DEMAND FOR RURAL COMMUNICATION SERVICES IN CANADA FOCUS GROUPS AND RESEARCH INSTRUMENTS

FINAL REPORT

PHASE I

Submitted to:

Mr. Alain de Fontenay
Scientific Authority
Study on Demand for Rural Communication Services
Department of Communication
Ottawa, Canada

Submitted by:

Prof. R. de Camprieu
Faculty of Administration
University of Ottawa
and
Prof. J. C. Bourgeois
School of Commerce
Carleton University

May 1979

Contract No. OSU-78-00256

DSS File 06SU-36100-8-9529

DOC File 5417-2-4

(2)

DEMAND FOR RURAL COMMUNICATION SERVICES IN CANADA/ FOCUS GROUPS AND RESEARCH INSTRUMENTS

FINAL REPORT

PHASE I

Submitted to:

Mr. Alain de Fontenay
Scientific Authority
Study on Demand for Rural Communication Services
Department of Communication
Ottawa, Canada

Submitted by:

Prof. R. (1) de Camprieu/
Faculty of Administration
University of Ottawa
and
Prof. J. C. Bourgeois
School of Commerce
Carleton University

May 1979

Contract No. OSU-78-00256
DSS File 06SU-36100-8-9529
DOC File 5417-2-4

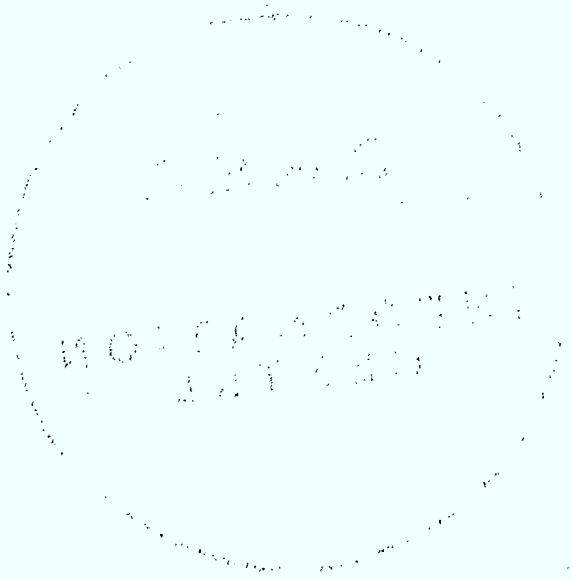


TABLE OF CONTENTS

I. INTRODUCTION

This is the final report of phase I of the "Demand for Rural Communication Services in Canada" project. Phase I involved three steps:

1) a literature review

2) focus group interviews

3) and the development of research instruments

The results of the literature review have earlier been reported (1). The results of the focus group interviews and the proposed research instruments will be presented in this report. Thus, the present report is comprised of four sections:

- the terms of reference,
- a brief review of the general conclusions earlier drawn in the literature review,
- a discussion of the ten in-depth group interviews conducted across Canada,
- and a presentation and discussion of the design of our survey instruments.

(1) "Demand for Rural Communication Services in Canada – A Literature Review"

II. TERMS OF REFERENCE

This component of the Department of Communications' rural program has two overall aims: 1) the identification of communication needs in rural areas and 2) the estimation of demand for these communication services.

The identification of needs for communication services in rural areas are to be described with respect to both residential and business sectors. The forecast of demand for communication services is to be provided for both short and long term time horizons. In the short and long run, forecasts will specifically be provided for:

- the demand for improved telephone services for business and residential sectors,
- the demand for improved TV services for the residential sector
- the demand for a combined improved telephone-TV service for the residential sector

Except when stated otherwise, "communication services" include: radio, TV, telephone and C.B. services. In addition, by "improved service", it is meant a service equivalent to that provided in urban areas. Finally, a "short run" demand forecast is that demand estimated for a particular new service within one year of introduction. On the other hand, a "long run" demand forecast is that demand estimated for a particular new service within the time it would take to feasibly introduce the new technology, for instance, 7-8 years.

III. GENERAL CONCLUSIONS FROM LITERATURE REVIEW

In light of the previously stated objectives, a comprehensive review of any existing documentation and literature was undertaken with the assistance of DOC.* It was generally found for broadcasting services that:

1. There exist secondary data on coverage in rural areas for television services and cable T.V., and on the level of choice of T.V. channels. For radio coverage, only provincial aggregate figures are available. The quality of reception is far from being even; low lying areas require special reception equipment. Overall, it appears that rural areas are not homogeneous in terms of reception of broadcasting services.
2. Besides the dichotomy of information vs entertainment, little is known about the needs satisfied by broadcasting services. No data were found for rural populations.
3. Data about behaviours (listenership, viewership, ownership of reception equipment, etc.) are not, when available, disaggregated at the rural level.
4. Needs and behaviours with respect to mobile radio services have been investigated only for the Prairies' rural areas.
5. Forecasts have been found only for cable T.V. The studies were conducted in the United States and the markets involved were mainly urban. There is a question whether the models can be generalized to the Canadian rural population.

In the area of telephony, the literature is voluminous, in fact, much of a journal (The Bell Journal of Economics and Management Science) is devoted to an academic discourse on the subject. Although there is much material, little of it deals directly with our concerns. From the material reviewed, the following general conclusions may be drawn.

1. Except for one report, no examination of "business" needs was undertaken. The one study undertaken did not focus on businessmen but rather on the

---

*A more comprehensive review has been presented in an earlier report (de Camprieu and Bourgeois, 1979). For our present purposes a brief summary is presented.

residential sector with a token mention of some businessmen's wish not to be grouped on the same multi-party lines as Bell's regular household customers.

2. The residential sector has expressed a preference for decreased line loads. In fact, results from Bell Canada and NBTel commissioned studies suggest that people would be willing to pay more for lower line loads. Thus, as a result of the Bell Canada finding, the introduction of the NUSI program will, by 1980 at the latest, offer 4-Party service as the basic service to all rural customers.

3. In addition to rural residents' concern over line load, several other concerns were mentioned which could result in part from heavy line loads. The more important ones being related to long distance calling, difficulties in obtaining the operator and repair services, lack of privacy, poor reception and poor accessibility.

4. Long term business or residential demand forecasts do not appear to be available, although a framework has been suggested in order to produce these predictions.

5. Short term business forecasts have not been reported although short term residential forecasts have been undertaken. These forecasts suggest that demand for telephone services is a function of several factors. In short, telephone demand would seem related to the services offered (e.g., line load and price), certain demographic (e.g., region and length of residence), and socio-economic (e.g., income and age) characteristics.

The literature reviewed and reported covered a cross-section of topics, some of which were not directly related to the above objectives but which we felt were important to a thorough understanding of the communications environment. Although much literature exists on the topic of communication, little was found about the needs satisfied by communication services, especially for rural people.

Past research has investigated "specific" communication services (e.g., telephone or cable T.V. or mobile radio). No study was found to investigate the needs associated with a range of communication services. It is also

interesting to note that no real distinction has been made between business and residential sectors. Although this facet has been deemed necessary for statistical analysis (Dunn, Williams and Spivey, 1971, p. 574), it is also necessary for recommendations to be drawn which better reflect the present operating conditions (e.g., different tariff structures).

IV. IN-DEPTH GROUP INTERVIEWS

1. Objectives

The purpose of the in-depth group interviews (focus groups) was twofold:

1) to delineate the need set for communication services in rural areas, and
2) to provide the basic information required for the design of the survey questionnaire.

Since the rural program's objectives (previously stated) were quite specific and clear, the focus groups were not used as an hypothesis generating device, as this may be the case in other applications. Rather, the purpose, as stated above, was to establish a set of relevant needs with respect to communication services and to supply inputs (e.g., list of relevant product attributes, list of relevant needs, etc.) to the design of the survey questionnaire.

Before undertaking the interpretation of these in-depth group interviews it should be pointed out that the results presented herein should not be used to generalize across the population of rural residents. Although care was taken to obtain a fair representation of rural residents, it must be remembered that the sample is basically a convenience sample and not a probability sample of rural Canada. The results are only meant to illustrate the type of opinions that rural residents might hold.

The present report is a summary and synthesis of what took place, as opposed to a recommendation-oriented analysis. The basic objective of the focus groups was exploratory and qualitative; that is, it was designed to understand feelings and concerns, not to measure their extent. For this reason, no recommendations were made.

2. Discussion Plan

The discussion plan for the in-depth group interview went from a general

inquiry as to the perceived quality of life differences between rural and urban sectors to a specific discussion on each communication service. The initial general discussion would help us assess the relative importance of communication services with respect to other services (e.g., education, mail, hospital, etc.) utilized by rural residents. The more specific discussion concentrates on each of the communication services (radio, T.V., C.B. and telephone), their level of satisfaction, improvements needed. The focus group discussion would generally end with a statement of their opinions (e.g., with respect to purchase intent, perceived price level) towards a technological innovation in the field of telecommunications.

Appendix 1 presents the followed outline of the focus group schedule. This schedule briefly outlines the discussion topics and their order with respect to the discussion carried out in each focus group.

3. Site Selection

Seven sites were selected across Canada in order to get some insights into some possible regional differences. These sites were chosen by D.O.C. as communities representing typical rural areas for the particular province. Not all provinces were included due to cost constraints. The following communities were selected.

No. of Focus Groups	Community	Nearest Major Center	Province
1	Sandy Cove	Digby	Nova Scotia
1	Drummond	Grand Falls	New Brunswick
2	Laverlochère	Rouyn-Noranda	Quebec
2	Sydenham	Kingston	Ontario
1	Wolseley	Regina	Saskatchewan
1	Three Hills	Calgary	Alberta
2	Elko	Cranbrook	B.C.

Figures 1 through 6 are geographical maps illustrating the position of each community.

