 87 | 61 | 633 | 2,088 | 2,721 |
| 2003 | 490 | 88 | 62 | 640 | 2,109 | 2,749 |
| 2004 | 496 | 88 | 62 | 646 | 2,129 | 2,775 |

* Defined as in text Table 10.

Source: See Section 10.

TABLE E32

"MOST LIKELY" SCENARIO*
DBS ACCESSIBILITY PROJECTIONS ('000)

| | Total Households with DBS Accessible** | | | | | |
|---|---|---|---|---|---|---|
| | Urban | | | | | |
| | Cable Subscribers | Non-Subscribers | Uncabled | Total | Rural | Total |
| 1984 | 652 | 1 | 2 | 655 | 150 | 805 |
| 1985 | 1,308 | 3 | 2 | 1,313 | 312 | 1,625 |
| 1986 | 2,003 | 4 | 2 | 2,009 | 476 | 2,485 |
| 1987 | 2,730 | 4 | 2 | 2,736 | 622 | 3,358 |
| 1988 | 3,605 | 68 | 42 | 3,715 | 796 | 4,511 |
| 1989 | 4,344 | 101 | 50 | 4,495 | 1,163 | 5,658 |
| 1990 | 5,078 | 122 | 52 | 5,252 | 1,448 | 6,700 |
| 1991 | 5,370 | 132 | 54 | 5,556 | 1,644 | 7,200 |
| 1992 | 5,669 | 139 | 56 | 5,864 | 1,735 | 7,599 |
| 1993 | 5,956 | 143 | 57 | 6,156 | 1,861 | 8,017 |
| 1994 | 6,045 | 145 | 56 | 6,246 | 1,912 | 8,158 |
| 1995 | 6,127 | 145 | 57 | 6,329 | 1,946 | 8,275 |
| 1996 | 6,199 | 147 | 57 | 6,403 | 1,979 | 8,382 |
| 1997 | 6,283 | 148 | 58 | 6,489 | 1,998 | 8,487 |
| 1998 | 6,352 | 149 | 59 | 6,560 | 2,023 | 8,583 |
| 1999 | 6,430 | 149 | 60 | 6,639 | 2,035 | 8,674 |
| 2000 | 6,501 | 150 | 61 | 6,712 | 2,056 | 8,768 |
| 2001 | 6,576 | 152 | 60 | 6,788 | 2,078 | 8,866 |
| 2002 | 6,659 | 152 | 61 | 6,872 | 2,088 | 8,960 |
| 2003 | 6,729 | 153 | 62 | 6,944 | 2,109 | 9,053 |
| 2004 | 6,800 | 153 | 62 | 7,015 | 2,129 | 9,144 |

* Defined as in text Table 10.
** Via cable or TVRO.

Source: See Section 10.

# APPENDIX F

## MISCELLANEOUS TABLES

URBAN/RURAL PRIVATE HOUSEHOLD PROJECTIONS (000) - CANADA AND REGIONS

TABLE F1.1

HIGH GROWTH ASSUMPTION

| YEAR | ATLANTIC URBAN | ATLANTIC RURAL | ATLANTIC TOTAL | ATLANTIC % URB | QUEBEC URBAN | QUEBEC RURAL | QUEBEC TOTAL | QUEBEC % URB | ONTARIO URBAN | ONTARIO RURAL | ONTARIO TOTAL | ONTARIO % URB | MANITOBA URBAN | MANITOBA RURAL | MANITOBA TOTAL | MANITOBA % URB | SASKATCHEWAN URBAN | SASKATCHEWAN RURAL | SASKATCHEWAN TOTAL | SASKATCHEWAN % URB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACTUAL | | | | | | | | | | | | | | | | | | | | |
| 1981 | 378 | 296 | 674 | 56.1 | 1752 | 421 | 2173 | 80.6 | 2482 | 487 | 2969 | 83.6 | 270 | 88 | 358 | 75.4 | 205 | 127 | 332 | 61.7 |
| PROJECTED | | | | | | | | | | | | | | | | | | | | |
| 1982 | 387 | 301 | 688 | 56.2 | 1786 | 429 | 2215 | 80.6 | 2530 | 495 | 3025 | 83.6 | 275 | 89 | 364 | 75.5 | 211 | 128 | 339 | 62.2 |
| 1983 | 396 | 306 | 703 | 56.4 | 1820 | 438 | 2258 | 80.6 | 2578 | 504 | 3082 | 83.6 | 279 | 90 | 369 | 75.6 | 218 | 129 | 347 | 62.7 |
| 1984 | 406 | 311 | 717 | 56.5 | 1855 | 446 | 2301 | 80.6 | 2627 | 512 | 3139 | 83.6 | 284 | 91 | 375 | 75.7 | 224 | 130 | 354 | 63.2 |
| 1985 | 415 | 317 | 732 | 56.7 | 1889 | 454 | 2343 | 80.6 | 2675 | 521 | 3196 | 83.7 | 289 | 92 | 381 | 75.8 | 230 | 131 | 361 | 63.7 |
| 1986 | 424 | 322 | 746 | 56.8 | 1924 | 463 | 2386 | 80.6 | 2724 | 529 | 3253 | 83.7 | 294 | 93 | 387 | 75.9 | 237 | 132 | 369 | 64.2 |
| 1987 | 433 | 326 | 760 | 57.0 | 1948 | 467 | 2415 | 80.6 | 2759 | 534 | 3293 | 83.7 | 297 | 93 | 391 | 76.1 | 242 | 132 | 374 | 64.6 |
| 1988 | 442 | 331 | 773 | 57.1 | 1973 | 470 | 2443 | 80.7 | 2793 | 540 | 3333 | 83.8 | 301 | 94 | 395 | 76.2 | 247 | 133 | 380 | 65.0 |
| 1989 | 451 | 336 | 787 | 57.3 | 1998 | 474 | 2472 | 80.8 | 2828 | 545 | 3373 | 83.8 | 305 | 94 | 399 | 76.3 | 252 | 133 | 385 | 65.4 |
| 1990 | 460 | 340 | 800 | 57.4 | 2023 | 478 | 2501 | 80.9 | 2862 | 550 | 3413 | 83.8 | 308 | 95 | 403 | 76.5 | 257 | 134 | 391 | 65.8 |
| 1991 | 469 | 345 | 814 | 57.6 | 2048 | 481 | 2530 | 80.9 | 2897 | 556 | 3453 | 83.9 | 312 | 95 | 407 | 76.6 | 263 | 134 | 397 | 66.2 |
| 1992 | 477 | 349 | 826 | 57.7 | 2073 | 487 | 2560 | 80.9 | 2930 | 562 | 3492 | 83.8 | 316 | 96 | 412 | 76.7 | 268 | 135 | 403 | 66.5 |
| 1993 | 485 | 353 | 838 | 57.8 | 2097 | 493 | 2590 | 80.9 | 2962 | 569 | 3531 | 83.8 | 321 | 97 | 417 | 76.8 | 274 | 135 | 409 | 66.9 |
| 1994 | 493 | 358 | 851 | 57.9 | 2121 | 499 | 2620 | 80.9 | 2994 | 576 | 3570 | 83.8 | 325 | 97 | 422 | 76.9 | 279 | 136 | 415 | 67.2 |
| 1995 | 501 | 362 | 863 | 58.0 | 2146 | 505 | 2650 | 80.9 | 3027 | 583 | 3609 | 83.8 | 329 | 98 | 427 | 77.0 | 285 | 136 | 421 | 67.6 |
| 1996 | 509 | 366 | 876 | 58.1 | 2171 | 510 | 2681 | 80.9 | 3060 | 589 | 3649 | 83.8 | 334 | 99 | 433 | 77.0 | 290 | 137 | 427 | 67.9 |
| 1997 | 518 | 371 | 889 | 58.2 | 2192 | 515 | 2707 | 80.9 | 3097 | 597 | 3694 | 83.8 | 338 | 100 | 438 | 77.0 | 296 | 138 | 434 | 68.1 |
| 1998 | 527 | 376 | 903 | 58.3 | 2213 | 520 | 2734 | 80.9 | 3134 | 605 | 3739 | 83.8 | 342 | 102 | 443 | 77.0 | 302 | 139 | 441 | 68.4 |
| 1999 | 535 | 381 | 916 | 58.4 | 2235 | 526 | 2760 | 80.9 | 3172 | 612 | 3784 | 83.8 | 346 | 103 | 449 | 77.0 | 307 | 140 | 447 | 68.6 |
| 2000 | 544 | 386 | 930 | 58.4 | 2257 | 531 | 2787 | 80.9 | 3210 | 620 | 3830 | 83.8 | 350 | 104 | 454 | 77.0 | 313 | 141 | 454 | 68.8 |
| 2001 | 553 | 391 | 944 | 58.5 | 2278 | 536 | 2814 | 80.9 | 3248 | 628 | 3876 | 83.7 | 355 | 105 | 460 | 77.0 | 319 | 142 | 461 | 69.1 |
| 2002 | 562 | 396 | 958 | 58.6 | 2300 | 541 | 2841 | 80.9 | 3286 | 636 | 3921 | 83.7 | 359 | 107 | 465 | 77.0 | 324 | 143 | 468 | 69.3 |
| 2003 | 571 | 401 | 972 | 58.7 | 2322 | 546 | 2868 | 80.9 | 3324 | 644 | 3967 | 83.7 | 363 | 108 | 471 | 77.0 | 330 | 145 | 475 | 69.5 |
| 2004 | 580 | 406 | 986 | 58.8 | 2344 | 551 | 2895 | 80.9 | 3362 | 651 | 4014 | 83.7 | 367 | 109 | 477 | 77.0 | 336 | 146 | 481 | 69.7 |