Figure 1: Sandy Cove, Nova Scotia

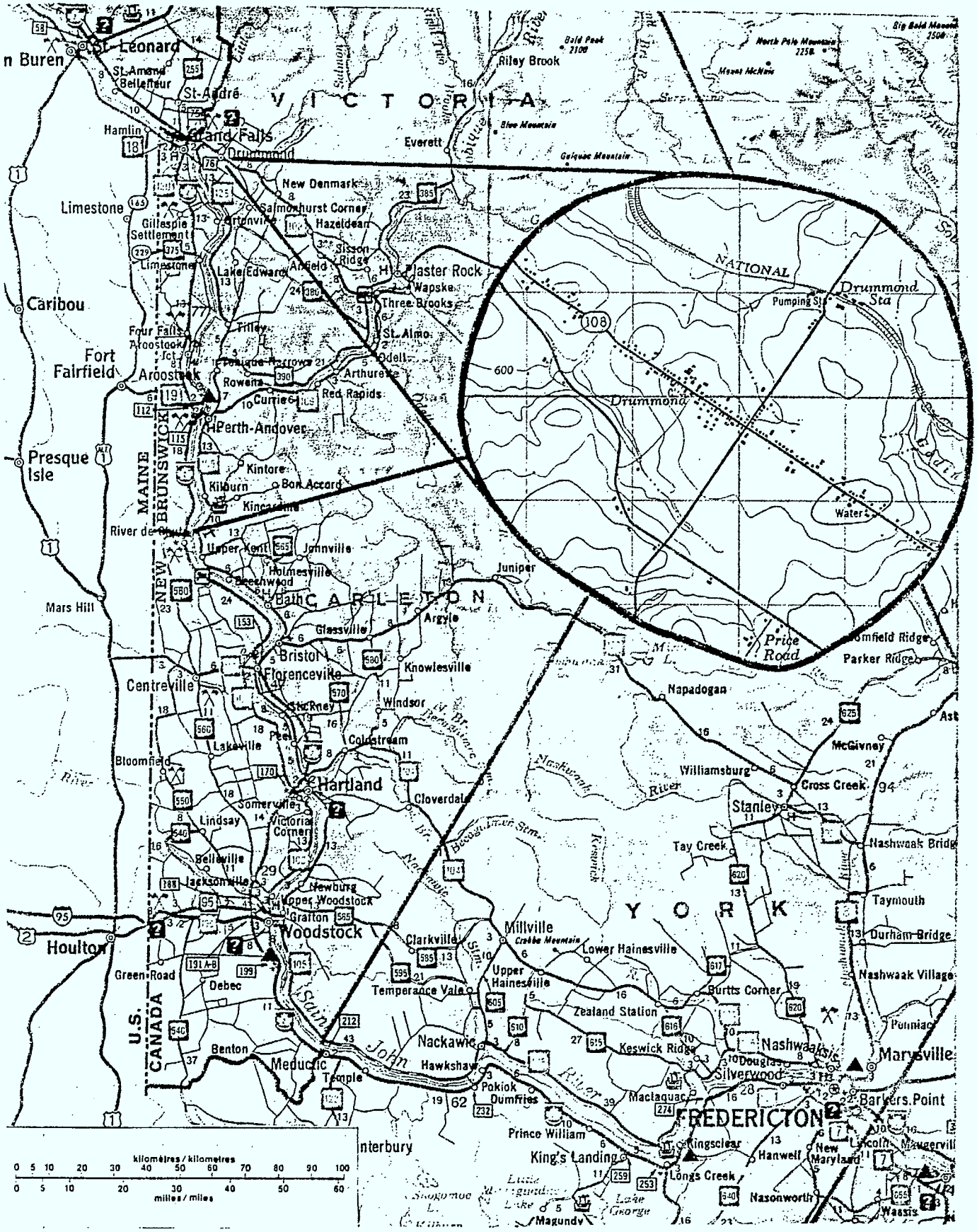


Figure 2: Drummond, New Brunswick

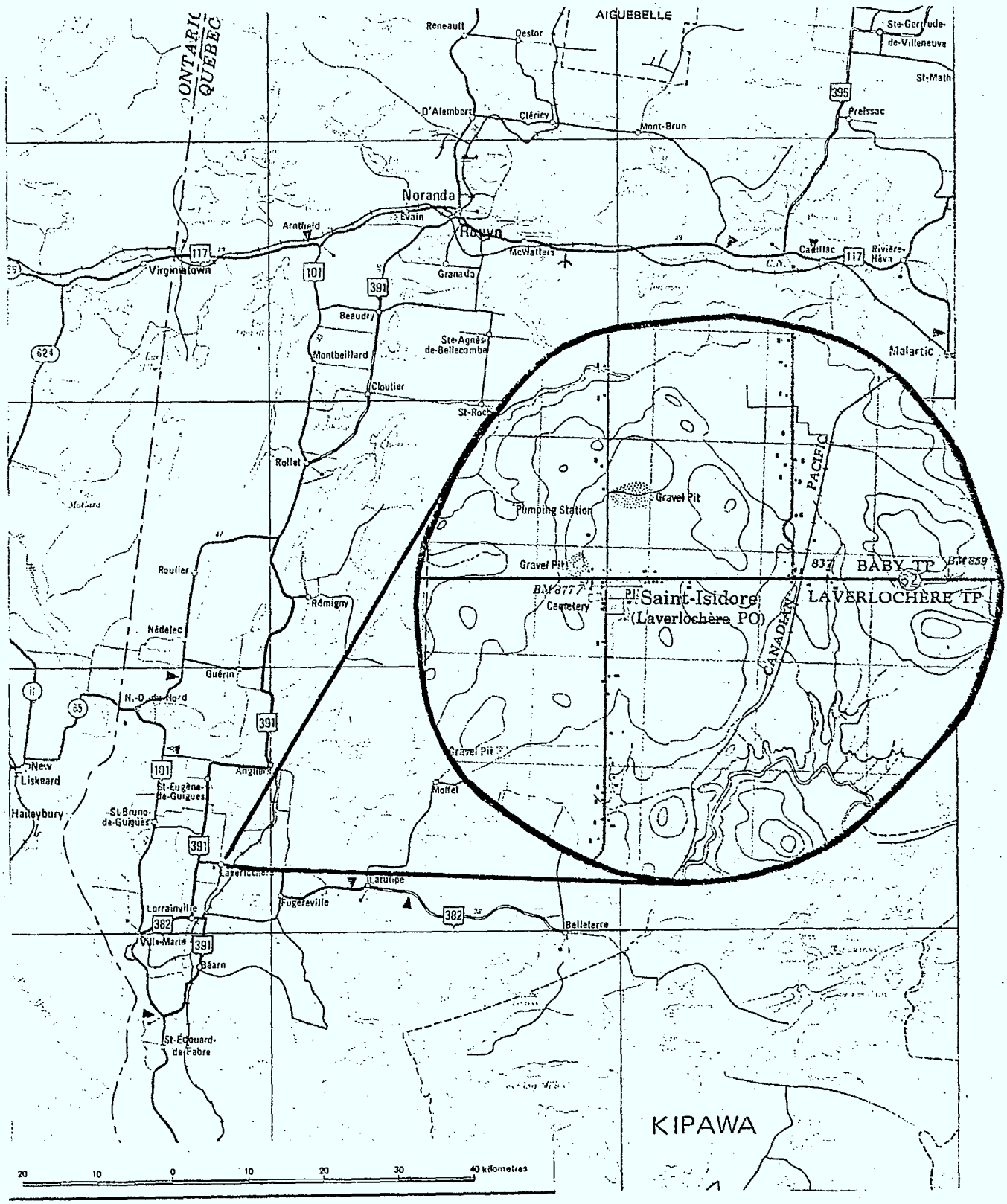


Figure 3: Laverlochère, Quebec

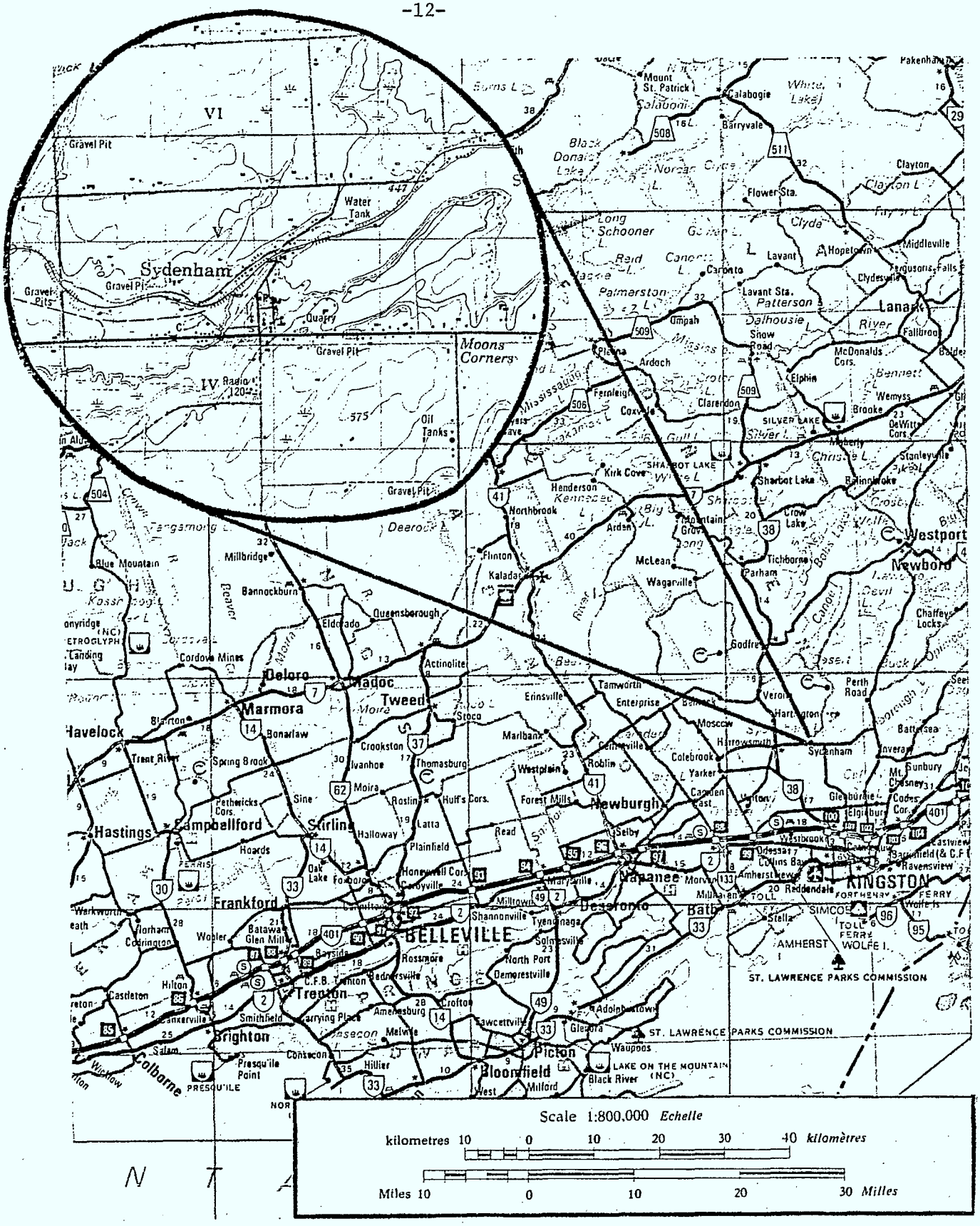


Figure 4: Sydenham, Ontario

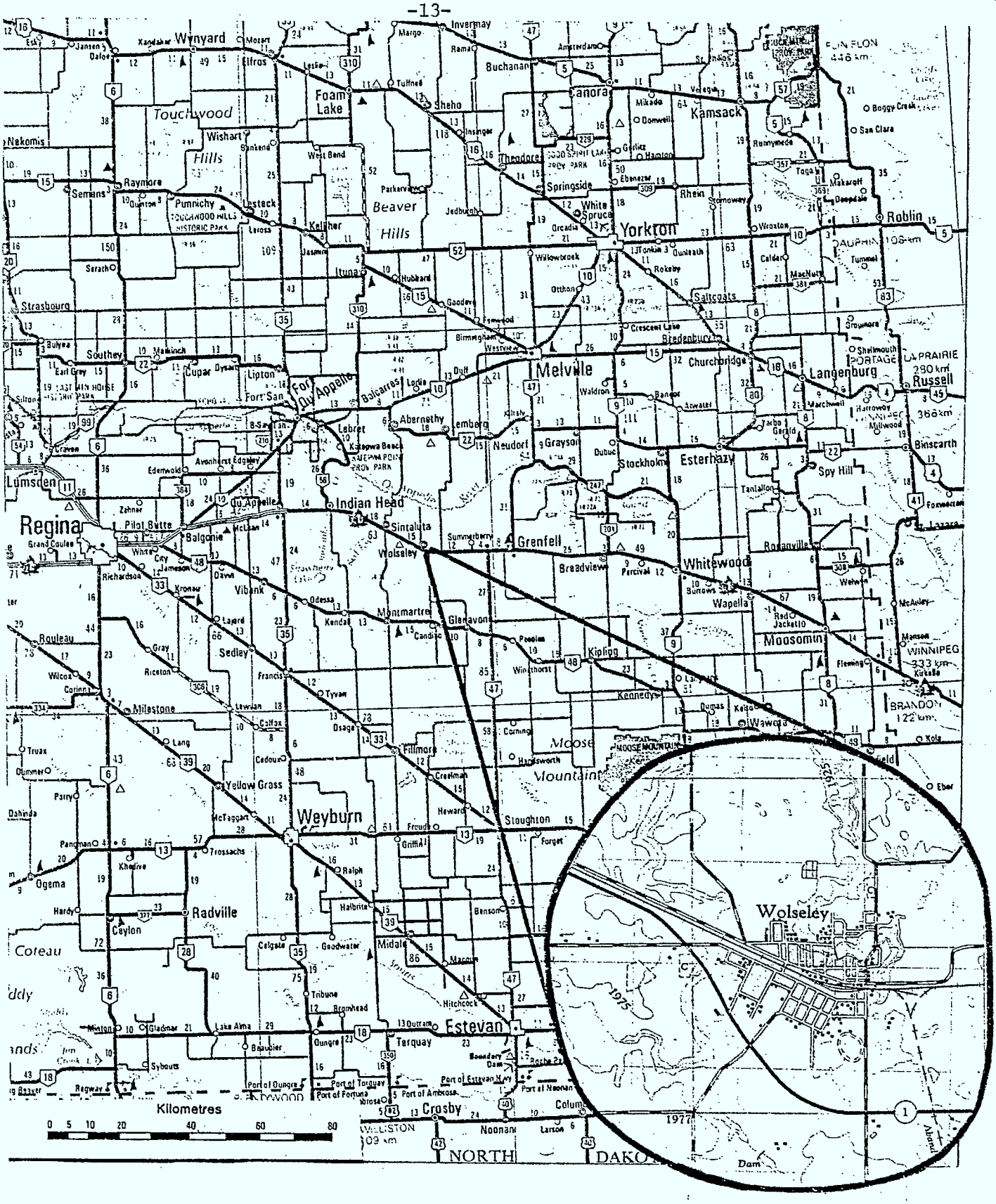


Figure 5: Wolseley, Saskatchewan

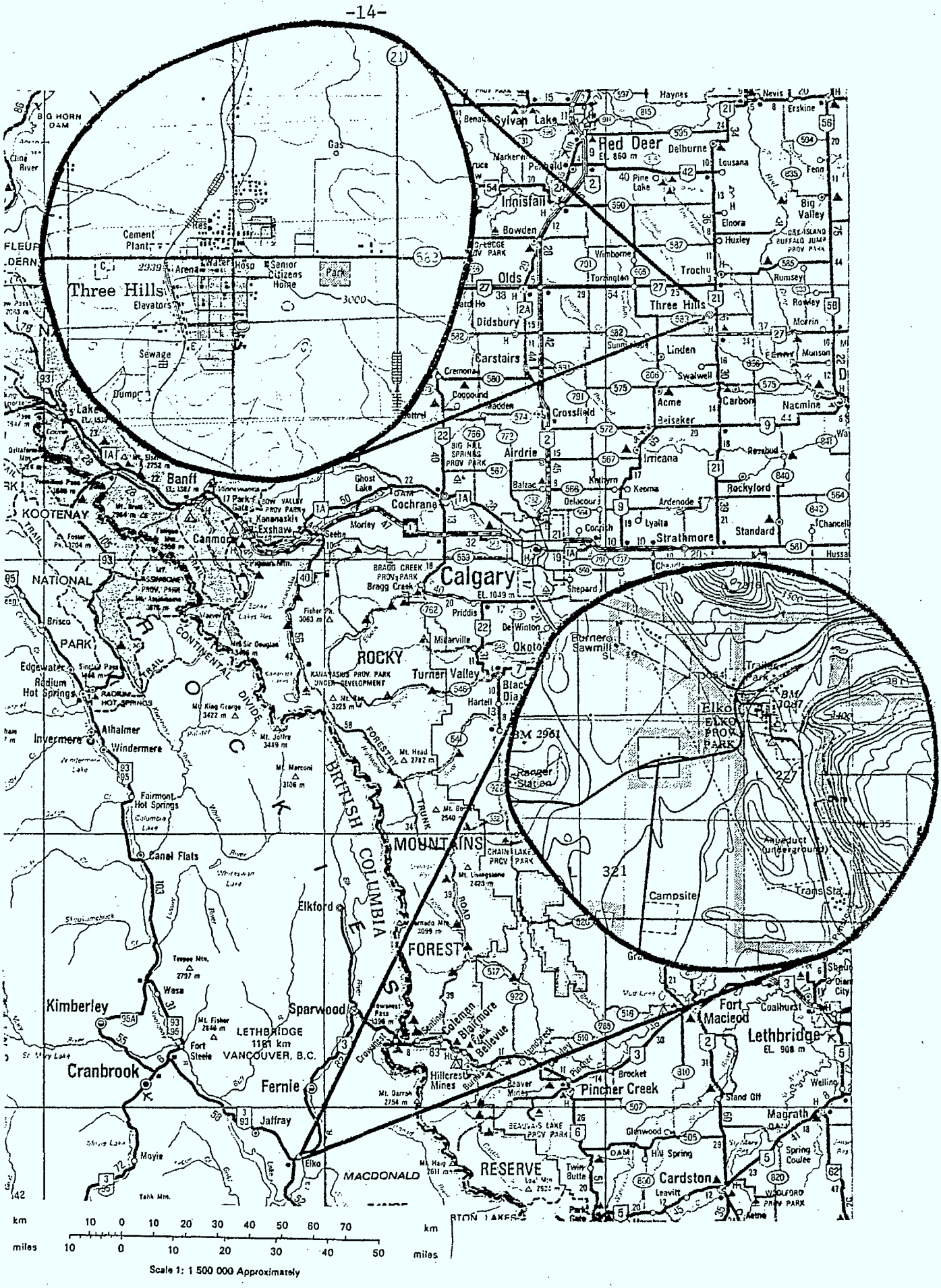


Figure 6: Three Hills, Alberta and Elko, British Columbia

4. Site Profiles*

1) Digby - Sandy Cove Area

Sandy Cove is a small unincorporated settlement located on the Digby Neck at the mouth of the Bay of Fundy. This coastal fishing community had a population of 164 for the 1976 census. The local fishermen, like others on the Digby Neck, are independent fishing operators that partake in inshore fishing activities. Lobster, herring and scallops are main catches in the area. The Digby Neck fishing area also attracts tourists during the summer months.

This area of Nova Scotia is very English Canadian, in fact at least 95% of the population is English speaking. They also seem to have a higher than average proportion of residences with multiple households. Most of them are fishermen.

2) Grand Falls - Drummond Area

Grand Falls, a town having a population of 6,223 (1976), is located in the St. John River Valley in the interior of New Brunswick. The town is too large to be considered rural (based on the Rural Communications Program definition of rural, the upper size limit of a rural community is 2,500 people), however the environs of the town (Grand Falls Parish) is a good example of the mixed agricultural activity found in parts of the Maritime Provinces. Another favourable factor in the Grand Falls area is that there is a mixture of English and French speaking residents.

This sector is characterized by its younger age residents. There is a larger than average number of 0-19 year olds and a smaller 55+ group. In addition, there is a significant French element which constitutes close to 17% of the population. Probably associated with the fact that they are a younger population, is the fact that there is a large proportion of singles. The family size (4.8) is also 14% above the other areas investigated. In addition, a lower education level is noticed when a comparison is made to the other areas.

---

*The profiles provided are based on Statistics Canada data and from a prior memo (Ref. no. 5420-4, 31.12 DEA). All comparative statements are made in relation to the other communities investigated.

3) Laverlochere - Rouyn, Noranda Area

St.-Isidore municipality had a population of 772 in 1976, a marked decline of 5.7% since 1971. The area of the municipality is 41.32 sq. miles giving a population density of 18.7 persons per square mile. In 1971, 38% of the population lived on farms in an area that is considered as having only average agricultural conditions. The area is rather isolated being some sixty miles south of Rouyn-Noranda, the nearest large urban agglomeration. St.-Isidore was chosen over Racine Municipality in Shefford Co. due to Racine's unfavourable proximity to the American border and adjacent urban centers.

As with the Drummond area, this population tends to be younger due to a larger 0-19 group and a lower 55+ category. Most residents (99.4%) are French speaking. We again find a similar profile to that of Drummond because of the larger number of singles, the larger families and the lower education level existing when compared to the other areas investigated. Although we also find the highest unemployment rate (17%) of all communities.

4) Sydenham - Kingston Area

Loughborough Township had a population of 3,083 in 1976, an increase of 23.8% since 1971. The population density for the 84 square mile township is 30 persons per sq. mile. Much of the township has a rugged terrain with frequent rock outcroppings. The farming areas of Loughborough have only shallow soils where most of the farms raise beef cattle. Farms in the township range in size between 200 and 400 acres. Many of the residents of Loughborough work in Kingston, only 18 miles to the southeast. The township has no local industries, however it is an active tourist area in the summer months.

This area is characterized by a young adult population (i.e., a large number of 20-34 year olds and a low 55+ group). Of all the areas researched, it has the highest English concentration: 97%. There are also a disproportionate number of married couples with a large number of single households.

5) Wolseley - Regina Area

Wolseley is a rural town of 883 (1976) located within the rural municipality 155 Wolseley (pop. 758). Wolseley is in the heart of

the Canadian Prairie Wheat Zone about 60 miles from Regina. The town is on the main CPR line linked with Regina to the west and Winnipeg to the east. The contact at the DOC District Office in Regina noted that residents of Wolseley have in the past complained of poor television reception. Originally the village of White City, Saskatchewan had been chosen to represent the Prairie Wheat Zone, however it was later considered too close to Regina (almost a suburb) to be a favourable choice.

This is a very old population. The 0-34 age group is very low when compared to the other communities, this is coupled with a substantially higher 55+ sector. There is also a higher than average proportion (14%) of people whose mother tongue is neither French nor English. Most residents form part of the married sector and a large proportion (11%) are widowed. These demographics reflect themselves in a large number of non-family households. Finally, this area has the highest employment (99%) statistics of all areas surveyed.

6) Three Hills - Calgary Area

Three Hills is a small agricultural town 75 miles northeast of Calgary, having a population of 1,564 (1976), an increase of 15.5% over a five year period. The environs of Three Hills (048 Kneehill) has, however, shown a slight decrease in population (5,890 in 1971 to 5,830 in 1976). Three Hills is located in the Wheat-Livestock Agricultural Zone of the Prairies. Brooks and Okatoks were two other centres considered as possible focus group locations in Alberta, but proved unsuitable. Brooks is in an irrigation zone and, therefore, a special case, while Okatoks is simply too close to Calgary.

Three Hills is known for its religious groups and activities. There is also a larger proportion of women and, as in Wolseley, a very high percentage (16%) of residents with neither French nor English as mother tongue. A very large (44%) proportion of the population have post-secondary education and a large number of bachelor households also exists.

7) Elko - Cranbrook Area

Elko, a small unincorporated settlement (1971 pop. 200), is the westernmost focus group location. It is situated in the southeastern

corner of the province, approximately 40 miles east of Cranbrook, the largest city in the East Kootenay Regional District. The mountain-valley topography combined with the existence of valuable natural resources gives credibility to the economy in East Kootenay. Mining, lumbering and associated service industries are the main economic activities in the Elko area.

5. Participant Selection

Before leaving for one location, a key person of that community (e.g., town clerk, mayor or some other opinion leader) was called and informed of the project. He was then asked if he would be willing to help us. This approach was quite successful in that all of our contacts followed through and contributed greatly to the successful recruitment of the participants.

He would be given details as to our needs: room, number of participants needed, sex, age, type (residential or business), etc. He would then provide us with a list of people in the community he thought filled these requirements and who could be interested in attending a group discussion.

The next step consisted in personally contacting each of these persons until the required number (8) had accepted. In some areas, the key informant actively took part (phoning, visiting, etc.) in the recruiting process. This would greatly enhance our chances of quickly obtaining participants. In any case, all key informants were extremely helpful in providing us with participants and the recruiting difficulties were minimal.

As the first contact with the participants was established close to the day of the focus group, no recall and confirmation needed to be made. As typically is the case, there is often one or two people of each focus group not able to attend the group discussion. Thus, the average group size was between seven and eight members. For seven of the groups, the group size was 8, for one of them it was 7, and for two of them it was 6.

6. Participant Profiles

Following the subjective selection procedure described above, the mix of the 65 participants was as follows:

	Business	Residential	Total
Sandy Cove, N.S.	8	0	8
Drummond, N.B.	3	5	8
Laverlochere, Que.	8	8	16
Sydenham, Ont.	8	7	15
Wolseley, Sask.	3	3	6
Three Hills, Alta.	4	4	8
Elko, B.C.	6	8	14
TOTAL	40 (53%)	35 (47%)	75

	Male	Female	Total
Sandy Cove, N.S.	8	0	8
Drummond, N.B.	4	4	8
Laverlochere, Que.	9	7	16
Sydenham, Ont.	7	8	15
Wolseley, Sask.	4	2	6
Three Hills, Alta.	6	2	8
Elko, B.C.	10	4	14
TOTAL	48 (64%)	27 (36%)	75

Age (estimated)

	20-30	30-40	40-50	50-60	60+	Total
Sandy Cove, N.S.	0	3	3	2	0	8
Drummond, N.B.	1	2	3	1	1	8
Laverlochere, Que.	1	3	0	1	1	16
Sydenham, Ont.	1	2	5	5	2	15
Wolseley, Sask.	0	1	2	3	0	6
Three Hills, Alta.	0	2	0	6	0	8
Elko, B.C.	3	0	2	4	5	14
TOTAL	6 (8%)	13 (18%)	25 (33%)	22 (29%)	9 (12%)	75

Socio-Economic Status (estimated)

	Lower	Lower Middle	Middle	Upper Middle	Total
Sandy Cove, N.S.	5	3	0	0	8
Drummond, N.B.	1	5	2	0	8
Laverlochere, Que.	1	8	5	2	16
Sydenham, Ont.	0	9	5	1	15
Wolseley, Sask.	2	0	3	1	6
Three Hills, Alta.	0	2	6	0	8
Elko, B.C.	0	9	5	0	14
TOTAL	9 (12%)	37 (49%)	26 (35%)	3 (4%)	75

As can be noticed from the above data the participants covered a range of characteristics. It should be noted that some of these data might be misleading. For instance, it would seem that the business sector was over-represented. In fact, in several cases these businessmen were mixed with residents and thus the conversation tended to revert to a residential discussion. It was planned to mix both male and female, and business and residential sectors, it would appear from the discussions that this should not have been carried out. Although this mix was carried out as a cost saving measure imposed by the budget constraints, the information obtained and the quality of the discussions were not as good where this was the case.

In summary, most of the participants were men, although one group was only females and seven of the ten groups had at least two females participating. The majority of the participants tended to be of middle age and of lower middle and middle socio-economic status.

V. QUALITY OF LIFE - FOCUS GROUP SUMMARY

The discussion carried out at this initial stage of the group interview was summarized into five specific dimensions related to different areas of concern and one overall evaluative dimension. The analysis which follows presents advantages and disadvantages for each of the five dimensions and an overall evaluation of rural living. Thus, eleven distinct discussions, one for each cell presented in Table 1, are presented.

Table 1
SUMMARY TOPICS
QUALITY OF LIFE

	Advantage	Disadvantage
Physical Health		
Social Health		
Psychological Health		
Financial Health		
Performance/Functional Health		
Overall Health		

1. Physical Health - Advantages

In terms of physical health rural residents enjoyed country-type living because they felt their children had more freedom - they had more space to play and they did not have to worry about traffic. As one respondent put it: "I can just turn my kids loose."

In addition, many of these residents would grow their own food and thus they thought that they had better food. Because of this perceived "superior" food and other factors (as discussed later), they generally anticipated a longer life.

2. Physical Health - Disadvantages

The negative commentary on physical health related to the poor or lack of medical services. For instance, most of these communities do not have a medical clinic and hospital facilities are not that accessible. Those communities with hospitals usually complained of a lack of medical equipment and a high turnover in doctors and other professional staff. As one respondent put it: "We can't keep medical help, anyone good leaves."

3. Social Health - Advantages

By far, the perceived advantages outweigh the disadvantages. For instance, it is seen that children learn to bear more responsibility by the fact that they have more chores to handle. The social life amongst the family and between friends is felt to be much better. Respondents felt much more a part of the social fabric of the community by, they felt, knowing their friends well and knowing their children's friends. They felt that the people were more friendly, that you felt you knew everyone, and that there was more caring for each other in a rural community. Generally, they expressed an appreciation for the lack or absence of social problems that they perceive associated with city life and thought that it was definitely a better place to raise a family and lead a better social life.

From a business perspective, a close customer-owner tie typically existed and was reassuring to each party. On the one hand, the customers felt they knew the owner well and therefore could rely on him for an honest opinion (and deal). On the other hand, the owners thought that people bought things from them because they knew them and had confidence in them. It was a mutual feeling of cooperation and trust. In addition to this mutual understanding, it was expressed that purchases tended to be more pragmatic in nature and less subject to peer group (e.g., neighbours) pressures, a situation that they perceived to be completely reversed to that which would be found in an urban

centre.

4. Social Health - Disadvantages

Already, some of the rural communities are feeling the effects of urban development. Two communities expressed concern towards new housing developments in their area. The rural residents which were experiencing this intrusion resented it. They had either lived in a rural environment most (or all) of their lives, or had moved there to escape a city type life, so they did not very much appreciate the move of many people to want a piece of the wilderness.

Other more relevant disadvantages were the relative isolation of children from many other children and from many children's social gatherings. Others expressed feelings of frustration at many neighbours' or acquaintances' knowledge of their business. Finally, given the smallness of these communities, it is very hard to say "no" whenever asked to participate in any community event. This, at times, constituted to some an undesirable compliance pressure.

5. Psychological Health - Advantages

This quality of life dimension is perhaps the most heavily favored one. Privacy, freedom ("doing your own thing"), less stress and space are the themes. Residents very much appreciated the room to roam and the spaciousness of country living. The absence of crowds, traffic, and pollution, the closeness to nature, the serenity of the environment elated them.

They found decision making easier in rural areas because of the restricted selection for most, if not all, of their product purchases. Children were perceived as acquiring and gaining more self-confidence, as compared to their urban counterparts. The lack of or absence of competition in these areas also contributed to a less stressfull living environment.

6. Psychological Health - Disadvantages

The only negative comment that may have arisen from the group discussions was their perception that "church groups are going downhill". It would seem that as is the case in the city, less attention is being put on the spiritual element.

7. Financial Health - Advantages

A few comments tended to stress the good side of this dimension, although these tended to be outweighed by the negative commentary. Respondents suggest that it is less expensive to build houses and that taxes seem to be more favorable. In addition, it was stated that older people live a financially better life than the city senior citizens. It would seem that many of them own their homes and have more contact with their families.

8. Financial Health - Disadvantages

Aside from the functional dimension, this is perhaps the most negatively slanted aspect. Many essential products and perceived to be more expensive. For instance, food was seen as more expensive because of perhaps higher transportation costs and because they seem to have fewer "specials" when compared to their urban counterpart. There was a certain feeling of frustration expressed here. In many instances, they would produce the products (e.g., wheat for cereal) and end up paying a higher price than the city residents.

Aside from this perception of grocery type items, they felt disadvantaged for paying more for: 1) installing power, 2) hooking up to natural gas, 3) putting in water and sewage, 4) receiving electricity, 5) heating their home, 6) clothing, 7) fire insurance, and 8) having the cost associated with garbage pick-up as an additional cost over and above their present taxes. In addition to the higher cost paid for these services, education was also perceived

to be more expensive. Typically, any student wishing to pursue his studies at the community college or university level must leave the area. Thus, additional costs for room and board are imposed on those families and individuals who wish post-secondary education.

From a business perspective, many complained at not being able to obtain specialized labour. On the other hand, most of those individuals who left the area, for a post-secondary education, could not find work in their home area which might be related to their area of expertise. Some also complained about their limited number of customers. This would result in a relatively good business but not good enough to hire another person and thus too much work for one family. This would typically result in longer hours.

The distance of most of these businesses from their suppliers had also a negative impact due to the greater time required for delivery and higher transportation cost. As well, many of these small businessmen have seriously considered taking courses which might help them in their business but are unable, due to the absence of any such offerings in the area.

9. Performance - Functional Health - Advantages

Most of the communities selected were not that far from a bigger town, thus most of these residents felt that nowadays, they weren't that far from most city type conveniences. As well, they felt in proximity to many outdoor sports and activities. Finally, education was perceived by some as being of higher quality because the teacher would typically know each family and therefore he/she would be better able to understand each student and therefore tailor his/her approach.

10. Performance - Functional Health - Disadvantages

Because of the relative isolation created by living in a rural area, most participants found it quite inconvenient to travel the long distances

required for most activities (e.g., visiting friends, going to a store, children or themselves participating in sports or other recreational activities). This would cause some parents to cut down on certain activities for their children. The lack of public services was also commented on. For instance, senior citizens and children cannot benefit from a public transportation system. Garbage, snow removal, fire protection, local housing for senior citizens are all lacking. Other conveniences such as take-out services, entertainment (e.g., concerts and plays), stores, product selection are also deficient or totally absent. Their children's education was also seen as being shortchanged due to the lack of "specialized" instruction, part-time courses, night courses and T.V. courses. Finally, bad post delivery and irregular hydro service were quoted as other functional problem areas.

Trade off

11. Overall Health

In summary, the participants seem to benefit mostly from factors related to their social and psychological make-up and lose on factors related to the financial and functional-performance dimensions. Their commentary on physical health seemed evenly weighted, that is, positive in terms of actual living conditions but negative in terms of health care and support systems.

In the participants' overall evaluation of rural living, the commentary was quite favourable, especially when compared to city living - obviously, otherwise the dissonance would have probably made them move elsewhere. These rural residents find the pace of life slower although they are also finding that it is accelerating. Generally, they expressed their strong feelings that the "quality of life is much better in a rural environment. As one participant stated: "No way would I ever move to the city, this is a much better life."

It was quite illuminating to discover, in this general discussion (lasting

about 20 minutes) on the relative advantages and disadvantages of living in a rural vs urban environment, that no mention (pro or con) was made of telecommunication services. Thus, in an overall sense when compared to other services and activities, telecommunications would seem to play a less important role. Communications was discussed by some participants, but this centered on the inefficient post office service and the discontinuance of rail service to the community.

VI. TELEPHONE - FOCUS GROUP SUMMARY

1. Regular Service

Generally, rural residents (at least those selected for the focus groups) are satisfied with their present phone system. These individuals have typically only known very heavy line loads, while most of them have recently (within the last four years) been converted to a four party system. Thus, their reference point is their prior experience with several parties on one line. Now that the number has been greatly reduced they, of course, find a tremendous improvement. Their general feeling, at present, is that four per line is fine.