## APPENDIX G

## DEFINITIONS

### PROJECTIONS

The A, Base-case and C projections are the results of running the market model with the variable factors set as follows:

| | A | Base-Case | C |
|---|---|---|---|
| Population Growth | High | Medium | Low |
| Apartment Living | Low | Medium | High |
| Cable Subscriptions | Low | Medium | High |
| DBS Accessibility Via Cable | Delayed | Medium | Accelerated |
| TVRO Cost From 1988* | $400 | $600 | $800 |
| Cable Cost | $10/month | $15/month | $20/month |

* $1,200 used through 1987 in all cases.

Each of these may be run with various programming packages.

### PROGRAMMING

The programming 'packages' referred to in the report assume the availability of the following types of channel on DBS services:

| | | Full | Reduced | Minimum | "Most Likely" |
|---|---|---|---|---|---|
| Canadian | - free | X | X | X | X |
| | - pay | X | X | X | X |
| | - special | X | | | |
| U.S. | - 4 networks | X | X | | X |
| | - DBS - free | | | | X |
| | - pay | X | X | X | |

### OPTIONS

The respondents in the consumer survey were presented with three basic options for reception of DBS services:

| | A | B | C |
|---|---|---|---|
| Delivery Mechanism | TVRO | Cable | Cable |
| Programming (see above) | Full | Full | Full less U.S. DBS Pay |

URBAN/RURAL PRIVATE HOUSEHOLD PROJECTIONS (000) - CANADA AND REGIONS

TABLE F1.2

HIGH GROWTH ASSUMPTION

| YEAR | ALBERTA URBAN | ALBERTA RURAL | ALBERTA TOTAL | ALBERTA % URB | BRITISH COLUMBIA URBAN | BRITISH COLUMBIA RURAL | BRITISH COLUMBIA TOTAL | BRITISH COLUMBIA % URB | TERRITORIES URBAN | TERRITORIES RURAL | TERRITORIES TOTAL | TERRITORIES % URB | CANADA URBAN | CANADA RURAL | CANADA TOTAL | CANADA % URB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACTUAL | | | | | | | | | | | | | | | | |
| 1981 | 607 | 151 | 758 | 80.1 | 799 | 197 | 996 | 80.2 | 12 | 7 | 19 | 63.2 | 6506 | 1775 | 8281 | 78.6 |
| PROJECTED | | | | | | | | | | | | | | | | |
| 1982 | 633 | 153 | 787 | 80.5 | 820 | 200 | 1020 | 80.3 | 12 | 7 | 19 | 62.5 | 6655 | 1804 | 8459 | 78.6 |
| 1983 | 660 | 156 | 816 | 80.8 | 840 | 203 | 1043 | 80.5 | 12 | 7 | 19 | 61.9 | 6805 | 1834 | 8638 | 78.7 |
| 1984 | 686 | 158 | 845 | 81.2 | 861 | 206 | 1067 | 80.7 | 12 | 8 | 20 | 61.3 | 6955 | 1863 | 8818 | 78.8 |
| 1985 | 713 | 161 | 874 | 81.6 | 882 | 209 | 1091 | 80.8 | 12 | 8 | 20 | 60.7 | 7106 | 1893 | 8999 | 78.9 |
| 1986 | 740 | 163 | 903 | 81.9 | 903 | 212 | 1115 | 81.0 | 12 | 8 | 20 | 60.2 | 7258 | 1923 | 9180 | 79.0 |
| 1987 | 765 | 164 | 929 | 82.3 | 918 | 214 | 1132 | 81.0 | 13 | 8 | 21 | 60.4 | 7375 | 1940 | 9314 | 79.1 |
| 1988 | 790 | 164 | 954 | 82.7 | 933 | 216 | 1149 | 81.1 | 13 | 8 | 22 | 60.7 | 7492 | 1957 | 9449 | 79.2 |
| 1989 | 815 | 165 | 980 | 83.1 | 947 | 218 | 1166 | 81.2 | 14 | 9 | 22 | 60.9 | 7610 | 1974 | 9584 | 79.4 |
| 1990 | 841 | 165 | 1006 | 83.5 | 962 | 221 | 1183 | 81.3 | 14 | 9 | 23 | 61.1 | 7729 | 1992 | 9720 | 79.5 |
| 1991 | 866 | 166 | 1032 | 83.9 | 977 | 223 | 1200 | 81.4 | 14 | 9 | 24 | 61.3 | 7847 | 2009 | 9856 | 79.6 |
| 1992 | 891 | 167 | 1058 | 84.2 | 993 | 225 | 1218 | 81.5 | 15 | 9 | 24 | 61.5 | 7962 | 2030 | 9992 | 79.6 |
| 1993 | 916 | 168 | 1083 | 84.5 | 1008 | 227 | 1235 | 81.6 | 15 | 10 | 25 | 61.7 | 8077 | 2051 | 10129 | 79.7 |
| 1994 | 941 | 169 | 1109 | 84.8 | 1024 | 228 | 1252 | 81.7 | 16 | 10 | 26 | 61.8 | 8193 | 2072 | 10266 | 79.8 |
| 1995 | 966 | 169 | 1135 | 85.0 | 1040 | 230 | 1270 | 81.8 | 16 | 10 | 26 | 62.0 | 8309 | 2094 | 10403 | 79.8 |
| 1996 | 991 | 170 | 1161 | 85.3 | 1055 | 232 | 1288 | 81.9 | 17 | 10 | 27 | 62.2 | 8426 | 2115 | 10541 | 79.9 |
| 1997 | 1012 | 170 | 1182 | 85.6 | 1069 | 236 | 1305 | 81.9 | 17 | 10 | 27 | 62.8 | 8539 | 2138 | 10677 | 79.9 |
| 1998 | 1033 | 170 | 1202 | 85.8 | 1084 | 239 | 1323 | 81.9 | 18 | 10 | 28 | 63.3 | 8652 | 2161 | 10813 | 80.0 |
| 1999 | 1054 | 170 | 1223 | 86.1 | 1098 | 242 | 1340 | 81.9 | 18 | 10 | 28 | 63.9 | 8765 | 2184 | 10950 | 80.0 |
| 2000 | 1075 | 169 | 1244 | 86.3 | 1112 | 246 | 1358 | 81.9 | 19 | 10 | 29 | 64.5 | 8879 | 2208 | 11087 | 80.0 |
| 2001 | 1096 | 169 | 1265 | 86.6 | 1126 | 249 | 1376 | 81.8 | 19 | 10 | 29 | 65.0 | 8994 | 2231 | 11225 | 80.1 |
| 2002 | 1118 | 169 | 1286 | 86.8 | 1141 | 252 | 1393 | 81.8 | 20 | 10 | 30 | 65.5 | 9108 | 2254 | 11363 | 80.1 |
| 2003 | 1139 | 169 | 1308 | 87.1 | 1155 | 256 | 1411 | 81.8 | 20 | 10 | 30 | 66.0 | 9224 | 2278 | 11502 | 80.1 |
| 2004 | 1160 | 168 | 1329 | 87.3 | 1170 | 259 | 1429 | 81.8 | 21 | 10 | 31 | 66.5 | 9339 | 2302 | 11641 | 80.2 |