Aside from this general feeling of satisfaction due to the recent conversion, some have complained at their inability to obtain a private line. Another problem area would seem to be the many errors on monthly invoices. The following statements illustrate these complaints and the service situation.

1. You can't even get a private line if you want one.
2. We ran into a lot of trouble in order to get a private line.
3. We were promised a maximum of two persons per line when the small telephone companies amalgamated. This is still not a reality, you can still find people with 10 parties on one line.
4. We have 13 households on our line. In the summer time, this increases to about 20-25 households on the same party line.
5. Even when you ask for the line, you are often told to wait your turn - even when it is important.
6. We have experienced some emergencies where people would still not get off the phone.
7. You learn to accept the party system.
8. I have a local restaurant and I don't mind being mixed with residential phones.
9. As a farmer, when you are doing business, there is no privacy.
10. The repair service is usually OK.
11. The repair service is a bit slow.
12. I have watched a repairman work (I'm an electrician) and I am not too confident in their knowledge and work.
13. I am not willing to pay for improved services.

14. We have had several problems with our monthly billing invoices.
15. We check very carefully each monthly bill.
16. Although they often make errors in their monthly bills, they are quite nice about correcting them.
17. It is usually hard to get the operator.
18. We often have long waits before getting the operator.
19. The phone company didn't have much foresight, they should have laid extra wires for the availability of more private lines.
20. We usually combine the use of the phone with that of the courier service. It is more expensive but much more reliable than the mail.
21. The decisions made about any phone system change/improvement, are made by men who couldn't care less. They think that:
    - . farmers don't need a private line
    - . farmers don't deserve one
    - . farmers can wait for it
    - . farmers can pay for this luxury

2. Rates

The concern on rates centered on the variability of the monthly rate, between different households, the very heavy installation charge and the frequent monthly billing mistakes. The fixed monthly billing rates varied from a low of $6.50/month to a high of $47./month. The average rate for a four party line would seem to lie in the neighbourhood of $8.00.

A few businessmen expressed the feeling that they should be paying less than residents do on their monthly telephone bills. Their rationale is that they use it less than do residents, so why not?

Generally, these rural residents feel frustrated that they pay a higher monthly rate when compared to city residents. They have often asked themselves: "after dishing out thousands of dollars for the installation (a charge not incurred by city dwellers), why must we also pay more on our monthly bill?". Again, the following summarizes the relevant commentary.

1. There are no more cottage rates.
2. If they want to keep their line, cottages have to pay through the winter months as well.

3. The installation charge is very high.
4. We pay high installation charges, so why do we as well pay higher monthly charges?
5. We don't see the need for advertising, it would seem that this would increase our rates.
6. There are many billing mistakes, but they are usually quite nice about giving you credit for them.
7. Something should be done about other people charging long distance phone calls to our number.
8. I like the idea of allowing us only a limited number of calls.
9. We were three weeks without a phone but our basic monthly charge was still the same.
10. Residences should pay more than businesses because they use it more.
11. We pay $12./month for a semi-private line.
12. I pay $18./month for a private line.
13. I pay $47./month and I also paid $1,600. for the installation charge.

3. Long Distance Service

Most of the participants complained at their extremely restrictive calling area. They find it unfair that they can't even call essential services (e.g., police, fire, hospitals, town office, schools) without encountering a long distance charge. Most participants also expressed a willingness to pay more for an extended area service.

Although extensive criticism concerned itself with the small calling area, praise was given to the newly introduced direct distance dialing. They found this new service just great over the old service. With the older system, residents reported often experiencing half hour waits before being able to put a call through. Although even now, they at times must wait a few minutes before the operator takes their number. Following are some summary comments.

1. You can't even call your local school or town office without having to make a long distance call.
2. The calling area is much too restrictive.
3. I have to pay a long distance charge to call my neighbour.
4. It is worth $10. per month to us to have a wider calling area.

5. 95% of my business is outside the calling area.
6. Direct distance dialing is great but at times we still have to wait long periods for the operator to take our number.

In summary, the phone was found to be used for several purposes, among them:

1. for business
2. for convenience and as a time saver
3. to feel less isolated and helpless
4. to talk to friends/to socialize
5. for security in case of fire or other emergencies

Most rural residents interviewed were on four party lines, although some had private lines and others had multiparty lines. As well, from the above discussion and from the more detailed comments contained in Appendix 2, the participants' evaluation of their phone service is a function of:

1. speed of repair
2. reliability of service
3. installation service (cost and speed)
4. operator service
5. line load
6. free calling area
7. basic monthly charge
8. installation charge

VII. TELEVISION - FOCUS GROUP SUMMARY

1. Programming

Generally, the programming is perceived to be a major source of disappointment. There is a general feeling of resentment towards commercials, especially. But it is acknowledged that these may be a necessary evil. They only wish that there could be some other way of paying for the programming. Thus, some favorable comments were made towards PBS.

Most French participants would prefer to have more French stations or even to replace their existing English stations with some French programming. The feeling is mutual in the English sector, where few channels are being received and one of them is a French channel. They would prefer more English programming and that, if they are to receive French programming, sub-titles should be added.

There were more specific issues raised. For instance, it would seem that the time zone creates several problems. Many participants (especially those of the western provinces) complained at their inability to watch some good programs because they were telecasted either too late at night or too early in the day. Another specific issue was the need for courses offered on T.V. and preferably broadcasted in the evenings. One last specific comment, and one of much concern, was the lack of proper programming for kids who seem to be the heavier users of this media. Several comments were made in relation to all of the above issues. Below is an excerpt of the more relevant and representative commentary.

1. There are too many commercials.
2. Commercials are awful.
3. Commercials are a nuisance, but I guess they pay for the shows.
4. Commercials are bad for kids.
5. Many of the kids' shows are late at night.
6. Many of the early evening programs are not suited for kids.

7. Several programs throughout the day are bad for kids and therefore we don't let our children watch them.
8. It is difficult to determine what programs children should watch.
9. Some people prefer to let their children watch some not-so-good programs rather than have them running around.
10. They seem to present urban life on T.V. as "the" life for children - this is terrible.
11. The French station should have English sub-titles.
12. We need more English stations (B.C.).
13. We need more French stations (Quebec and N.B.)
14. We should be provided with PBS so that we may have better and unedited movies and no commercials.
15. Global and CTV have much better programming than the CBC.
16. CBC news is not that good.
17. I would be happy to send my money to the U.S. for PBS but the channel recently added to this area was a French station.
18. When we watch T.V., we prefer programs such as: Fifth Estate, Newsmagazine or even French programs like these.
19. More sporting events should be broadcasted.
20. More courses should be offered on T.V.
21. More courses offered on T.V. should be at night.
22. We prefer live events to watching T.V.; so, two or three times a year we go to the city to watch a live event or even to local high school plays.
23. The time zone creates problems. Many good programs are either too early or too late at night.
24. Programming used to be better. Today, it could stand improvement.
25. The programming is bad because there is not enough (if any) competition. So why should the stations try to improve?
26. Generally, there is not enough local programming.
27. There should be more programming related to our country. They should cut down on shooting, killing and sex type programs and increase local and national type programming.
28. Generally, programming is terrible. But the ratings are the thing and we can't affect these (because of our relatively small number) out here in the country.

2. Reception

Generally, the reception is perceived to be unsatisfactory. Typically, reception is good on only one channel, mediocre and unacceptable on the others. Several participants reported buying boosters to improve the quality of reception

but were unable to obtain the improvement. The booster seems to have more of an impact on the number of stations received than on the quality of the signal received. Much of this bad reception seemed attributed to the bad location of repeater stations. Some communities felt so frustrated at the quality of their reception that they had actually started their own pirate operation.

The reception in any particular area seems quite variable as it is affected by several factors. For instance, some French communities complained that they had poorer reception of French stations vs English stations. Commercials also tended to annoy people, not only by their presence, but by the fact that their volume intensity seemed higher than their associated programs. Another source of the variability in reception was the interference incurred from electrical cables and from radio operators of either local stations or nearby motor vehicle traffic (C.B.s). A summary set of comments are presented below to illustrate the above discussion.

1. Our reception is not even good with a booster.
2. We receive a perfect reception on only one channel.
3. It's OK on two of the four channels we receive.
4. CTV does not come in as well as the CBC and we prefer it over the CBC.
5. The English stations come in stronger than the French stations (French participants).
6. Commercials always seem so much louder than the associated programming. In fact, sometimes we get up and turn the volume down.
7. Our reception could be improved with more and better located repeater stations. Why doesn't the government do something about it?
8. They haven't located the repeater stations at the right spots.
9. Some people have gotten so frustrated that they have started their own "pirate" receiving operations.
10. We get a lot of interference from a local operator of a two-way private radio. Two of his neighbours have actually moved because it's so bad. They have complained, but there is nothing which can be done, since he has a license to operate it.
11. We often receive, on our sets, the truckers' C.B. conversations as they go by on the nearby highway.

12. Electrical cables seem to interfere with our reception. On one side of the street where there are no cables, the reception is good, while on the other side of the street where there are cables, the reception is bad.
13. Since the local radio station has increased its transmitting power, we have it interfering with our T.V. signal.
14. We are so aggravated by the bad reception that we hardly watch it anymore.
15. Generally, the reception is not good.

3. Selection

The selection is very narrow in the majority of cases. Typically, only one station is well received and perhaps two or three others are received with a mediocre signal. On average, rural participants would seem to receive two to three channels of varying quality signals. The largest selection found was six channels, including two UHF channels and two American stations.

Generally, the selection is perceived to be limited, although they did not expect a wide selection, nor did they necessarily want more choice, but rather preferred better programming or better reception. The following excerpts will illustrate these points.

1. We receive one channel only.
2. We receive four regular channels (ABC, NBC, CTV and CBC) and two UHF channels.
3. The number of channels received reflects consumer demand.
4. There are enough channels, it's the programming that should be changed.
5. I would like to receive more channels (a retired man).
6. The selection of channels is very limited.
7. There is only one Canadian station on PBS and it's French (Sydenham community).
8. There is only one station which we receive well, and it's English. We would like to have at least two well received French stations (a French community).
9. We don't expect that many stations.
10. We don't need more selection, just better programming.
11. We don't need more selection, we prefer the isolation and independence. More selection would just mean more intrusion.

4. Cable

Generally, these rural residents did not foresee themselves ever getting cable T.V. Two communities reported being aware of its availability in a nearby village. Thus, the great majority of rural residents do not have cable. Actually, the cable service did not seem important to them.

In terms of what they would pay for cable service, were it available to them, the replies ranged from nothing to $20./month. Although the responses could generally be grouped into two categories: those who would not pay anything and those who would pay what city dwellers typically pay (i.e., in the $6. - $8. range).

A small mobile home community had actually acquired their own cable system with a receiver for the group and a cable system for the distribution to each of about thirty households. The only outlay was an initial investment of $40. per household.

Rural residents did not seem to be fully aware of the cable system. Some had heard about it ten years ago or so, while others had never heard about it. Thus, there was no real need for cable T.V. per se, but rather for better programming and reception, and perhaps a bit wider selection. Following is a list of some of the more typical comments relative to the cable service.

1. We have no cable.
2. There is cable in the nearby village.
3. There is really no hope of getting it.
4. We are not interested in getting cable until the quality of the programming increases.
5. Cable is not important to us.
6. $6.00 to $8.00 per month is as much as we would ever pay for cable service.
7. I would pay $20. for 5 or 6 more channels.
8. We would pay the same price as city dwellers pay: $5. - $10.
9. Cable T.V. provides us with 6 more channels.
10. Cable T.V. provides 9 additional channels.

11. Some channels provided by cable T.V. are very similar to each other.
12. Generally, not sure as to exactly what cable T.V. does provide.

5. Equipment

The cost of the associated T.V. reception equipment is substantive. If one includes the installation and a complete system (i.e., rotor, booster, antenna and antenna base) in the total cost, this cost could be estimated, on average, at $600. to $700. The rural residents complained that this is a compulsory cost to be incurred in order to receive any signal while city residents are not burdened with such costs.

Others had bought this equipment (e.g., a booster) and complained that it was not doing the job. For instance, it was not uncommon for people to add a booster but their reception or selection (i.e., number of channels) would not be significantly affected. Comments relevant to the purchase or use of optional equipment follow.

1. A rotor, booster, antenna and antenna base cost me $800.
2. A rotor, antenna and booster cost me in the neighbourhood of $400.
3. Just the antenna and booster cost us around $250.
4. In addition to the equipment, we must pay for the installation which is very expensive, usually around $100.
5. A local booster station was promised but we are still waiting for it.
6. We have gone through 4 antennas and a couple of boosters - and I'm still not receiving a good signal.
7. The rotor freezes in the winter time.
8. Even though I have a booster, a local radio station overrides our T.V. reception.

6. Needs and Behaviors

Several households seemed to resent the presence of a T.V. set in their home. It seemed to intrude on the family life and participation. Thus, many families restrict the use of T.V. T.V. seemed to be a "winter" past time, mostly used by older (especially retired) individuals and by children. Some

participants suggested that they would not replace their T.V. and that if someone were to remove it from their home, they would not really miss it, except for some very special occasions (e.g., NHL playoffs, 1976 Olympics).

When queried as to why they have a T.V., their replies suggested that T.V. is used primarily as an information vehicle for adults, educational tool for children and secondarily as an entertainment or distraction outlet in certain circumstances (e.g., bad weather days, winter months).

In our discussion of areas needing improvements, the comments centered on obtaining more local news and better programming. It was suggested that a panel of "real" people should screen the programs to be aired, and not some editor. Several others commented on the need for better reception, while those French communities sampled suggested more French programming.

Most rural residents contacted were quite retiscent about adopting any new T.V. reception equipment for several reasons. First, all had, at present, a fairly expensive and extensive system, and would probably only replace it when they would need a replacement system because of obsolescence or complete system breakdown. Second, unless better programming (not increased selection) was provided through the new service, they weren't interested in receiving more of the same. Third, they were not confident that the system would actually deliver whatever it promised. In any case, most would wait one and perhaps two years before adopting such a system. Most would seem to prefer a "wait and see" approach to their purchase of a new reception system. Again, the following comments are a summary of the typical comments made, which are relevant to the above discussion.

1. We prefer family type activities to watching T.V.
2. There is no T.V. allowed after 7:00 p.m.
3. We watch more T.V. during the winter months.
4. We want our kids out of the house, not watching T.V.

5. We will not replace our T.V. when it goes.
6. Take my T.V. away, I don't care.
7. I watch T.V. for:
    - . general interest programs
    - . sports on Sundays
    - . cultural programs
    - . news
    - . to feel another's presence
    - . to fill in time
    - . information
    - . entertainment and distraction since there are no theatres
8. There should be more local news.
9. There should be better programming, especially for children.
10. There should be at least two French stations.
11. A panel of "real" people should screen all programming.
12. I may consider spending $20./month for a new reception system but I would probably wait a year or two, to see how well they work.
13. I would not spend any more than I do now for such a new system.
14. I don't think we should spend any more than what it costs city residents.
15. I would only consider buying it if there was better programming and perhaps more selection.

In summary, the main reasons for having a T.V. were:

1. information
2. education for children
3. kill time
4. entertainment
5. keep children quiet/occupied
6. keep them company when alone

In addition, the great majority of rural households had an outside antenna, tower, rotor and booster. Except for a small community in New Brunswick, no one had cable, nor did they ever foresee getting it. The small New Brunswick community (Drummond) had cable because of their proximity to a larger center (Grand Falls) which had applied for and received cable on the condition that Drummond also be included in the distribution. The most relevant set of

improvements suggested were (in order of importance):

1. better programming
2. better reception
3. more selection

Thus, from the above discussion and from the more detailed conversations carried out in the focus groups (and abstracted in Appendix 2), the more relevant attributes generated for television are (in order of importance):

1. better programming, especially local
2. quality of sound and picture
3. more selection of English and French programs
4. cheaper reception equipment
5. more reliable reception equipment

VIII. RADIO - FOCUS GROUP SUMMARY

1. Programming

Generally, radio programming is seen to be of sufficient quality. It should be noted, however, that several participants found the programming to concentrate too heavily on city affairs and/or news, rather than a proper mix of urban and rural information.

Others suggested that there was not enough sports and that they wanted to hear more good (country) music. From a business perspective, the Nova Scotia fishermen would very much like to hear more frequent local weather reports - their livelihood depends on it. On several occasions they complained of wasting entire days when bad weather was forecasted for another area but did not materialize in their own fishing area. Thus, more frequent local weather reports are critical to these individuals. In summary, the following comments were made relative to programming:

1. Generally it's OK, but some improvements are needed.
2. There is too much focus on the city.
3. There isn't enough sports news.
4. Radio is useful for weather reports when hunting.
5. We need good music.

2. Reception

The reception seems quite variable. It would seem that this is mostly due to the low transmission power of local stations. Thus, any obstruction (e.g., hill, mountain) to the signal would significantly affect the quality of the signal received.

Thus, the average resident would seem to receive a good signal, although this reception is easily affected by the resident's location. It was thought that the reception quality could be improved with the use of repeater terminals for those stations which operate at a distance. For instance those operating

out of major centers (e.g., Halifax, Cranbrook). On the other hand, the local stations could improve their signal by increasing their transmitting power. The following illustrates the above points.

1. It's fine.
2. It's lousy.
3. It could be improved with repeater stations.
4. There are several dead spots when you travel.
5. I often lose the station going from one village to another.

3. Selection

Generally, these rural residents were satisfied with the available selection of radio stations. Perhaps it should be mentioned that they would prefer to have included in their selection one local station.

Except for a few exceptions, everyone was aware of FM programming. They enjoyed it and would appreciate getting more of it. Following are a few appropriate comments.

1. FM is nice.
2. I wasn't aware that FM existed.
3. More FM programming is needed.
4. There are generally enough radio stations.

4. Needs and Behaviors

The commentary here suggested that much of radio listening was done in the car when travelling, even over short distances. At home, many housewives would have the radio on continuously, but admitted not really paying attention to it, rather it was used as background noise. In many instances, it was to make them feel as if they were not alone.

A radio with FM and cassette capabilities is quite valuable to these residents, especially in a motor vehicle where FM does not seem to be as affected by the terrain (although it is affected by distance). On the other

hand, a cassette player fills the gaps quite nicely whenever the signal is lost during car travel.

It should be pointed out again that they sought more local programming and more local weather reports. As with TV, the French communities would like to have more French radio stations. As with the previous sections, the following statements illustrate some of the above discussion.

1. FM and cassette are good options to have, especially in a car.
2. The clock radio has to be one of the greatest inventions.
3. There should be more local programming.
4. There should be more local weather reports.
5. I listen to radio for: news, weather, sports, entertainment/music, learning.
6. More French stations are needed.
7. We use the radio mostly in the car.

Generally, it was found that the radio fills, or should fill, the needs for:

1. local, regional and national news
2. music
3. background noise
4. education/learning

On the other hand, the most relevant attributes of a radio broadcasting service are:

1. quality of reception (day and night)
2. number of stations received (including number of French stations, number of English stations and the number of U.S. stations)
3. amount of local vs regional vs national programming

IX. C.B.-TELEX - FOCUS GROUP SUMMARY

1. Reception

Over water, C.B. reception is exceptional. Indeed, the Nova Scotia fishermen reported using it over distances of 30 to 35 miles. On the other hand, in areas such as in B.C., the range is barely 2 to 3 miles. Over the rolling hills of Alberta, we find a range of perhaps 4 to 5 miles. Thus, the natural terrain plays a great role in the reception quality.

"SKIP" is another factor affecting the quality of reception of C.B. radios. It would seem that across Canada, we are in a period when atmospheric conditions are most affecting the signal reception. This phenomenon is not expected to leave us before another 2 or 3 years. The experience of those using the C.B. radio is that the reception is typically not so bad but that when they experience SKIP interference, the conditions are hopeless. Some suggested that increasing the power of C.B. sets would overcome the SKIP. But, it was also pointed out that since the SKIP is a temporary phenomenon, why go to all that trouble and expense? Following are some relevant comments.

1. We can receive 30-35 miles over water.
2. We usually receive 2 to 3 miles here in the mountains.
3. The SKIP is a real nuisance.
4. We should be allowed to have more power to overcome the SKIP.

2. Selection

It was repeatedly stated that C.B. channels are overcrowded. There is too much abuse of this system. It is evident that no control over the proper utilization of these sets is in effect.

The problem is especially acute for businessmen (e.g., fishermen, lumbermen, miners, etc.) who absolutely need to use the system. In many instances, they have requested the use of a channel, but have repeatedly been denied it. An interesting suggestion was made. The suggestion recommended that at least

four channels be devoted to the exclusive use of the business sector. Although an appealing suggestion, others pointed to the fact that this may not be very successful, given that the present channel devoted exclusively for emergencies is being abused.

Many have just given up using the C.B. because of the overcrowded channels. Others (e.g., the fishermen) cannot give up, it is essential to their business. Although, everyone feels something should be done about this problem - perhaps a better policing system. Following are just a few excerpts of the more critical comments made:

1. The system is much too overcrowded.
2. We do not necessarily need more channels, but rather a few channels reserved for business.

3. Needs and Behaviors

At least 50% of the farmers have them while 100% of the fishermen have them. Its use (and misuse) covers a broad spectrum of activities. For instance they are often used for emergency services, getting fuel and getting parts. Others of course use it as a pleasure activity.

The misuse of the C.B. system is worth mentioning again, as many (and it would seem that most) users are uncooperative in their usage of this system. Even to the extent that in one instance, last year, two fishermen drowned because they could not gain access to the emergency channel, or any other channel for that matter, to give the coordinates of their sinking boat.

In summary, everyone is not satisfied with the present system. They feel that the novelty has worn off and they now seldom use it. To make it useful again, they suggest that the users must be re-educated. Following is the list of relevant comments.

1. There is no end to the types of things you can use the C.B. for.
2. The novelty has worn off.

3. The C.B. is "instant" communication.
4. People are uncooperative.
5. It's too late, it's hopeless now.

In summary, the C.B. is used for a range of activities, the most important ones being:

1. business
2. security
3. fun/hobby
4. convenience
5. for outdoor sports

On the other hand, the relevant attributes to the evaluation of C.B. systems are:

1. its range
2. its reception quality
3. its traffic on each channel
4. its initial purchase cost

Very few respondents were aware of any Telex system and no participants had actually used one. Their perception was that it could be quite useful when placing orders with their suppliers, but that the costs would be prohibitive for small operations.

X. DESIGN OF SURVEY INSTRUMENTS

The purpose of phase I of the "demand study for rural communication" is the development of a survey instrument or questionnaire. The overall objective of the project (phases I & II) is "to survey the needs of rural domestic and business subscribers for existing and proposed telecommunication services and to forecast short term and long term demand for those services". From a measurement point of view, the concepts of "need", "short term demand forecast" and "long term demand forecast" deserve careful attention. The following section will be devoted to this issue; the methodology followed to design the instruments will be presented in another section.

1. The models underlying the measurement strategy.

1.1 The concept of need

In the context of the present research, the concept of need can be approached from two perspectives:

- human needs requiring satisfaction
- characteristics of the services which are needed.

The focus groups revealed that, when investigated in terms of telecommunication services, human needs were perceived in terms of personal benefits derived from the usage of the service rather than in terms of generic needs (safety, love, esteem, self-actualisation etc.). It was therefore decided that, from a measurement point of view, the needs satisfied by telecommunication services, will have to be inferred through an unaided association of usage of service with personal benefits derived (see questions T.N. 2, TV.N. 2, R.N. 2, MR.N. 1 in appendix 3). The list of personal benefits was compiled from the focus group interviews.

When the concept of need is approached from the perspective of what is wanted in the service, three strategies are possible; in short, one can measure:

- the relative importance of the service compared to other services

- the relative importance of each characteristic or attribute or feature of given service
- the respondent's sensitivity to various levels of a given attribute of a service

The third option is, obviously, most appealing to decision makers. During the focus group interviews, its feasibility was investigated. It was discovered that respondents had great difficulty in expressing their preference for a level of an attribute "in abstracto" (that is not considering the level of other complementary attributes). However, to overcome this, one can use a decompositional approach, such as conjoint measurement, where respondent's utilities for various levels of an attribute can be inferred from a rank ordering of selected combinations of attributes (or "packages"). This approach was seriously considered and, as a matter of fact, was pretested with students. The pretest revealed that the rank ordering task for the type of services involved (T.V., radio, telephone) would take at least half an hour, if the technique were to be applied to three services. Since one purpose of the research is to survey the needs for the gamut of telecommunication services, the conjoint measurement approach was discarded because of the lengthy period of time required to complete the task.

The other approach involves measuring the relative importance of each characteristic or attribute or feature of a given service. Its relevance is based on cognitive consistency theory which states that an attitude toward a service is a composite of the perceived instrumentality of the attributes of the service as a means of attaining certain goals, weighted by the relative importance or saliency of these goals. If the goal is "satisfaction" with the attribute, the model can be expressed as follows:

$$A_s = \sum_{j=1}^{n} W_j S_j$$

where:

A_s = attitude toward service s

W_j = importance weight attached to the j^{th} attribute of service s

S = extent to which respondent is satisfied with the j^{th} attribute of service s

This model is very relevant to our concern, for an attitude is a predisposition to behave (i.e. demand for service). In other words, the model specifies a relationship between the attributes needed in a service, consumer's satisfaction and the predisposition to demand that service. The focus groups revealed that respondents were able to assess the importance of the attributes for the services involved. The approach was therefore retained (see questions T.I. 1, T.S. 1, TV.I. 2, TV.S. 1, R.I. 1, R.S. 1, MR.I. 1, MR.S. 1). The list of attributes in each question was derived from the focus group interviews. The focus groups also revealed that a recent improvement in service can affect, in the short run, the level of satisfaction expressed by people; therefore, questions to exert control on that have been included (T.E. 4, TV. E. 5, R.E. 4).

Finally, it is certainly relevant to measure the relative importance of each telecommunication service compared to other public services. The formulation of the corresponding questions (N. 1 & N. 2) draw from the phase of the focus groups devoted to quality of life (domestic) and efficiency of operations (business).

1.2 Short term demand forecasting

By demand, we mean a market demand function, or a market response function. The function can be expressed as follows:

$$S_{it} = f\left(R_{it}^{eRi} \; P_{it}^{-ePi} \; A_{it}^{eAi} \; D_{it}^{eDi}\right)$$

where:

S_{it} = Quantity (volume) of service i at time t

R_{it} = index of perceived quality of service i

eRi = quality elasticity

P_{it} = price of service i

ePi = price elasticity

A_{it} = advertising and promotion cost relative to service i

eAi = advertising/promotion elasticity

D_{it} = distribution and sales-force cost relative to service i

eDi = distribution/sales-force elasticity

Unfortunately, elasticities do not easily lend themselves to measurement; conjoint measurement could have provided an approximation of the elasticity for each attribute, but its utilisation was earlier discarded. The alternative is to employ one of the methods which are used to forecast demand directly. These methods are best classified, for the concern of this project, in terms of the type of data used in the forecasting paradigm. In short, forecasts can be derived from data on what people have done, what people do, or what people say. In the first category forecasts are based on past behaviours; the techniques used are time series analysis (e.g. extrapolation, curve fitting, moving average and exponential smoothing, time series decomposition, Box - Jenkins) and causal analysis (e.g. regression analysis, econometric models, input-output analysis). The second category refers to the application of the experimental method to forecasting. Finally, forecasts, in the last category, are based on judgments or expectations; the techniques include polling, risk analysis and survey of buyer intentions.

In the context of the present research the forecasts to be made are for improved services which are, from the point of view of the subscriber, to be considered new. The words "short term" refers to a period of time within which no changes are expected in respondent's situation (occupation, income, marital status etc...). It is generally meant to cover a period of less than 12 months.

After an analysis of the sources of secondary information (refer to the literature review) and after consultation with authorities from the Department of Communication, survey of buying intentions emerged as the only forecasting approach that could be used.

The demand model presented earlier indicates that: 1) demand is a function of the total effort devoted to market the new service (price, quality, service, promotion) 2) demand is a function of the potential adopter's predisposition. Therefore, buying intentions can only be estimated for specific given scenarios. Three scenarios will be considered:

-1- quality of service up graded to urban standards and high price

-2- quality of service up graded to urban standards and medium price

-3- quality of service up graded to urban standards and low price

The buying intentions for each scenario, presented in the order indicated above, will be obtained through a simulated choice situation approach. The objective is to make the task as realistic as possible; the approach can only be handled through personal interviews (the reader is invited to refer to questions T.F. 1, TV. F. 1, T/TV.F. 1, for an illustration of the technique). In the case of telephone, subscribers already pay a monthly charge for the level of service they get; therefore, their buying intentions will be a function of their perception of what they pay. If there is a gap between their perception and the actual price, this information must be taken into account when forecasts are made. A procedure was devised to that effect (see questions T.E. 5 & T.E. 6).

Figure 7 illustrates the type of output expected from the short term forecast measurement strategy.