SOURCES:

CENSUS YEARS TO 1981 - CENSUS

CENSUS YEAR PROJECTIONS - WOODS GORDON ESTIMATES, BASED ON STATISTICS CANADA PROJECTIONS 3 AND 4 PLUS 5% BY 2001 (80% OF CHANGE ASSIGNED TO URBAN)

NON-CENSUS YEARS - LINEAR INTERPOLATIONS

URBAN/RURAL PRIVATE HOUSEHOLD PROJECTIONS (000) - CANADA AND REGIONS

TABLE F2.1 MEDIUM GROWTH ASSUMPTION

| YEAR | ATLANTIC URBAN | ATLANTIC RURAL | ATLANTIC TOTAL | ATLANTIC % URB | QUEBEC URBAN | QUEBEC RURAL | QUEBEC TOTAL | QUEBEC % URB | ONTARIO URBAN | ONTARIO RURAL | ONTARIO TOTAL | ONTARIO % URB | MANITOBA URBAN | MANITOBA RURAL | MANITOBA TOTAL | MANITOBA % URB | SASKATCHEWAN URBAN | SASKATCHEWAN RURAL | SASKATCHEWAN TOTAL | SASKATCHEWAN % URB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACTUAL | | | | | | | | | | | | | | | | | | | | |
| 1981 | 378 | 296 | 674 | 56.1 | 1752 | 421 | 2173 | 80.6 | 2482 | 487 | 2969 | 83.6 | 270 | 88 | 358 | 75.4 | 205 | 127 | 332 | 61.7 |
| PROJECTED | | | | | | | | | | | | | | | | | | | | |
| 1982 | 386 | 301 | 687 | 56.2 | 1782 | 428 | 2210 | 80.6 | 2524 | 494 | 3018 | 83.6 | 274 | 89 | 363 | 75.5 | 211 | 128 | 338 | 62.2 |
| 1983 | 394 | 306 | 699 | 56.3 | 1811 | 435 | 2247 | 80.6 | 2566 | 501 | 3067 | 83.7 | 278 | 90 | 368 | 75.6 | 216 | 129 | 345 | 62.7 |
| 1984 | 401 | 310 | 712 | 56.4 | 1841 | 443 | 2283 | 80.6 | 2608 | 507 | 3115 | 83.7 | 282 | 90 | 372 | 75.7 | 222 | 129 | 351 | 63.2 |
| 1985 | 409 | 315 | 724 | 56.5 | 1870 | 450 | 2320 | 80.6 | 2650 | 514 | 3164 | 83.7 | 286 | 91 | 377 | 75.8 | 227 | 130 | 358 | 63.6 |
| 1986 | 417 | 320 | 737 | 56.6 | 1900 | 457 | 2357 | 80.6 | 2692 | 521 | 3213 | 83.8 | 290 | 92 | 382 | 75.9 | 233 | 131 | 364 | 64.0 |
| 1987 | 424 | 324 | 748 | 56.7 | 1920 | 459 | 2379 | 80.7 | 2720 | 525 | 3244 | 83.8 | 293 | 92 | 385 | 76.1 | 237 | 131 | 369 | 64.4 |
| 1988 | 431 | 328 | 760 | 56.8 | 1940 | 462 | 2401 | 80.8 | 2747 | 528 | 3275 | 83.9 | 296 | 92 | 388 | 76.2 | 242 | 131 | 373 | 64.8 |
| 1989 | 439 | 333 | 771 | 56.9 | 1959 | 464 | 2424 | 80.8 | 2775 | 532 | 3307 | 83.9 | 298 | 93 | 391 | 76.3 | 246 | 132 | 378 | 65.2 |
| 1990 | 446 | 337 | 783 | 57.0 | 1979 | 467 | 2446 | 80.9 | 2802 | 535 | 3338 | 84.0 | 301 | 93 | 394 | 76.4 | 251 | 132 | 382 | 65.5 |
| 1991 | 453 | 341 | 794 | 57.1 | 1999 | 469 | 2468 | 81.0 | 2830 | 539 | 3369 | 84.0 | 304 | 93 | 397 | 76.6 | 255 | 132 | 387 | 65.9 |
| 1992 | 459 | 345 | 804 | 57.1 | 2018 | 473 | 2491 | 81.0 | 2855 | 544 | 3399 | 84.0 | 307 | 94 | 401 | 76.7 | 260 | 132 | 392 | 66.2 |
| 1993 | 465 | 349 | 814 | 57.2 | 2037 | 478 | 2514 | 81.0 | 2880 | 549 | 3428 | 84.0 | 311 | 94 | 405 | 76.7 | 264 | 133 | 397 | 66.5 |
| 1994 | 472 | 352 | 824 | 57.2 | 2055 | 482 | 2538 | 81.0 | 2904 | 553 | 3458 | 84.0 | 314 | 95 | 409 | 76.8 | 269 | 133 | 402 | 66.9 |
| 1995 | 478 | 356 | 834 | 57.3 | 2074 | 487 | 2561 | 81.0 | 2929 | 558 | 3487 | 84.0 | 318 | 95 | 413 | 76.9 | 273 | 134 | 407 | 67.2 |
| 1996 | 484 | 360 | 844 | 57.3 | 2093 | 491 | 2584 | 81.0 | 2954 | 563 | 3517 | 84.0 | 321 | 96 | 417 | 77.0 | 278 | 134 | 412 | 67.5 |
| 1997 | 491 | 364 | 855 | 57.4 | 2109 | 495 | 2603 | 81.0 | 2983 | 569 | 3552 | 84.0 | 324 | 97 | 421 | 77.0 | 283 | 135 | 417 | 67.7 |
| 1998 | 497 | 369 | 866 | 57.4 | 2124 | 498 | 2622 | 81.0 | 3012 | 574 | 3587 | 84.0 | 327 | 98 | 425 | 77.0 | 287 | 136 | 423 | 67.9 |
| 1999 | 504 | 373 | 877 | 57.4 | 2140 | 502 | 2642 | 81.0 | 3042 | 580 | 3621 | 84.0 | 331 | 99 | 430 | 77.0 | 292 | 136 | 428 | 68.1 |
| 2000 | 510 | 378 | 888 | 57.5 | 2155 | 505 | 2661 | 81.0 | 3071 | 585 | 3656 | 84.0 | 334 | 100 | 434 | 76.9 | 296 | 137 | 434 | 68.4 |
| 2001 | 517 | 382 | 899 | 57.5 | 2171 | 509 | 2680 | 81.0 | 3100 | 591 | 3691 | 84.0 | 337 | 101 | 438 | 76.9 | 301 | 138 | 439 | 68.6 |
| 2002 | 524 | 386 | 910 | 57.5 | 2187 | 513 | 2699 | 81.0 | 3129 | 597 | 3726 | 84.0 | 340 | 102 | 442 | 76.9 | 306 | 139 | 444 | 68.8 |
| 2003 | 530 | 391 | 921 | 57.6 | 2202 | 516 | 2718 | 81.0 | 3158 | 602 | 3761 | 84.0 | 343 | 103 | 446 | 76.9 | 310 | 140 | 450 | 69.0 |
| 2004 | 537 | 395 | 932 | 57.6 | 2218 | 520 | 2738 | 81.0 | 3188 | 608 | 3795 | 84.0 | 347 | 104 | 451 | 76.9 | 315 | 140 | 455 | 69.2 |