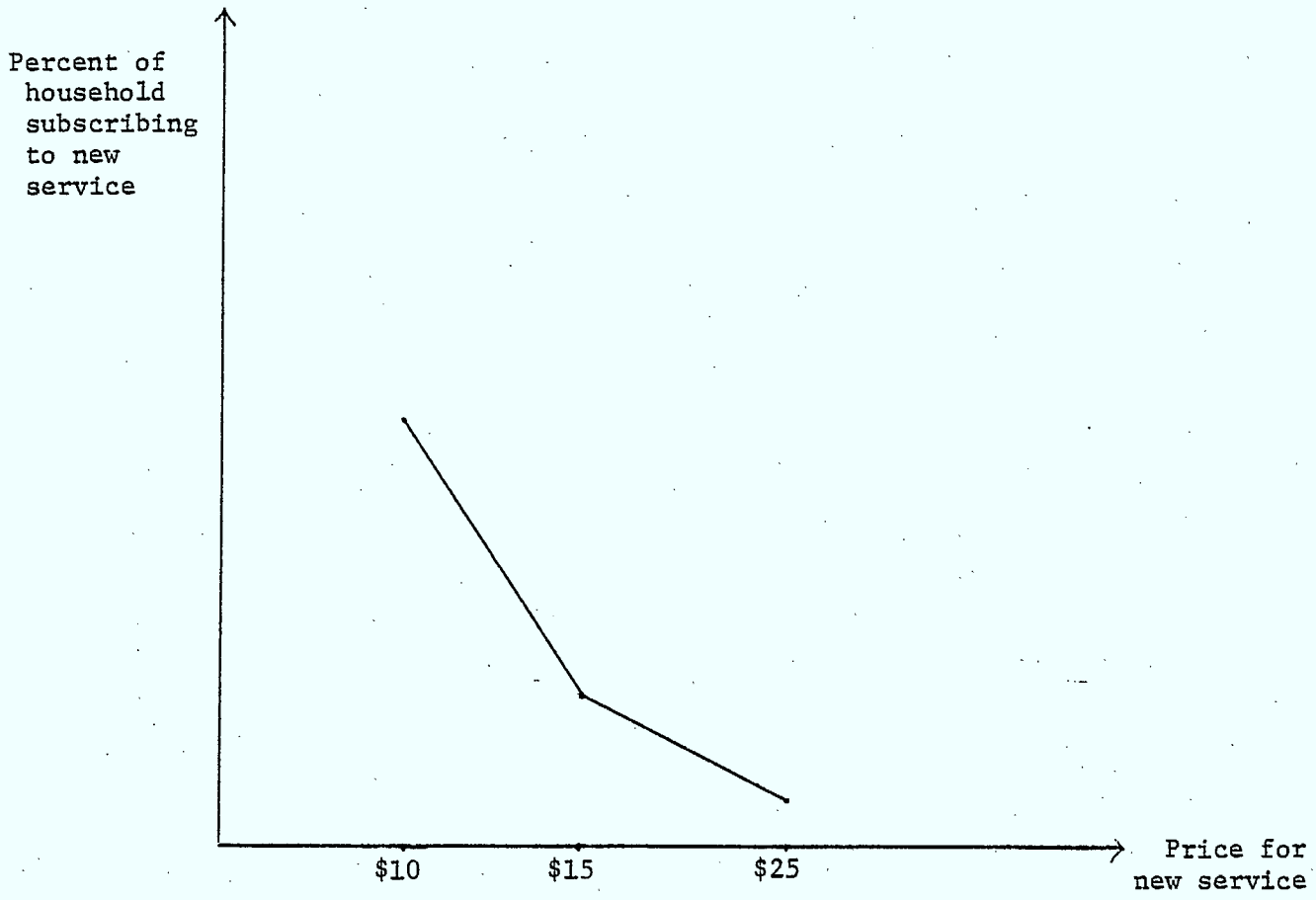


Figure 7 Example of the type of output expected from the short term demand measurement strategy.

1.3 Long term demand forecasting

i) Background

The model chosen for our long term forecast is that typically adopted when modelling the adoption and diffusion of innovations. Thus, the approach is in the tradition of diffusion research, but is an outgrowth of recent developments in a quantitative approach that has emerged in the field of marketing that, in turn, has its roots in the mathematical models of epidemiologists studying the spread of diseases and chemists investigating the nature of chemical reactions. The model is parsimonious in that it involves as few parameters as possible. This is an attractive feature for long term forecasts, although one obtained at the detriment of explanatory power.

The suggested model is useful in providing three important measures:

1) the number of adoptions in any given time period
2) the number of years required for adoption to peak
3) the number of years required for all potential adopters to adopt

This general class of models has had several applications. For instance, Lawton and Lawton (1979) have applied the model to adoptions of: 1) color television 2) cable T.V. subscribers, reel tape recorders, room air conditioners, LP record players, black and white television and freezers. The actual model does vary in functional form depending on the proponent, in fact the underlying approach would seem to be quite similar. For instance, Chaddha and Chitgopekar (1971) investigated the telephone growth in an area as a function of the "S"-shaped logistic curve. Their model incorporated a number of economic and sociological variables. The approach seems appealing, but it does rely on the future knowledge of a set of unknown variables.

A very similar model to that of Lawton and Lawton (1979) is a new product growth model for consumer durables developed by Bass (1969). This model has extensively been tested and applied to several product categories (e.g., color

T.V., clothes dryers, power lawnmowers, refrigerators, freezers, black and white T.V., water softeners, room air conditioners, electric bed coverings, automatic coffee makers and steam irons). The model chosen for our purposes will be that of Lawton and Lawton because of its parsimonious nature, although it is intended to validate the results with forecasts provided by Bass's model.

ii) Assumptions and Limitations

The diffusion model, as any other model, does have an accompanying set of assumptions. Because of the nature of the new services investigated for telephone and television, it is thought that the assumptions are quite valid. Briefly stated the assumptions are:

1. A seed or a group of carriers (e.g., advertisements, promotions) start the adoption process.
2. There are no equivalent innovations occurring at the same time.
3. Repeated adoptions are not a significant factor.
4. The new service or product is perceived by consumers to be a truly different service or product.

iii) Model

The model is entirely defined in only three parameters: 1) a measure of contagion (p) 2) the number of potential adopters (N) and 3) the number of carriers (n_o). The measure of contagion may be estimated from prior applications to similar products, from the diffusion rate in areas where the service has already been available for a period of time (e.g., Drummond, N.B.), and from inputs provided from the short term forecasts. The number of potential adopters and the number of carriers will be obtained through a combination of market research information available at Statistics Canada and the Drummond experience. Following is a brief presentation of the actual functional form of the proposed long term demand model.

Number of Carriers:

$$N_o = NS_1 e^{-p}/(N(1-e^{-p}) - S_1)$$

Number of adopters by time t:

$$S_{(t)} = ((N + N_o)/(1 + (N/n_o) e^{-pt})) - n_o$$

Rate of adoption at time t:

$$R(t) = (p(N + n_o) (N/n_o) e^{-pt})/(1 + (N/n_o) e^{-pt})^2$$

Time to reach peak sales:

$$T_m = (\ln (N) - \ln (n_o))/p$$

Number of adoptions at maturity:

$$S(m) = p(N + n_o)/4$$

n_o : number of carriers (cable T.V. firms, no. ads, etc.)

N : number of potential adopters

p : rate constant - measure of contagion or rate of adoption proportional to: probability of adopting on contact

S_1 : number of first year adoptions

S(t) : number of people adopting by time "t"

R(t) : rate of adoptions at time "t"

T_m : time required to reach maturity

S(m) : adoptions at maturity

2. Designing the instruments.

A series of meetings were held with authorities from the Department of Communication in order to clarify the research objectives and to establish priorities. The following constraints resulted:

- services to be investigated:
  - domestic: Telephone, Television, Radio, Mobile Radio
  - business: Telephone, Mobile Radio
- Types of new services involved: The overall objective of the rural program is the availability throughout rural Canada of services with a quality of performance approximating that available in urban areas. Therefore the "new services" should be understood in terms of a level of service up-graded to urban standards.
- The technological nature of the services is not the issue in the demand project. Rather, the crux is the level of service that people need and are willing to pay for.

Several autorities from the Department of Communication were invited to specify to the consultants the informations they would like to obtain from the demand project. Comprehensive written reports were received from K. Richardson, DRCP, F. Léger, DRCP, K. Watson DGSP, and a verbal report from C. Billowes, DPP. Because of a space constraint, the instruments which were to be developed, could not meet each and every specific request; nevertheless, every effort was made to provide data for all issues deemed essential.

A literature review (see report No 1) and subsequently focus group interviews (see earlier part of this report) were conducted to gain insights into the design of the research instrument.

Finally, a measurement strategy was selected for the critical concepts involved in this project, that is need, short term demand forecast, and long

term demand forecast (refer to previous section) and the research instruments were developed. The matrix in table 2 shows the relationship between the questions of the survey schedules appearing in appendices 3 & 4 and the various concepts and services involved in the research project.

Given the proposed measurement strategy, the data must be collected by personal interviews. Therefore the instruments described in appendices 3 & 4 are "interview schedules" rather than questionnaires. The person to be interviewed is the head of the household (male or female) in the domestic survey and the person who makes decisions about telephone and mobile radio equipment in the business survey.

In order to minimize the administration cost, the same format was adopted in designing the domestic and the business instruments; therefore, the same field force can administer both the domestic and the business survey schedules.

The instruments appearing in appendices 3 & 4 are not pre-coded; coding will be done when a final version for pretesting is agreed upon.

Decisions with respect to pretesting, sampling and administration procedures will be considered in Phase II of the demand project.

Table 2 Key to the questions appearing in

appendices 3 & 4 -

	General Data	Telephone	T.V.	Combined T.V. and Telephone	Radio	Mobile Radio
1. Domestic Survey						
.respondent	G.1 to 7					
.residence	G.8 to 10					
.equipment		T.E.1 to 6	TV.E.1 to 5		R.E.1 to 4	MR.E. 1 to 2
.need for service	N.1 to 2	T.N.1 to 4	TV.N.1 to 2		R.N.1 to 2	MR.N.1
.attributes needed		T.I.1	TV.I.1		R.I.1	R.I.1
.satisfaction		T.S.1	TV.S.1		R.S.1	R.S.1
.forecast		T.F.1	TV.F.1	T/TV.F.1	R.F.1	
2. Business Survey						
.type of business	G.1 to 3					
.equipment		T.E.1 to 14				MR.E.1
.need for service	N.1 to 2					MR.N.1 to 3
.attributes needed		T.I.1				T.I.1
.satisfaction		T.S.1				T.S.1
.forecast		T.F.1				

XI. CONCLUSION

The main objective of this component of the Rural Communications Program is to determine the needs and demand for telecommunication services in rural Canada. Towards this aim, three phases were established.

Phase I was intended to, at first, clarify the objectives and steps to be undertaken in this project. This initial stage was followed with a comprehensive literature review. This review led to the need for focus groups to be conducted across Canada since the literature was lacking in several dimensions relevant to the design of our survey instrument. Following the execution of the focus groups a measurement strategy was selected and a measurement instrument designed. These steps have been completed and are reported or made reference to in this report.

Phase II involves the sample design to be applied in the execution of the field work. As well, while using the survey instrument derived in phase 1, a pre-test would be carried out in order to verify, for instance, the procedure, questionnaire format and question sequence. After modification of the questionnaire following the pre-test, the last step involved in this phase would be the actual field work and gathering of the data into a machine readable format.

Phase III simply analyzes the data generated from the survey instrument designed in phase 1 and gathered in phase 2 to achieve our initial objectives. That is, the analysis will center on a need analysis for both business and domestic markets, as well as providing short and long term forecasts for certain telecommunication services.

The proposed survey instrument contained in appendices 3 and 4 were designed specifically for each service. Thus, each service has an integrated set of issues investigated in the interview schedule. Although appendices 3 and 4 also contain some commentary, it is a fairly lengthy interview schedule.

It is easy to see how such a lengthy questionnaire arises due to the data requirements on needs and behaviors, for several telecommunication services, and for both domestic and business sectors. In addition to these requirements, both short and long term demand is to be estimated for certain telecommunication services, and for domestic and business sectors, as well.

Because the survey instrument was designed around each communication service (telephone, television, radio, C.B. and Telex), each section of the questionnaire is an integrated package designed to measure those aspects described above. Thus, if the questionnaire were deemed too long due to, for instance, cost restrictions, it would be advisable to delete the enquiry towards certain services (e.g., C.B. and Telex) rather than to delete certain measurement dimensions from each service. Another possible reduction step would be to delete the business sector and include in the domestic sector some businessmen. That is, have some business owners reply to the domestic questionnaire.

The present report has presented the essential and necessary ingredients required for the following phases of the Rural Communications Program. It is hoped that the findings uncovered in the focus groups have served to provide the proper inputs to the design of the proposed interview schedule. We also believe that the suggested interview schedule will enable us to obtain answers to the questions arising out of our objectives, i.e.:

- what are the needs for telecommunication services?
- what is the demand for telecommunication services?

BIBLIOGRAPHY

Bass, F.M., "A New Product Growth for Model Consumer Durables", Management Sciences, Vol. 15, No. 5 (January, 1969), pp. 215-227.

Chaddha, R.L. and S.S. Chitgopekar, "A "generalization" of the logistic curves and long-range forecasts (1966-1991) of residence telephones", The Bell Journal of Economics and Management Science, Fall 1971, pp. 542-560.

de Camprieu, R. and J.C. Bourgeois, "Demand for Rural Communication Services in Canada: A Literature Review", Ottawa: Department of Communication (January, 1979).

Dunn, D.M., W.H. Williams and W.A. Spivey, "Analysis and Prediction of Telephone Demand in Local Geographical Areas", The Bell Journal of Economics and Management Science (Autumn, 1971), pp. 561-576.

Green, P.E. and V. Srinivasan, "Conjoint Analysis in Consumer Research: Issues and Outlook", Journal of Consumer Research, Vol. 5, No. 2 (September, 1978), pp. 103-123.

Lawton, S.B. and W.H. Lawton, "An Autocatalytic Model for the Diffusion of Educational Innovations", Educational Administration Quarterly, Vol. 15, No. 1 (Winter, 1979), pp. 19-46.

Tull, D.S. and G.S. Albaum, Survey Research: A Decisional Approach, New York: Intext Educational Publishers, 1973.

Wilkie, W.L. and E.A. Pessemier, "Issues in Marketing's Use of Multi-Attribute Attitude Models", Journal of Marketing Research, Vol. 10, No. 4 (November, 1973), pp. 428-441.

APPENDIX 1

FOCUS GROUP SCHEDULE

RURAL COMMUNICATION SERVICES

1. What are the "differences" between living in the country and living in the city?

2. What are some other "disadvantages" to living in the country, besides those just enumerated?

3. What do you think about your "communications" systems, here in the country?

4. What do you think about your:

   radio service?
   T.V. service?
   telephone service?
   C.B. service?

5. Are you satisfied with your present:

   radio service?
   T.V. service?
   telephone service?
   C.B. service?

6. How could your present services be improved for:

   radio?
   T.V.?
   telephone?
   C.B.?

7. Suppose that a "greatly improved" (i.e., service equivalent to that of the city) service for T.V./telephone was now available -

   Would you consider buying it?

   What factors would you consider in your purchase?

   Why would you not purchase it?

   When would you purchase it?

   How much would you pay?

APPENDIX 2

FOCUS GROUPS -
SUMMARY COMMENTS FROM:

SANDY COVE	-	Nova Scotia
DRUMMOND	-	New Brunswick
LAVERLOCHERE	-	Quebec
SYDENHAM	-	Ontario
WOLSELEY	-	Saskatchewan
THREE HILLS	-	Alberta
ELKO	-	British Columbia

SANDY COVE, Nova Scotia

- I wouldn't live in the city
- it's "hurry" all the time, you don't have time to enjoy it
- don't have the conveniences (entertainment, stores) but we make our own entertainment
- you know everyone in the country, not in the city
- hard for the kids to get involved in sports (hockey, basketball), it somewhat deprives the kids
- peace and quiet here
- outside 15 miles of Digby you can't get it or any other local station
- not enough "local" news
- telephone is very good service
- was supposed to be on E.A. with Digby but still not on Digby exchange
- good reception on phone
- would like to see a few C.B. channels for fishermen and some for the homemakers
- we use our C.B.s to sell our fish
- can communicate 30-40 miles with C.B. over water
- ask a couple of ladies to get off, I needed it to call home for business and they wouldn't get off
- two persons drowned; they heard one once but he couldn't get on, it was too crowded
- receive 3 T.V. channels but 2 are pretty much the same all the time
- receive good French radio AM and FM stations
- we get New Brunswick news and weather and at that only twice a day
- would like to get marine weather which Yarmouth and Digby get every $\frac{1}{2}$ hour
- we have lost a lot of time (money) because we don't have it (marine weather watch)
- most have all channel aerial and rotor although some did not have rotor
- but they don't get any more channels. It's just for the choice of getting it at all
- no booster - very few people have one
- radio use for weather, news, entertainment, to help work in house
- T.V.:
  - . for sports, watch a lot of T.V.
  - . they don't get any more hockey on Wednesday night
  - . put a channel that's only sports on Sunday because Saturday and all other weekdays we work
- we fish all year round, therefore we need the C.B. all year round
- we always get our information second hand, especially the local news we get after Halifax news

- get some news from C.B.
- use phone: . to sell fish
  . getting parts for boat
- no one has telex, even fish plants
- don't know how the people understand on C.B., they're so crowded
- bad year for skip (past 2 the same and one to go)
- should be a few channels (say 3) for business
- VHF radio is expensive and doesn't carry very far
- we can't affort a VHF radio, but those who have one went to it because the C.B. was useless
- can get weather as well on VHF
- not satisfied with T.V.: . reception
  . power is fluctuating which does not help reception
  . programming
  . selection - want more channels, more to choose from, if you don't want your children to watch something, you don't have much alternative but to turn it off
- radio: . could have more selection (there's no country and western)
  . more FM, we only have 1
  . should be getting Digby
  . it's not logical - you can get all sorts of stations: Boston, N.Y., even Montreal, but you can't even get Digby
  . can't get Digby even with a high quality set
- C.B.: . very unanimous that they're not satisfied with C.B.
  . "it's useless"
  . skip causes problems
- C.B. improvements: . designated (3) channels for fishermen
  . higher power to overcome skip - but not unanimous on this. Actually if it wasn't for skip we would have enough power. Actually if skip disappeared they agreed that they needed no more power.
- phone: . is fine
  . most have private line (except for 1 who is with his father)
  . prices are around $7.95
  . 4 party service
  . can make LD's anywhere fast and without problems
- T.V.: . more channels
  . more local news/information
  . should get cable: more variety, good reception, price willing to pay: - no more than in city; $5. to $10./m. the "most" I would pay; $10 to $15 NO WAY; depends on how much you watch
  . probably would buy it right away
  . if it was all U.S. channels, I wouldn't care for it
- priorities: 1. C.B.
  2. radio - weather reports
  3. telephone
  4. T.V.

DRUMMOND, New Brunswick

- city life too fast
- friendship, know everyone
- more freedom
- inconveniences:
  . no rink, we have to travel a lot to permit our kids to go to after school activities
  . no cable T.V.
  . 7-8 on phone line
  . $12. semi-private
  . can't get private line - we enquired
  . if you're lucky in '81 you'll get private
  . intrusion on privacy - they know our price for carload before it's loaded
  . we were lucky we got a private line
- if you're a business you can get a private line but not if you're a farmer. I know of some who asked and didn't get it but a neighbour "business" got it. Why aren't farmers considered business so they could get a private line?
- pay $17. for private
- on party lines, I know of people who asked for the line and couldn't get it
- air is pure, water is pure
- more space, although life's pace is accelerating here
- closer to nature
- eventually time (i.e., as time goes on and progress takes place) structures your activities and breaks up the family, the core of our society
- even a small city (Grand Falls) is faster than Drummond
- more freedom to do what you want at home, you don't need to know someone on council (his brother was mayor) to do something on your house, we're still not run by the nose
- English-French sectors are not here but they are at Grand Falls
- easier to raise a family
- we lived in the city - a nice enough house in Toronto, we gave it a good try. But after 1 year we couldn't stand the rat race
- we know everyone here
- education is better here, the teachers know the family backgrounds and therefore can be treated better
- no phase problem in village - you can easily get a private line, but in the concessions it's not good
- in village we now have cable - before that it was pitiful
- without cable:
  . U.S. stations
  . Quebec
  . St. John

- radio: . French station in Edmunston
  . sub-station in Grand Falls - no news from Grand Falls but money for commercials - might stop us from getting our own French station
- T.V. - programming not well done
- phone - OK - semi-private line
- T.V.: likes Fifth Estate, Newsmagazine - would like programs like that in French
- with cable 7-9 channels but some are the same
- Sunday T.V. awful without cable
- people do not move around anymore - use phone
- will not get cable until T.V. has quality programming
- reason for watching T.V.: . cultural reasons
  . kill time (too tired to do anything else)
- too many commercials - commercials not well done
- do not let children watch certain programs
- difficult to determine what program to watch
- one prefers to let them watch bad programs than to let them run around
- reason for watching T.V.: if you don't go out (kill time)
- family participation instead of watching T.V. - children follow
- T.V. always open, it's a habit
- T.V. or radio open to feel another presence
- C.B.s: . novelty, everyone had one but misused
  . at first good - communication
  . but then even emergency station used for fun
  . it's a toy
- telex: . at work for purchase of machinery
  . faster than phone - very efficient
  . cheaper than phone
  . good but expensive to have one
- beepers: some give message but you can't talk
- railroad: . inefficient at moment
  . want to close station
  . nobody there on weekends now
  . cheap
- bus: never anybody there, can't get information in advance
- airport: . $3.5 million for airport
  . useful but won't make money because not enough people will use it
  . not everybody wants to use airplane
  . small community more afraid
- improvements: T.V. French stations (a few miles from the village you can't get a French station)

- phone: winter: 13/line; summer (with cottages): 25/line
- business can get private phone
- wanted to pay $750. but then phone company said no. Made a price then said no.
- near village you can direct dial but outside you have to go through operator
- with direct dial they cut staff and the others have to wait
- some people answer telephones of others - bad for long distance
- high installation cost and higher monthly rates
- you have to buy a line
- need telephone - one neighbour had trouble getting phone
- new equipment (T.V.):
  . portable
  . colour
  . cable vs antenna, rotor
- cable $9./month - antenna, rotor pays cable for 2-3 years and you have to start again
- winter: rotor freezes
- radio:
  . should be able to make comments on radio
  . should be able to announce activities
- no paper in Drummond
- priorities:
  1. radio, T.V. telephone, C.B.
  2. T.V. (quality French and English channels), radio (cultural musical French station), transport (no big trucks on our road)
  3. radio, T.V. (better programming for children), telephone, C.B. (never had and does not want it)
  4. telephone only (guy with 13 on line)
  5. telephone (need it for sickness, fire - can't do without phone - should be able to get private line if you want it), T.V. (children's programs during the day)
  6. telephone, transportation, T.V. (good educational programs in Canadian context, i.e., 60 Minutes, get French station)
  7. telephone, radio (for local news), T.V. (programming for children)
  8. radio (FM; local bilingual station), T.V. (programming for children before 8 PM), telephone, transport - railroad, C.B. - should have a course to show people how to use it
- cable: since cable those who don't have it don't have as good a reception
- heard about cable: 1 year; 1½ years; 7-8 years; 8 years; 10-12 years; when in city
- innovation:
  1. do not want pay T.V.
     satellite: $50-$100 year more than cable - worth the cost of phone
  2. will wait - $20./month
     1-2 year wait (at least) - things are replaced too fast
  3. if radio:
     . OK
     . would wait
     . $20./month

4. $15-20/month
   3-4 year wait
5. depends on financial situation
6. would not spend more at present moment

- North East N.B.: much worse than North West (Drummond)
- English population better served than French
- had to fight for years to get French
- newspapers: . a pity
  . everything owned by Irving

LAVERLOCHERE, Quebec

RESIDENTIAL

- fresh air
- space
- freedom
- know everybody
- faster contact with the people
- in city, not interested in knowing neighbour
- children: . space to play
  . know where they are - safety
- more selection in the city (stores)
- communications: . more interested in communicating
  . organizations - interest
- freedom - more space
  - quieter
- people in the city don't talk to each other
- move more in country
- no gardens in city
- miss out on specials
- no public transportation system: . senior citizens
  . children
- information is late, difficult to obtain, sometimes have to go get it yourself
- children far from working centre - have to leave to go to CEGEP, to work
- can't keep medical help - when they're good they leave
- isolation - children
- have to cut on sports for children because of transportation time imposed on parents
- can't afford to get sick - no equipment in hospital - reason for high turnover of doctors
- telephone: . use it for everything
  . just got 7 digit phone number
  . maximum 4 parties/line outside village
  . private line in village
  . outside village: can't get private line (too expensive)
  . about $400/year depending on distance
- communications: need more groups, more participation in government activities
- telephone: . 3 weeks without telephone, still have to pay full price
  . $4 something/month
  . errors in billing - subtract it and it's OK
  . should be able to get private line at same price as city
  . no reason to pay more

. only village not long distance
. lots of long distance calls
. calling area too small
. direct dialing with operator asking for number
. neighbour is long distance
. not more than city for private line ($6.00)
. Telebec has same charge for everybody
. improvement - private line
. would be important to have: free communication throughout Timiskaming
. direct communication with closest city no charge
. some things can't be done on phone but others can very easily

- same transportation cost for milk no matter how far - should be same for phone

- T.V.: . reception bad
. only one French station
. would like at least 2 (indispensable)
. one good station - English
. could be fixed - just one complaint
- guy could lose license
. equipment: antenna - tower, rotor
. would like: another French station
better reception
. no competition - stations don't try
. cable - not solution
. male: news/information
. female: entertainment
. children: educational - English stations: kids learn
. innovation: cable: $6-8 - too much

- radio: . not satisfied with information
. useful for hunting
. reception good
. listen mostly in morning
. children listen to it a lot
. FM - none
- Western (almost all)
- not many - one in Ottawa, Kingston, St. Catherines
. one French station
. more English stations
. station in Ville Marie is a sub-station - news from Hull
. no antenna for radio
. listen most in car
. morning news
. better reception in car - one does not agree

- C.B.: . none there have one
. don't need it on farm - would be good but expensive
. other - telecommunications: . 55 miles
. better reception
. more expensive ($2,500.)
. for business only
. fun
. help other people
. saves a lot of steps

- new T.V. equipment:
  - get information around
  - where easier to get repaired
  - somewhere where the person repairs the T.V. himself
  - one has best equipment and still not good reception:
    $800. T.V.
    $400. equipment
- if innovation with everything (cable, phone, etc.), if it breaks, you lose everything
- priority: phone (1, 2, 3, 4, 5)
  T.V. (1, 2)
- innovation:
  . wait
  . if had money would probably be first to try
  . if free - would be first
  . prefer buying to renting if service with renting - OK - but often they take long time to fix it
- electricity: some people (cottages) can't get it - have to pay for everything (posts, cable, etc.)
- telephone:
  . willing to pay $10./m. if extended area
  . long distance - weekends - with lower rates - hard to get lines

BUSINESS

- less competition
- everybody has its own area
- less stress - traffic
  - don't have to lock your car
- better way of life - no pollution
- near everything for sports
- freedom - go where you want, when you want without being pushed
- quality of life
- everybody knows each other - friendship
  - relatives
  - more receptions and everybody is invited
- people help you in business because you're you (they prefer going to somebody they know)
- you know your clientele
- distance - delay for transport - time
  - long distance - cost
- recreational - no concerts, plays
  - if you go in city, get home too late
- medical services poor
- employees are from here so they're used to this
- no specialized labour - would be hard to get

- if you want to get ahead you have to go closer to a city - bigger
- merchandise: e.g., clothing - slower to get new things
- no specialized work - if students take specialized courses
  - have to work in city
- for studying - have to pay room and board at CEGEP level vs city people at University level
- even in high school some specialized courses are not offered
- forget part-time courses - have to go to Rouyn - even just night you have to live there
- it's a business handicap not to be able to take courses
- courses by T.V.:
  . has to be at night
  . only temporary solution
  . can't ask questions on T.V.
  . don't know if you understand well
- much distance to cover
- population not numerous - not enough business to hire another person, but too much business for just family, therefore long hours
- telephone:
  . business starts with it
  . would like telephone with truck
- C.B. in trucks:
  . not sure when you want to use, others are using it
  . a lot of skip
  . if you can get it, it can save a lot of mileage
  . one Ontario station seems to cut in on French conversations
- police type bands:
  . would be possible
  . R.O.I. would be negative or very low
- 2 way radio equipment cost:
  . $300-350 for 1 truck
  . tower at home more expensive
- C.B. usage:
  . warn - security
  . save time
- C.B. better control of usage would be good
- telephone:
  . only 4 numbers before, now 7 digit phone number
  . better than it was
  . still need improvements
  . phone used more with direct dialing
  . very recent improvements on phone
  . some errors on billing: watch only large amounts
  . saves time (DDD)
  . before people did not return calls (could not direct dial either)
  . problems with toll free numbers (1-800)
  . some don't have any problems with it (1-800)
  . if you go through operator - reverse the charges but takes more time than toll free numbers (1-800)
  . use long distance a lot because only call village, then it's long distance
  . if extended area - save money

. willing to pay double the price for extended area - whole region
. 90-95% of customers outside call-free area
. lose some customers because of it
. outside village limits people must pay to get them
. repairs are slow

- telex: . nobody uses
. no business has it

- T.V.: . was better, can be better - programming
. 1 French station, 2 English stations
. might get another French station
. would like at least 2 French stations
. reception not too good - need: tower, antenna, base, booster } $800.00 2 years ago
. electric cable interferes with reception (one side of street is good, the other is bad)

- cable: . one does not seem to know what it is
. 5 or 6 channels more: $20./m. ($240./year) - with FM - worth it

- usage: . distraction - no theatre
. more needed than in city
. information need - radio: news from Hull
. good for children: educational
necessary

- radio: . very limited: Radio Canada
. need good music
. car - places where you don't get radio
- more cassettes sold for cars
. English stations stronger than French (radio and T.V.)