URBAN/RURAL PRIVATE HOUSEHOLD PROJECTIONS (000) - CANADA AND REGIONS

TABLE F2.2

MEDIUM GROWTH ASSUMPTION

| YEAR | ALBERTA URBAN | ALBERTA RURAL | ALBERTA TOTAL | ALBERTA % URB | BRITISH COLUMBIA URBAN | BRITISH COLUMBIA RURAL | BRITISH COLUMBIA TOTAL | BRITISH COLUMBIA % URB | TERRITORIES URBAN | TERRITORIES RURAL | TERRITORIES TOTAL | TERRITORIES % URB | CANADA URBAN | CANADA RURAL | CANADA TOTAL | CANADA % URB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACTUAL | | | | | | | | | | | | | | | | |
| 1981 | 607 | 151 | 758 | 80.1 | 799 | 197 | 996 | 80.2 | 12 | 7 | 19 | 63.2 | 6506 | 1775 | 8281 | 78.6 |
| PROJECTED | | | | | | | | | | | | | | | | |
| 1982 | 632 | 153 | 785 | 80.5 | 818 | 199 | 1017 | 80.4 | 12 | 7 | 19 | 62.5 | 6638 | 1800 | 8438 | 78.7 |
| 1983 | 657 | 155 | 812 | 80.9 | 836 | 202 | 1038 | 80.6 | 12 | 7 | 19 | 61.9 | 6770 | 1825 | 8595 | 78.8 |
| 1984 | 681 | 157 | 838 | 81.3 | 855 | 204 | 1059 | 80.7 | 12 | 8 | 20 | 61.2 | 6903 | 1850 | 8753 | 78.9 |
| 1985 | 706 | 159 | 865 | 81.6 | 873 | 207 | 1080 | 80.9 | 12 | 8 | 20 | 60.6 | 7035 | 1875 | 8910 | 79.0 |
| 1986 | 731 | 161 | 892 | 82.0 | 892 | 209 | 1101 | 81.0 | 12 | 8 | 20 | 60.0 | 7167 | 1900 | 9067 | 79.0 |
| 1987 | 754 | 161 | 915 | 82.4 | 904 | 211 | 1115 | 81.1 | 12 | 8 | 21 | 60.2 | 7265 | 1912 | 9177 | 79.2 |
| 1988 | 777 | 161 | 938 | 82.8 | 917 | 212 | 1129 | 81.2 | 13 | 8 | 21 | 60.4 | 7362 | 1924 | 9287 | 79.3 |
| 1989 | 800 | 161 | 961 | 83.2 | 929 | 214 | 1143 | 81.3 | 13 | 9 | 22 | 60.6 | 7460 | 1937 | 9396 | 79.4 |
| 1990 | 823 | 161 | 984 | 83.6 | 942 | 215 | 1157 | 81.4 | 14 | 9 | 22 | 60.7 | 7557 | 1949 | 9506 | 79.5 |
| 1991 | 846 | 161 | 1007 | 84.0 | 954 | 217 | 1171 | 81.5 | 14 | 9 | 23 | 60.9 | 7655 | 1961 | 9616 | 79.6 |
| 1992 | 868 | 161 | 1029 | 84.3 | 967 | 218 | 1185 | 81.6 | 14 | 9 | 24 | 61.0 | 7748 | 1977 | 9725 | 79.7 |
| 1993 | 890 | 161 | 1052 | 84.7 | 980 | 219 | 1199 | 81.7 | 15 | 9 | 24 | 61.2 | 7841 | 1992 | 9834 | 79.7 |
| 1994 | 913 | 162 | 1074 | 85.0 | 992 | 221 | 1213 | 81.8 | 15 | 10 | 25 | 61.3 | 7935 | 2008 | 9942 | 79.8 |
| 1995 | 935 | 162 | 1097 | 85.2 | 1005 | 222 | 1227 | 81.9 | 16 | 10 | 25 | 61.4 | 8028 | 2023 | 10051 | 79.9 |
| 1996 | 957 | 162 | 1119 | 85.5 | 1018 | 223 | 1241 | 82.0 | 16 | 10 | 26 | 61.5 | 8121 | 2039 | 10160 | 79.9 |
| 1997 | 975 | 161 | 1136 | 85.8 | 1029 | 226 | 1255 | 82.0 | 16 | 10 | 26 | 62.1 | 8210 | 2056 | 10266 | 80.0 |
| 1998 | 993 | 160 | 1153 | 86.1 | 1040 | 228 | 1269 | 82.0 | 17 | 10 | 27 | 62.7 | 8299 | 2073 | 10372 | 80.0 |
| 1999 | 1012 | 159 | 1171 | 86.4 | 1052 | 231 | 1282 | 82.0 | 17 | 10 | 27 | 63.2 | 8388 | 2090 | 10478 | 80.1 |
| 2000 | 1030 | 158 | 1188 | 86.7 | 1063 | 233 | 1296 | 82.0 | 18 | 10 | 28 | 63.8 | 8477 | 2107 | 10584 | 80.1 |
| 2001 | 1048 | 157 | 1205 | 87.0 | 1074 | 236 | 1310 | 82.0 | 18 | 10 | 28 | 64.3 | 8566 | 2124 | 10690 | 80.1 |
| 2002 | 1066 | 156 | 1222 | 87.2 | 1085 | 239 | 1324 | 82.0 | 18 | 10 | 28 | 64.8 | 8655 | 2141 | 10796 | 80.2 |
| 2003 | 1084 | 155 | 1239 | 87.5 | 1096 | 241 | 1338 | 82.0 | 19 | 10 | 29 | 65.3 | 8744 | 2158 | 10902 | 80.2 |
| 2004 | 1103 | 154 | 1257 | 87.7 | 1108 | 244 | 1351 | 82.0 | 19 | 10 | 29 | 65.8 | 8833 | 2175 | 11008 | 80.2 |

SOURCES:

CENSUS YEARS TO 1981 - CENSUS

CENSUS YEAR PROJECTIONS - WOODS GORDON ESTIMATES, BASED ON STATISTICS CANADA PROJECTIONS 3 AND 4

NON-CENSUS YEARS - LINEAR INTERPOLATIONS

## URBAN/RURAL PRIVATE HOUSEHOLD PROJECTIONS (000) - CANADA AND REGIONS

TABLE F3.1 — LOW GROWTH ASSUMPTION

| YEAR | ATLANTIC URBAN | ATLANTIC RURAL | ATLANTIC TOTAL | ATLANTIC % URB | QUEBEC URBAN | QUEBEC RURAL | QUEBEC TOTAL | QUEBEC % URB | ONTARIO URBAN | ONTARIO RURAL | ONTARIO TOTAL | ONTARIO % URB | MANITOBA URBAN | MANITOBA RURAL | MANITOBA TOTAL | MANITOBA % URB | SASKATCHEWAN URBAN | SASKATCHEWAN RURAL | SASKATCHEWAN TOTAL | SASKATCHEWAN % URB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACTUAL | | | | | | | | | | | | | | | | | | | | |
| 1981 | 378 | 296 | 674 | 56.1 | 1752 | 421 | 2173 | 80.6 | 2482 | 487 | 2969 | 83.6 | 270 | 88 | 358 | 75.4 | 205 | 127 | 332 | 61.7 |
| PROJECTED | | | | | | | | | | | | | | | | | | | | |
| 1982 | 383 | 300 | 683 | 56.0 | 1773 | 426 | 2199 | 80.6 | 2512 | 491 | 3003 | 83.6 | 273 | 88 | 361 | 75.5 | 209 | 127 | 337 | 62.1 |
| 1983 | 388 | 304 | 692 | 56.0 | 1793 | 431 | 2224 | 80.6 | 2541 | 494 | 3036 | 83.7 | 275 | 89 | 364 | 75.5 | 213 | 128 | 341 | 62.5 |
| 1984 | 393 | 308 | 701 | 56.0 | 1813 | 436 | 2249 | 80.6 | 2571 | 498 | 3069 | 83.7 | 278 | 89 | 367 | 75.6 | 218 | 128 | 346 | 62.8 |
| 1985 | 398 | 312 | 710 | 56.0 | 1833 | 441 | 2274 | 80.6 | 2599 | 502 | 3101 | 83.8 | 280 | 90 | 370 | 75.7 | 222 | 129 | 350 | 63.2 |
| 1986 | 402 | 316 | 719 | 55.9 | 1853 | 445 | 2298 | 80.6 | 2628 | 505 | 3133 | 83.8 | 282 | 90 | 372 | 75.8 | 226 | 129 | 355 | 63.6 |
| 1987 | 406 | 320 | 726 | 55.9 | 1863 | 445 | 2308 | 80.7 | 2642 | 505 | 3147 | 83.9 | 284 | 90 | 373 | 75.9 | 229 | 129 | 358 | 63.9 |
| 1988 | 410 | 323 | 733 | 55.9 | 1872 | 445 | 2317 | 80.7 | 2655 | 505 | 3161 | 84.0 | 285 | 90 | 374 | 76.0 | 231 | 129 | 360 | 64.2 |
| 1989 | 414 | 326 | 740 | 55.9 | 1882 | 445 | 2327 | 80.8 | 2669 | 505 | 3174 | 84.0 | 286 | 89 | 375 | 76.1 | 234 | 129 | 363 | 64.5 |
| 1990 | 418 | 330 | 747 | 55.8 | 1891 | 445 | 2336 | 80.9 | 2682 | 505 | 3188 | 84.1 | 287 | 89 | 376 | 76.2 | 237 | 128 | 365 | 64.8 |
| 1991 | 421 | 333 | 754 | 55.8 | 1900 | 444 | 2345 | 81.0 | 2695 | 505 | 3201 | 84.2 | 288 | 89 | 377 | 76.3 | 240 | 128 | 368 | 65.1 |
| 1992 | 424 | 336 | 760 | 55.7 | 1908 | 446 | 2354 | 81.0 | 2705 | 506 | 3212 | 84.2 | 290 | 89 | 379 | 76.4 | 242 | 128 | 370 | 65.4 |
| 1993 | 426 | 339 | 765 | 55.7 | 1916 | 448 | 2364 | 81.0 | 2715 | 507 | 3223 | 84.2 | 291 | 89 | 381 | 76.5 | 245 | 128 | 373 | 65.6 |
| 1994 | 429 | 342 | 770 | 55.6 | 1923 | 449 | 2373 | 81.0 | 2725 | 508 | 3233 | 84.2 | 293 | 89 | 382 | 76.6 | 248 | 128 | 376 | 65.9 |
| 1995 | 431 | 345 | 776 | 55.5 | 1931 | 451 | 2382 | 81.0 | 2734 | 509 | 3243 | 84.2 | 294 | 90 | 384 | 76.6 | 251 | 128 | 379 | 66.2 |
| 1996 | 433 | 347 | 781 | 55.5 | 1938 | 452 | 2390 | 81.0 | 2743 | 510 | 3253 | 84.3 | 296 | 90 | 386 | 76.7 | 253 | 128 | 381 | 66.4 |
| 1997 | 436 | 351 | 787 | 55.4 | 1942 | 453 | 2395 | 81.0 | 2756 | 512 | 3268 | 84.3 | 297 | 90 | 388 | 76.7 | 256 | 128 | 384 | 66.6 |
| 1998 | 438 | 354 | 792 | 55.3 | 1946 | 454 | 2399 | 81.0 | 2769 | 513 | 3282 | 84.3 | 298 | 91 | 389 | 76.6 | 258 | 128 | 387 | 66.8 |
| 1999 | 441 | 357 | 798 | 55.2 | 1950 | 454 | 2404 | 81.1 | 2781 | 515 | 3295 | 84.3 | 300 | 91 | 391 | 76.6 | 261 | 129 | 390 | 66.9 |
| 2000 | 443 | 361 | 804 | 55.1 | 1953 | 455 | 2408 | 81.1 | 2793 | 516 | 3309 | 84.4 | 301 | 92 | 393 | 76.6 | 263 | 129 | 392 | 67.1 |
| 2001 | 445 | 364 | 809 | 55.0 | 1957 | 455 | 2412 | 81.1 | 2805 | 517 | 3322 | 84.4 | 302 | 92 | 394 | 76.6 | 266 | 129 | 395 | 67.2 |
| 2002 | 447 | 367 | 814 | 54.9 | 1960 | 456 | 2416 | 81.1 | 2816 | 518 | 3335 | 84.4 | 303 | 93 | 396 | 76.5 | 268 | 129 | 398 | 67.4 |
| 2003 | 449 | 371 | 820 | 54.7 | 1963 | 456 | 2419 | 81.1 | 2827 | 519 | 3347 | 84.4 | 304 | 93 | 397 | 76.5 | 271 | 130 | 400 | 67.5 |
| 2004 | 451 | 374 | 825 | 54.6 | 1966 | 457 | 2423 | 81.1 | 2838 | 521 | 3359 | 84.5 | 305 | 94 | 399 | 76.5 | 273 | 130 | 403 | 67.7 |

URBAN/RURAL PRIVATE HOUSEHOLD PROJECTIONS (000) - CANADA AND REGIONS

TABLE F3.2 LOW GROWTH ASSUMPTION

| YEAR | ALBERTA URBAN | ALBERTA RURAL | ALBERTA TOTAL | ALBERTA % URB | BRITISH COLUMBIA URBAN | BRITISH COLUMBIA RURAL | BRITISH COLUMBIA TOTAL | BRITISH COLUMBIA % URB | TERRITORIES URBAN | TERRITORIES RURAL | TERRITORIES TOTAL | TERRITORIES % URB | CANADA URBAN | CANADA RURAL | CANADA TOTAL | CANADA % URB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACTUAL | | | | | | | | | | | | | | | | |
| 1981 | 607 | 151 | 758 | 80.1 | 799 | 197 | 996 | 80.2 | 12 | 7 | 19 | 63.2 | 6506 | 1775 | 8281 | 78.6 |
| PROJECTED | | | | | | | | | | | | | | | | |
| 1982 | 629 | 152 | 781 | 80.5 | 814 | 198 | 1012 | 80.3 | 12 | 7 | 19 | 62.4 | 6604 | 1792 | 8396 | 78.6 |
| 1983 | 650 | 153 | 803 | 80.9 | 828 | 200 | 1028 | 80.5 | 12 | 7 | 19 | 61.6 | 6702 | 1808 | 8509 | 78.7 |
| 1984 | 671 | 154 | 826 | 81.2 | 842 | 201 | 1043 | 80.7 | 12 | 8 | 19 | 60.9 | 6798 | 1824 | 8621 | 78.8 |
| 1985 | 692 | 156 | 848 | 81.6 | 856 | 202 | 1058 | 80.8 | 12 | 8 | 19 | 60.2 | 6892 | 1839 | 8732 | 78.9 |
| 1986 | 713 | 157 | 870 | 82.0 | 870 | 203 | 1073 | 81.0 | 12 | 8 | 20 | 59.4 | 6986 | 1855 | 8840 | 79.0 |
| 1987 | 732 | 156 | 888 | 82.4 | 878 | 204 | 1082 | 81.1 | 12 | 8 | 20 | 59.5 | 7044 | 1857 | 8901 | 79.1 |
| 1988 | 751 | 154 | 905 | 82.9 | 885 | 204 | 1089 | 81.2 | 12 | 8 | 20 | 59.6 | 7102 | 1859 | 8962 | 79.2 |
| 1989 | 769 | 153 | 923 | 83.3 | 893 | 205 | 1097 | 81.3 | 13 | 8 | 21 | 59.7 | 7159 | 1861 | 9021 | 79.3 |
| 1990 | 788 | 152 | 940 | 83.8 | 900 | 205 | 1105 | 81.4 | 13 | 9 | 21 | 59.8 | 7215 | 1863 | 9078 | 79.4 |
| 1991 | 806 | 151 | 957 | 84.2 | 907 | 205 | 1112 | 81.5 | 13 | 9 | 22 | 59.8 | 7270 | 1865 | 9135 | 79.5 |
| 1992 | 823 | 150 | 973 | 84.5 | 915 | 205 | 1120 | 81.6 | 13 | 9 | 22 | 59.9 | 7320 | 1870 | 9190 | 79.6 |
| 1993 | 840 | 149 | 989 | 84.9 | 922 | 205 | 1127 | 81.8 | 14 | 9 | 23 | 59.9 | 7369 | 1874 | 9244 | 79.7 |
| 1994 | 857 | 148 | 1004 | 85.3 | 929 | 205 | 1134 | 81.9 | 14 | 9 | 23 | 59.9 | 7418 | 1879 | 9296 | 79.7 |
| 1995 | 873 | 146 | 1020 | 85.6 | 936 | 205 | 1141 | 82.0 | 14 | 9 | 24 | 60.0 | 7465 | 1883 | 9348 | 79.8 |
| 1996 | 890 | 145 | 1035 | 85.9 | 944 | 204 | 1148 | 82.1 | 14 | 10 | 24 | 60.0 | 7511 | 1887 | 9398 | 79.9 |
| 1997 | 902 | 143 | 1045 | 86.3 | 949 | 206 | 1154 | 82.1 | 15 | 10 | 24 | 60.5 | 7553 | 1892 | 9445 | 79.9 |
| 1998 | 915 | 140 | 1055 | 86.6 | 954 | 207 | 1161 | 82.1 | 15 | 10 | 25 | 61.0 | 7594 | 1897 | 9490 | 80.0 |
| 1999 | 927 | 138 | 1065 | 87.0 | 959 | 208 | 1167 | 82.2 | 15 | 10 | 25 | 61.5 | 7634 | 1901 | 9535 | 80.0 |
| 2000 | 940 | 135 | 1075 | 87.4 | 964 | 209 | 1173 | 82.2 | 16 | 9 | 25 | 62.0 | 7673 | 1906 | 9579 | 80.1 |
| 2001 | 952 | 133 | 1085 | 87.7 | 969 | 210 | 1179 | 82.2 | 16 | 9 | 25 | 62.5 | 7711 | 1910 | 9621 | 80.1 |
| 2002 | 964 | 130 | 1094 | 88.0 | 974 | 211 | 1185 | 82.2 | 16 | 9 | 25 | 63.0 | 7748 | 1914 | 9662 | 80.1 |
| 2003 | 975 | 128 | 1103 | 88.4 | 979 | 212 | 1190 | 82.2 | 16 | 9 | 26 | 63.4 | 7785 | 1918 | 9703 | 80.2 |
| 2004 | 987 | 125 | 1112 | 88.7 | 983 | 213 | 1196 | 82.2 | 17 | 9 | 26 | 63.9 | 7820 | 1922 | 9742 | 80.2 |

SOURCES:

CENSUS YEARS TO 1981 - CENSUS

CENSUS YEAR PROJECTIONS - WOODS GORDON ESTIMATES, BASED ON STATISTICS CANADA PROJECTIONS 3 AND 4 MINUS 10% BY 2001 (80% OF CHANGE ASSIGNED TO URBAN)

NON-CENSUS YEARS - LINEAR INTERPOLATIONS

TABLE F4

CABLE SYSTEMS ACQUIRING DBS TVRO'S - ATLANTIC REGION

IN OPERATION 1981: 36 WITH MICROWAVE LINKS, 14 OTHERS

TOTAL CONVERTED

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 4 | 1 | 5 | 5 | 1 | 6 | 7 | 2 | 9 |
| 1985 | 7 | 2 | 9 | 10 | 3 | 13 | 14 | 4 | 18 |
| 1986 | 11 | 3 | 14 | 15 | 4 | 19 | 22 | 6 | 28 |
| 1987 | 14 | 4 | 18 | 21 | 6 | 27 | 29 | 8 | 37 |
| 1988 | 18 | 5 | 23 | 26 | 7 | 33 | 36 | 10 | 46 |
| 1989 | 22 | 6 | 28 | 31 | 8 | 39 | 36 | 12 | 48 |
| 1990 | 25 | 7 | 32 | 36 | 10 | 46 | 36 | 14 | 50 |
| 1991 | 29 | 7 | 36 | 36 | 11 | 47 | 36 | 14 | 50 |
| 1992 | 32 | 8 | 40 | 36 | 13 | 49 | 36 | 14 | 50 |
| 1993 | 36 | 9 | 45 | 36 | 14 | 50 | 36 | 14 | 50 |
| 1994 | 36 | 10 | 46 | 36 | 14 | 50 | 36 | 14 | 50 |
| 1995 | 36 | 11 | 47 | 36 | 14 | 50 | 36 | 14 | 50 |
| 1996 | 36 | 12 | 48 | 36 | 14 | 50 | 36 | 14 | 50 |
| 1997 | 36 | 13 | 49 | 36 | 14 | 50 | 36 | 14 | 50 |
| 1998 | 36 | 14 | 50 | 36 | 14 | 50 | 36 | 14 | 50 |

ANNUAL CONVERSIONS

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 4 | 1 | 5 | 5 | 1 | 6 | 7 | 2 | 9 |
| 1985 | 3 | 1 | 4 | 5 | 2 | 7 | 7 | 2 | 9 |
| 1986 | 4 | 1 | 5 | 5 | 1 | 6 | 8 | 2 | 10 |
| 1987 | 3 | 1 | 4 | 6 | 2 | 8 | 7 | 2 | 9 |
| 1988 | 4 | 1 | 5 | 5 | 1 | 6 | 7 | 2 | 9 |
| 1989 | 4 | 1 | 5 | 5 | 1 | 6 | 0 | 2 | 2 |
| 1990 | 3 | 1 | 4 | 5 | 2 | 7 | 0 | 2 | 2 |
| 1991 | 4 | 0 | 4 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1992 | 3 | 1 | 4 | 0 | 2 | 2 | 0 | 0 | 0 |
| 1993 | 4 | 1 | 5 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1994 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE F5

CABLE SYSTEMS ACQUIRING DBS TVRO'S - QUEBEC

IN OPERATION 1981: 34 WITH MICROWAVE LINKS, 139 OTHERS

TOTAL CONVERTED

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 3 | 9 | 12 | 5 | 14 | 19 | 7 | 20 | 27 |
| 1985 | 7 | 19 | 26 | 10 | 28 | 38 | 14 | 40 | 54 |
| 1986 | 10 | 28 | 38 | 15 | 42 | 57 | 20 | 60 | 80 |
| 1987 | 14 | 37 | 51 | 19 | 56 | 75 | 27 | 79 | 106 |
| 1988 | 17 | 46 | 63 | 24 | 70 | 94 | 34 | 99 | 133 |
| 1989 | 20 | 56 | 76 | 29 | 83 | 112 | 34 | 119 | 153 |
| 1990 | 24 | 65 | 89 | 34 | 97 | 131 | 34 | 139 | 173 |
| 1991 | 27 | 74 | 101 | 34 | 111 | 145 | 34 | 139 | 173 |
| 1992 | 31 | 83 | 114 | 34 | 125 | 159 | 34 | 139 | 173 |
| 1993 | 34 | 93 | 127 | 34 | 139 | 173 | 34 | 139 | 173 |
| 1994 | 34 | 102 | 136 | 34 | 139 | 173 | 34 | 139 | 173 |
| 1995 | 34 | 111 | 145 | 34 | 139 | 173 | 34 | 139 | 173 |
| 1996 | 34 | 120 | 154 | 34 | 139 | 173 | 34 | 139 | 173 |
| 1997 | 34 | 130 | 164 | 34 | 139 | 173 | 34 | 139 | 173 |
| 1998 | 34 | 139 | 173 | 34 | 139 | 173 | 34 | 139 | 173 |

ANNUAL CONVERSIONS

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 3 | 9 | 12 | 5 | 14 | 19 | 7 | 20 | 27 |
| 1985 | 4 | 10 | 14 | 5 | 14 | 19 | 7 | 20 | 27 |
| 1986 | 3 | 9 | 12 | 5 | 14 | 19 | 6 | 20 | 26 |
| 1987 | 4 | 9 | 13 | 4 | 14 | 18 | 7 | 19 | 26 |
| 1988 | 3 | 9 | 12 | 5 | 14 | 19 | 7 | 20 | 27 |
| 1989 | 3 | 10 | 13 | 5 | 13 | 18 | 0 | 20 | 20 |
| 1990 | 4 | 9 | 13 | 5 | 14 | 19 | 0 | 20 | 20 |
| 1991 | 3 | 9 | 12 | 0 | 14 | 14 | 0 | 0 | 0 |
| 1992 | 4 | 9 | 13 | 0 | 14 | 14 | 0 | 0 | 0 |
| 1993 | 3 | 10 | 13 | 0 | 14 | 14 | 0 | 0 | 0 |
| 1994 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE F5

CABLE SYSTEMS ACQUIRING DBS TVRO'S - ONTARIO

IN OPERATION 1981: 55 WITH MICROWAVE LINKS, 85 OTHERS

TOTAL CONVERTED

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 6 | 6 | 12 | 8 | 9 | 17 | 11 | 12 | 23 |
| 1985 | 11 | 11 | 22 | 16 | 17 | 33 | 22 | 24 | 46 |
| 1986 | 17 | 17 | 34 | 24 | 26 | 50 | 33 | 36 | 69 |
| 1987 | 22 | 23 | 45 | 31 | 34 | 65 | 44 | 49 | 93 |
| 1988 | 28 | 28 | 56 | 39 | 43 | 82 | 55 | 61 | 116 |
| 1989 | 33 | 34 | 67 | 47 | 51 | 98 | 55 | 73 | 128 |
| 1990 | 39 | 40 | 79 | 55 | 60 | 115 | 55 | 85 | 140 |
| 1991 | 44 | 45 | 89 | 55 | 68 | 123 | 55 | 85 | 140 |
| 1992 | 50 | 51 | 101 | 55 | 77 | 132 | 55 | 85 | 140 |
| 1993 | 55 | 57 | 112 | 55 | 85 | 140 | 55 | 85 | 140 |
| 1994 | 55 | 62 | 117 | 55 | 85 | 140 | 55 | 85 | 140 |
| 1995 | 55 | 68 | 123 | 55 | 85 | 140 | 55 | 85 | 140 |
| 1996 | 55 | 74 | 129 | 55 | 85 | 140 | 55 | 85 | 140 |
| 1997 | 55 | 79 | 134 | 55 | 85 | 140 | 55 | 85 | 140 |
| 1998 | 55 | 85 | 140 | 55 | 85 | 140 | 55 | 85 | 140 |

ANNUAL CONVERSIONS

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 6 | 6 | 12 | 8 | 9 | 17 | 11 | 12 | 23 |
| 1985 | 5 | 5 | 10 | 8 | 8 | 16 | 11 | 12 | 23 |
| 1986 | 6 | 6 | 12 | 8 | 9 | 17 | 11 | 12 | 23 |
| 1987 | 5 | 6 | 11 | 7 | 8 | 15 | 11 | 13 | 24 |
| 1988 | 6 | 5 | 11 | 8 | 9 | 17 | 11 | 12 | 23 |
| 1989 | 5 | 6 | 11 | 8 | 8 | 16 | 0 | 12 | 12 |
| 1990 | 6 | 6 | 12 | 8 | 9 | 17 | 0 | 12 | 12 |
| 1991 | 5 | 5 | 10 | 0 | 8 | 8 | 0 | 0 | 0 |
| 1992 | 6 | 6 | 12 | 0 | 9 | 9 | 0 | 0 | 0 |
| 1993 | 5 | 6 | 11 | 0 | 8 | 8 | 0 | 0 | 0 |
| 1994 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE F7

CABLE SYSTEMS ACQUIRING DBS TVRO'S - MANITOBA

IN OPERATION 1981: 7 WITH MICROWAVE LINKS, 14 OTHERS

TOTAL CONVERTED

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 3 |
| 1985 | 1 | 2 | 3 | 2 | 3 | 5 | 3 | 4 | 7 |
| 1986 | 2 | 3 | 5 | 3 | 4 | 7 | 4 | 6 | 10 |
| 1987 | 3 | 4 | 7 | 4 | 6 | 10 | 6 | 8 | 14 |
| 1988 | 4 | 5 | 9 | 5 | 7 | 12 | 7 | 10 | 17 |
| 1989 | 4 | 6 | 10 | 6 | 8 | 14 | 7 | 12 | 19 |
| 1990 | 5 | 7 | 12 | 7 | 10 | 17 | 7 | 14 | 21 |
| 1991 | 6 | 7 | 13 | 7 | 11 | 18 | 7 | 14 | 21 |
| 1992 | 6 | 8 | 14 | 7 | 13 | 20 | 7 | 14 | 21 |
| 1993 | 7 | 9 | 16 | 7 | 14 | 21 | 7 | 14 | 21 |
| 1994 | 7 | 10 | 17 | 7 | 14 | 21 | 7 | 14 | 21 |
| 1995 | 7 | 11 | 18 | 7 | 14 | 21 | 7 | 14 | 21 |
| 1996 | 7 | 12 | 19 | 7 | 14 | 21 | 7 | 14 | 21 |
| 1997 | 7 | 13 | 20 | 7 | 14 | 21 | 7 | 14 | 21 |
| 1998 | 7 | 14 | 21 | 7 | 14 | 21 | 7 | 14 | 21 |

ANNUAL CONVERSIONS

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 3 |
| 1985 | 0 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 4 |
| 1986 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 3 |
| 1987 | 1 | 1 | 2 | 1 | 2 | 3 | 2 | 2 | 4 |
| 1988 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 3 |
| 1989 | 0 | 1 | 1 | 1 | 1 | 2 | 0 | 2 | 2 |
| 1990 | 1 | 1 | 2 | 1 | 2 | 3 | 0 | 2 | 2 |
| 1991 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1992 | 0 | 1 | 1 | 0 | 2 | 2 | 0 | 0 | 0 |
| 1993 | 1 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1994 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE F8

CABLE SYSTEMS ACQUIRING DBS TVRO'S - SASKATCHEWAN

IN OPERATION 1991: 0 WITH MICROWAVE LINKS, 12 OTHERS

TOTAL CONVERTED

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 2 | 2 |
| 1985 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 3 | 3 |
| 1986 | 0 | 2 | 2 | 0 | 4 | 4 | 0 | 5 | 5 |
| 1987 | 0 | 3 | 3 | 0 | 5 | 5 | 0 | 7 | 7 |
| 1988 | 0 | 4 | 4 | 0 | 6 | 6 | 0 | 9 | 9 |
| 1989 | 0 | 5 | 5 | 0 | 7 | 7 | 0 | 10 | 10 |
| 1990 | 0 | 6 | 6 | 0 | 8 | 8 | 0 | 12 | 12 |
| 1991 | 0 | 6 | 6 | 0 | 10 | 10 | 0 | 12 | 12 |
| 1992 | 0 | 7 | 7 | 0 | 11 | 11 | 0 | 12 | 12 |
| 1993 | 0 | 8 | 8 | 0 | 12 | 12 | 0 | 12 | 12 |
| 1994 | 0 | 9 | 9 | 0 | 12 | 12 | 0 | 12 | 12 |
| 1995 | 0 | 10 | 10 | 0 | 12 | 12 | 0 | 12 | 12 |
| 1996 | 0 | 10 | 10 | 0 | 12 | 12 | 0 | 12 | 12 |
| 1997 | 0 | 11 | 11 | 0 | 12 | 12 | 0 | 12 | 12 |
| 1998 | 0 | 12 | 12 | 0 | 12 | 12 | 0 | 12 | 12 |

ANNUAL CONVERSIONS

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 2 | 2 |
| 1985 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1986 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 2 |
| 1987 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 2 | 2 |
| 1988 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 2 | 2 |
| 1989 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1990 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 2 | 2 |
| 1991 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| 1992 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1993 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1994 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE F9

CABLE SYSTEMS ACQUIRING DBS TVRO'S - ALBERTA

IN OPERATION 1981: 22 WITH MICROWAVE LINKS, 27 OTHERS

TOTAL CONVERTED

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 2 | 2 | 4 | 3 | 3 | 6 | 4 | 4 | 8 |
| 1985 | 4 | 4 | 8 | 6 | 5 | 11 | 9 | 8 | 17 |
| 1986 | 7 | 5 | 12 | 9 | 8 | 17 | 13 | 12 | 25 |
| 1987 | 9 | 7 | 16 | 13 | 11 | 24 | 18 | 15 | 33 |
| 1988 | 11 | 9 | 20 | 16 | 14 | 30 | 22 | 19 | 41 |
| 1989 | 13 | 11 | 24 | 19 | 16 | 35 | 22 | 23 | 45 |
| 1990 | 15 | 13 | 28 | 22 | 19 | 41 | 22 | 27 | 49 |
| 1991 | 18 | 14 | 32 | 22 | 22 | 44 | 22 | 27 | 49 |
| 1992 | 20 | 16 | 36 | 22 | 24 | 46 | 22 | 27 | 49 |
| 1993 | 22 | 18 | 40 | 22 | 27 | 49 | 22 | 27 | 49 |
| 1994 | 22 | 20 | 42 | 22 | 27 | 49 | 22 | 27 | 49 |
| 1995 | 22 | 22 | 44 | 22 | 27 | 49 | 22 | 27 | 49 |
| 1996 | 22 | 23 | 45 | 22 | 27 | 49 | 22 | 27 | 49 |
| 1997 | 22 | 25 | 47 | 22 | 27 | 49 | 22 | 27 | 49 |
| 1998 | 22 | 27 | 49 | 22 | 27 | 49 | 22 | 27 | 49 |

ANNUAL CONVERSIONS

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 2 | 2 | 4 | 3 | 3 | 6 | 4 | 4 | 8 |
| 1985 | 2 | 2 | 4 | 3 | 2 | 5 | 5 | 4 | 9 |
| 1986 | 3 | 1 | 4 | 3 | 3 | 6 | 4 | 4 | 8 |
| 1987 | 2 | 2 | 4 | 4 | 3 | 7 | 5 | 3 | 8 |
| 1988 | 2 | 2 | 4 | 3 | 3 | 6 | 4 | 4 | 8 |
| 1989 | 2 | 2 | 4 | 3 | 2 | 5 | 0 | 4 | 4 |
| 1990 | 2 | 2 | 4 | 3 | 3 | 6 | 0 | 4 | 4 |
| 1991 | 3 | 1 | 4 | 0 | 3 | 3 | 0 | 0 | 0 |
| 1992 | 2 | 2 | 4 | 0 | 2 | 2 | 0 | 0 | 0 |
| 1993 | 2 | 2 | 4 | 0 | 3 | 3 | 0 | 0 | 0 |
| 1994 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE F10

CABLE SYSTEMS ACQUIRING DBS TVRO'S - B.C.

IN OPERATION 1981: 13 WITH MICROWAVE LINKS, 64 OTHERS

TOTAL CONVERTED

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 1 | 4 | 5 | 2 | 6 | 8 | 3 | 9 | 12 |
| 1985 | 3 | 9 | 12 | 4 | 13 | 17 | 5 | 18 | 23 |
| 1986 | 4 | 13 | 17 | 6 | 19 | 25 | 8 | 27 | 35 |
| 1987 | 5 | 17 | 22 | 7 | 26 | 33 | 10 | 37 | 47 |
| 1988 | 7 | 21 | 28 | 9 | 32 | 41 | 13 | 46 | 59 |
| 1989 | 8 | 26 | 34 | 11 | 38 | 49 | 13 | 55 | 68 |
| 1990 | 9 | 30 | 39 | 13 | 45 | 58 | 13 | 64 | 77 |
| 1991 | 10 | 34 | 44 | 13 | 51 | 64 | 13 | 64 | 77 |
| 1992 | 12 | 38 | 50 | 13 | 58 | 71 | 13 | 64 | 77 |
| 1993 | 13 | 43 | 56 | 13 | 64 | 77 | 13 | 64 | 77 |
| 1994 | 13 | 47 | 60 | 13 | 64 | 77 | 13 | 64 | 77 |
| 1995 | 13 | 51 | 64 | 13 | 64 | 77 | 13 | 64 | 77 |
| 1996 | 13 | 55 | 68 | 13 | 64 | 77 | 13 | 64 | 77 |
| 1997 | 13 | 60 | 73 | 13 | 64 | 77 | 13 | 64 | 77 |
| 1998 | 13 | 64 | 77 | 13 | 64 | 77 | 13 | 64 | 77 |

ANNUAL CONVERSIONS

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 1 | 4 | 5 | 2 | 6 | 8 | 3 | 9 | 12 |
| 1985 | 2 | 5 | 7 | 2 | 7 | 9 | 2 | 9 | 11 |
| 1986 | 1 | 4 | 5 | 2 | 6 | 8 | 3 | 9 | 12 |
| 1987 | 1 | 4 | 5 | 1 | 7 | 8 | 2 | 10 | 12 |
| 1988 | 2 | 4 | 6 | 2 | 6 | 8 | 3 | 9 | 12 |
| 1989 | 1 | 5 | 6 | 2 | 6 | 8 | 0 | 9 | 9 |
| 1990 | 1 | 4 | 5 | 2 | 7 | 9 | 0 | 9 | 9 |
| 1991 | 1 | 4 | 5 | 0 | 6 | 6 | 0 | 0 | 0 |
| 1992 | 2 | 4 | 6 | 0 | 7 | 7 | 0 | 0 | 0 |
| 1993 | 1 | 5 | 6 | 0 | 6 | 6 | 0 | 0 | 0 |
| 1994 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE F11

CABLE SYSTEMS ACQUIRING DBS TVRO'S - TERRITORIES

IN OPERATION 1981: 0 WITH MICROWAVE LINKS, 2 OTHERS

TOTAL CONVERTED

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1986 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1987 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1988 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1989 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 2 | 2 |
| 1990 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 2 | 2 |
| 1991 | 0 | 1 | 1 | 0 | 2 | 2 | 0 | 2 | 2 |
| 1992 | 0 | 1 | 1 | 0 | 2 | 2 | 0 | 2 | 2 |
| 1993 | 0 | 1 | 1 | 0 | 2 | 2 | 0 | 2 | 2 |
| 1994 | 0 | 1 | 1 | 0 | 2 | 2 | 0 | 2 | 2 |
| 1995 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 |
| 1996 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 |
| 1997 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 |
| 1998 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 |

ANNUAL CONVERSIONS

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1985 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1986 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1987 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1989 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1991 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 1992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

TABLE F12

CABLE SYSTEMS ACQUIRING DBS TVRO'S - CANADA

IN OPERATION 1981: 167 WITH MICROWAVE LINKS, 357 OTHERS

TOTAL CONVERTED

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 17 | 24 | 41 | 24 | 36 | 60 | 33 | 51 | 84 |
| 1985 | 33 | 48 | 81 | 48 | 71 | 119 | 67 | 102 | 169 |
| 1986 | 50 | 71 | 121 | 72 | 107 | 179 | 100 | 153 | 253 |
| 1987 | 67 | 95 | 162 | 95 | 143 | 238 | 134 | 204 | 338 |
| 1988 | 84 | 119 | 203 | 119 | 179 | 298 | 167 | 255 | 422 |
| 1989 | 100 | 143 | 243 | 143 | 214 | 357 | 167 | 306 | 473 |
| 1990 | 117 | 167 | 284 | 167 | 250 | 417 | 167 | 357 | 524 |
| 1991 | 134 | 190 | 324 | 167 | 286 | 453 | 167 | 357 | 524 |
| 1992 | 150 | 214 | 364 | 167 | 321 | 488 | 167 | 357 | 524 |
| 1993 | 167 | 238 | 405 | 167 | 357 | 524 | 167 | 357 | 524 |
| 1994 | 167 | 262 | 429 | 167 | 357 | 524 | 167 | 357 | 524 |
| 1995 | 167 | 286 | 453 | 167 | 357 | 524 | 167 | 357 | 524 |
| 1996 | 167 | 309 | 476 | 167 | 357 | 524 | 167 | 357 | 524 |
| 1997 | 167 | 333 | 500 | 167 | 357 | 524 | 167 | 357 | 524 |
| 1998 | 167 | 357 | 524 | 167 | 357 | 524 | 167 | 357 | 524 |

ANNUAL CONVERSIONS

| YEAR | SLOW CONVERSION RATE M/W | OTHER | TOTAL | MOD. CONVERSION RATE M/W | OTHER | TOTAL | FAST CONVERSION RATE M/W | OTHER | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 1984 | 17 | 24 | 41 | 24 | 36 | 60 | 33 | 51 | 84 |
| 1985 | 16 | 24 | 40 | 24 | 35 | 59 | 34 | 51 | 85 |
| 1986 | 17 | 23 | 40 | 24 | 36 | 60 | 33 | 51 | 84 |
| 1987 | 17 | 24 | 41 | 23 | 36 | 59 | 34 | 51 | 85 |
| 1988 | 17 | 24 | 41 | 24 | 36 | 60 | 33 | 51 | 84 |
| 1989 | 16 | 24 | 40 | 24 | 35 | 59 | 0 | 51 | 51 |
| 1990 | 17 | 24 | 41 | 24 | 36 | 60 | 0 | 51 | 51 |
| 1991 | 17 | 23 | 40 | 0 | 36 | 36 | 0 | 0 | 0 |
| 1992 | 16 | 24 | 40 | 0 | 35 | 35 | 0 | 0 | 0 |
| 1993 | 17 | 24 | 41 | 0 | 36 | 36 | 0 | 0 | 0 |
| 1994 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1995 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | 0 | 23 | 23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |

MOORE, JOHN B.
--Determination of the direct broadcasting satellite (DBS) market in Canada.