- innovation: Priority: 1st T.V. (unanimous)
Cost: . worth more than willing to pay
. rent or buy?: rent - probably better
buy - probably as expensive as the T.V.
. equipment does not break
Time: . wait and see if it works
. depends if community or individual
. just takes one and then everybody buys one

- used to paying more for services than city - because of distance (if service equal to the one in the city)

- accept paying more because of the environment and it's worth it

- information: . never heard of telecommunication services of Ville Marie
. heard of private station: good reception (perfect) but very expensive to buy ($10,000)
. $2,000 would be reasonable over the years
. not enough information on this subject
. word-of-mouth only

- T.V. on demand: . never heard of it for public (one)
. men have heard of it
. would be interesting depending on cost

- tourism: . better service would not help - come here for nature
  . the others have to come anyway
- computers for business: people don't want them, they want to see people do the bill

SYDENHAM, Ontario

RESIDENTIAL

- wish we were further away from city for community activities
- close to nature
- terrific to be able to produce your own food
- can't phone downtown for pizza
- prices higher sometimes
- recreational facilities for kids not so good
- local housing for senior citizens (none)
- kids gain confidence at being themselves
- taking part-time course, a disadvantage
- water a problem
- education a disadvantage
- telephone:
  - . LD everywhere (community phone)
  - . problems with billing
  - . bills up to $100
  - . minor - something you can fight
- mail service good - deal with person
- radio
  - . OK - FM
  - . disadvantage: focus is on the city
  - . should make effort to get own radio
- use phone quite a bit
- phone out for 5 days - really at a loss
- use of radio:
  - . news
  - . music
  - . FM a lot
  - . if we didn't have radio life would be nicer - too much noise
- T.V. commercials awful: no manners, awful for children
- some families decided not to have T.V.
- no T.V. after dinner
- retired person: watches a lot of T.V.
- phone:
  - . call out-of-town sons at least once a week
  - . group of neighbours
- marks all phone calls down and checks bills
- 4 party line maximum - phone rings at 2 places
- special rate if lots of long distance
- can't phone town office without long distance
- learn to accept party lines in country (that's the way it is)
- repair service a bit slow

- installation - once a week
- no cottage rates anymore
- can't get phone disconnected and reconnected, you have to get it taken out and put back in
- cottages pay during the winter too
- T.V.: . UHF with something on aerial
  . Kingston CBC affiliate - would prefer CBC station
  . ratings are the big thing
  . kids shows at late time
  . rural: urban life presented on T.V. must not be presented as the city life to the kids
  . decide on Sunday what they're going to watch all week
- improvements: . real people for programming
  . panel of "real" people to analyse programming
- terrible programming
- face to face communication more important than telecommunications
- church groups gone - % of people lower
- many groups for children - no child is deprived
- phone service improvement: repairmen don't know as much (community telephone)
- buying new T.V.: . consumers' buying guide
  . will not replace T.V. when it goes
  . colour
  . portable
- radio: . portable
  . AM/FM
- innovation: . probably no
  . wouldn't pay any more
- want the kids out of the house - not watching T.V.
- prefer live events
- got 1st colour T.V.: 2 years; heard about them: 12 years ago; still have B. and W. but parents have had one for 12 years; got 1st colour T.V. 2, 3, 4, 8, 14, 15 years ago
- microwave - 6 months - heard about it quite a while ago
- dishwashers: . 3 years
  . 3-4 years
  . 11 years
  . 3 years

  heard about them: when I was a kid
- people get things because they're useful, not because of neighbour's pressure
- if want to improve telecommunications - working at it from the wrong end, increase quality, not exposure

BUSINESS

- city people don't know their neighbours

- radio: . lousy in this area
  . managed to take the junk off the FM
- T.V.: . commercials are louder - have to turn it down
  . not on PBS
  . 1 UHF station
  . happy to send money to states and it's almost jumped by a French station
  . Sydenham - 4 stations
- before CKOC radio station: . boosters - to improve reception
  . now: limited use of the boosters because of the great power of the radio station
- transmitter of 50,000 to 100,000 watts - shouldn't have been allowed
- problems: . radio: can get CKOC anywhere on the dial before pretty good choice
  . T.V.: herringbone type of interference and you can even hear the music
- before: could get anything practically
- now: channels 4 and 2 are fuzzy
- PBS French station: should have English subtitles
- only one Canadian station on PBS and it's French
- better movies, not edited, no commercials
- to get more than 4 channels you need a booster
- used to get trucks radio on your T.V.
- C.B.: . used it a lot but too many now, too much skip
  . would use it a lot if could get range
  . more power wouldn't help
  . 10 times as many illegal sets in the country as legal ones - don't use the regular 40 channel - found ways to get more
  . bothers people who want regular business bands - expensive - nobody wants to go through that if they're interrupted by someone who got it for nothing
- rent teller for 2 way radio - good - got 6 or 7 years ago - could be better if tower in this area
- telephone: when there was an operator fire department had no problems, now with answering service, not so good
- telex: nobody uses it
- Bell telephone operator - impossible to get on Saturday night - trying to get along on a too small crew
- radio: not satisfied
- T.V.: volume on ads too high
- no more sports on radio - Canadian content
- Global and CTV much better than CBC
- CBC news not very good
- telephone: . more operators needed
  . party lines OK
  . servicing OK

- direct dialing: still have to give your number - takes a long time
- local area not big enough - long distance charges for 5 or 6 miles
- station on Perth road - 25 employees - long distance
- next door neighbours sometimes are long distance
- phone book should not be separate from Bell
- limited calls - 85 calls - .05/call over
- residential people should be paying more than commercial - businesses use it for short calls
- innovation:
  - . depends on cost
  - . $5./month - OK - but Bell would take over, then price increase
  - . master community operated antenna would be good - $6-$7/month
- post office:
  - . slow
  - . courier would be better
- other problems:
  - . water and sewage - lottery should take care of this
  - . some things are more expensive but then taxes are lower
  - . you know everybody (advantage)
  - . far from hospitals
  - . communications: people don't know how to communicate
  - . need a medical clinic - community of 6,000
- housing: development of 30 houses - people expect a paved road - want a piece of the wilderness but want all the services
- pay taxes and pay for garbage pick-up

WOLSELEY, Saskatchewan

- speed of life
- transport lines all around
- friendliness
- pay more for food - bread and meat
- transportation cost raise the price of many commodities - preferential rates needed
- live here by choice
- better place to raise a family
- don't care for crowds
- only 60 miles to Regina - Center of the Arts
- taxes more favorable
- own their own houses/car - bought and paid for, compared to some old age pensioners in city who can't get along on their old age supplement - old people live better in small towns
- build a home cheaper due to lot prices and people not willing to pay as much
- don't know your next door neighbour in city - no friendliness
- word gets around fast in a small town
- kids stay away from some of the social problems associated with city life
- a lot of peer pressure on kids in city
- not really sure
- special training facilities not available
- restricted number of people you can call without having to use long distance: don't understand charging system, something that has been bothering him for a few years (learned to live with it)
- T.V. reception terrible:
  . put rotor on and 50 ft. antenna, base itself was $100.
  . must have an antenna
  . good reception (channel, day, topography)
- have a booster:
  . don't see any hope in getting cable
- cable: more channels, U.S. shows, better reception
- reception: 2-4 channels fairly well
- priority of T.V.:
  . business woman: very low
  . employee at old age home: very low - never, but for the residents of home: very high, nothing else to do
  . young man: "kids watch all day"
- generally not as good reception, not as good selection
- Chamber of Commerce looked into putting in a booster station - was too expensive
- older people watch it all the time/much more than average
- promised underground lines (max 2 on line) for telephone when all the small companies were amalgamated

- when not underground (max 10 on line)
- for emergency (fire, ambulance) line load "could" be a problem
- more than 50% of farmers have C.B. - emergency (repairs, breakdown)
- busy lines can't receive incoming calls
- why C.B.: Convenience
- radio: . fine reception, selection, AM and FM, FM listen at night going to bed
  . was completely turned off of radio until "clock radio" came - just great to wake up
- T.V.: . aggravation due to bad reception
- transportation: . upset at railway station being destroyed
  . new on-line computer system for banking: don't understand it
  . computer for income tax (COMPUTAX)
- send income tax material by courier
- no real problem with communications with respect to business
- telex: good for parts
- post office should have taken over telecommunications in business of communications - message could be sent anywhere across Canada because they have the distribution network - "the post office must have been sleeping when all these things were happening". "They have let the business go."
- problem with post office: speed
- "cheaper to phone it (information) in than mailing it in"
- all business done on phone (female businesswoman on party line)
- generally satisfied: . no
  . transportation more than before
  . T.V. terrible reception
  . Telex OK
  . T.V. bad, good
  . phone bad
- promise was made of a booster to improve T.V. reception, but not yet there
- underground lines
- wider calling area
- reasonably priced
- can't even call school district
- prices could be cut if they didn't advertise
- it is nice of them to credit us for our dialing mistakes
- options: . remote control
  . color T.V.
  . portable: bring it to cottage and move it from room to room
  . FM and cassette radio
  . record facilities on radio
- innovation: . phone innovation would not really do anything "unless it was cheaper"

. wait to see what the others do
. "what's the price?"
. "wait to see how it works"
. "take quite a while"/"wouldn't take that long"

- adoption time:
  . what is it replacing?
  . are you in the market for it?
  . depend on how much you use it
  . what's on the new channels? - programming
  . consider adopting if wider selection and quality of what's on the channel
- $10-$20 more of them around $10 for T.V.
- phone service in town is single party
- improved phone in town: not willing to pay
- have to wait for operator for long distance calls
- at times some people send your number for long distance calls
- T.V. set last 7-10 years
- part of a community - you're always taking part in something or asked to take part, it's hard to say no
- C.B.'ers:
  . serious interference with T.V. and radio reception
  . has caused some people to move
  . ref. to those living in area with a radio home base, not only those just passing by
- not aware of charging system for phone
- frustrated at paying more monthly rate for phone compared to city people

THREE HILLS, Alberta

- neighbours are far away
- more isolated
- more private
- removed from hospital
- do as you please
- education: not as accessible
- learn to be more responsible: having to do chores (children)
- less individual instruction
- less specialized instruction
- very expensive to live on farm:
  - . extra transportation (gas, insurance)
  - . bring kids to various activities
  - . putting in power
  - . putting in natural gas
  - . water and sewage
- better to raise children:
  - . safer
  - . more control - where they are, what they're doing
- more expensive on the whole:
  - . light
  - . heat
  - . water
  - . clothing
  - . food
- it's a privilege to live out here
- cost a little bit more
- nobody bothering you
- raise a family is terrible in city
- turn your kids loose out here
- communications:
  - . do not feel disadvantaged with phone
  - . no problem at all
  - . everyone has a phone
  - . black top to wherever you want to go
  - . takes a while to get phone in
- a lot easier to raise kids on farm - more things for him to do: chores
- I would never want to raise a kid in an apartment
- control in a small town:
  - . you know where your kids are
  - . you know who their friends are
- very content with phone
- cable in city providing a few more channels (not important to them)
- good reception
- TWX in hospital tying in with labs
- we (the city) have our own radio system joining: counsellors, fire dept., ambulance, hospital

- C.B. between pleasure-farm-home
- 2,000 sold last year
- "skip" causing really bad reception
- C.B. good:
  - . "instant" communication (generally)
  - . getting fuel
  - . parts
  - . "lining up a date"
  - . no end to it
- monitor machinery: something goes wrong, you are immediately informed
- never go in field/hunting/fishing without our C.B.
- allows him to have his 12 year old son in field alone - would never let him without a C.B.: instant contact: . with home
  . with other mobile
  "It's almost like being there watching him."
- "verbal" communication most important kind, now, of communication - "that piece of black stuff (the phone) is pretty impersonal you know"
- municipal office has a computer system
- telex is used by a piggery to hook up to a computer
- max. 4 on line
- cost is prohibitive private line: $1600. installation and $47./m. - tried to be considered as 4 farmers for a total of $28./m. - 4 lines, but they wouldn't go for it
- "utilities in all respect are out of this world"
- no privacy at all - can't do business at all over phone, we go to town
- calling area is restrictive
- if you're paying for extended service you'll use it more
- like to have private line before cable T.V. but both could be provided together
- lack of private lines when system was put in quite recently
- pay for whole installation but then also raise monthly rate to higher than city dwellers - something for power
- should have put proper installation to allow for single party, cost would not have been any different except for very small additional cost for wire which is negligible compared to labour, machinery and other costs. Should have put enough service for single party even if facilities at switching center could not at this time handle it. These could be designed in future to handle it and therefore costs would only involve that difference and not the additional charge to dig up the existing wires to add to them
- don't watch much T.V. but children do
- T.V. programs seem all the same
- wife uses the phone more
- wife and husband use the phone more
- watch general interest programs (special sports events, Market Place, W5, Ombudsman)

- use T.V. as a communication box rather than an entertainment box
- too many commercials but I guess they pay the bill
- generally satisfied with all services
- program selection reflects consumer demand - we are responsible for what is shown
- reception is good: . T.V.
  . phone
- repairs on phone OK
- decisions are being made by men who couldn't care less - they've had a private line all their life and farmers are such a small percentage of the voters anyway
- "They don't need a private phone, they're just farmers."
- I often ask myself, would I want to lose my gas, power, phone? No, I'd want to keep them (gas, power, phone) at any cost!
- when you go to jail, you've paid the penalty, so why do you have to pay again?
- is installation (phone) subsidized?
- someone (or more than one) decided that: (1) farmer doesn't need a private phone, (2) doesn't deserve one, (3) he can wait for it, (4) if he wants it, he can pay the luxury of getting it, but it isn't a luxury, the East thinks it's a luxury for us, but it's just as important to us as it is to a city person
- farming business is big and getting bigger all the time - you don't want to talk business and have all your neighbours hear about it (general communication gap - don't know our needs)
- some people think country people are third class people
- C.B.: . open up better (or more power) open season frequencies that may not reach as far but get rid of the "skip"
  . we like those frequencies that we have now, because when they are working (i.e., no skip) they're long distance and good
  . 5:30 a.m. to 9:00 p.m. can't use C.B. radio (skip overpowers it) outside 3 miles from home base
- reception is very good - it's content that needs to be changed (radio)
- not aware that FM existed
- wouldn't have a clue as to what to look for in a new T.V. or radio
- I'd rely on the salesman - very important in a small town, he can't afford not to have you come back
- look for: . American made
  . easily repaired (no printed circuits)
  . remote control
  . antennas, rotors we install ourselves
- no booster needed in this area
- adoption: f (price, what does it replace, where does it belong on the priority list, date of last purchase)
- don't like monthly charges

- I like to wait and see how much good it would do me
- want to know if it is government run or private run, don't trust government - want a 5 year contract because for sure as soon as they have it (the new system) in, the rates will triple
- priority list:
  . new house
  . insulation
  . priorities change from day to day
  . buying land for son (which you don't need to do if you have no "son")
  . sending kid to college
- two people don't have the same priorities
- farmers are becoming an older generation
- we don't buy anything when things first come out
- farmers are part of a community where the community has all private lines and it's an expensive option to the farmers. So how many are actually asking for private lines - very few.
- I'm certainly not the first one to go out to buy new things
- no communication system exists with school buses in case of breakdown - this is terrible
- post office problem:
  . high rent in P.O. box
  . inappropriate rates for box vs. home delivery

ELKO, British Columbia

RESIDENTIAL

- animals, freedom, room to roam - living in country
- life is slower, get to know people better
- quiet, peaceful, friendly people, live longer
- city is scarey (guy had never been in city)
- easier to make a decision in country, selection of products is narrower
- never been used to it: . so I don't really miss it
  . but something I enjoy
- family missed being in sports, but it's expensive (transportation)
- don't really miss city conveniences
- "I think we're lucky"
- communication (verbal) is easier in the country, people are less suspicious, more outgoing, everyone is at the same level, everyone depends on each other, as you expand you depend more on yourself, you become more individualistic
- nothing wrong with service in these (country) areas
- widespread in fees paid - $6.50-$39.00: . don't understand why (telephone)
  . weren't told why
- facilities are there (no capital needed for outlay) so why do I have to pay more?
- all on four party lines
- before change I didn't want a phone because it rang too much on everyone's phone for every call
- perfect reception on 1 station, don't need any more (T.V.)
- within 5 miles another household has 5 stations
- too much advertising
- receive 3 stations (actually $2\frac{1}{2}$)
- CTV when it came in was supposed to be as good as CBC - this was negotiated in the contract (since they were bidding against BCTV) but its picture is very poor/terrible
- time zone creates problems, consumer shows and news come on too late
- do their own installation: . booster and antenna $140.
  . all purpose antenna, booster and rotor $300.
- getting more stations (4) than I thought I would be getting when I moved here
- why: . entertainment
  . fill in time
  . information
- enough sounds around that if I don't like it, I turn the radio off
- telephone keeps improving since we've been here

- T.V. reception could be improved
- BCTV has expanded and keeps improving their service
- T.V. is good but we had to pay for it (equipment) - city doesn't have to
- complaint about radio content
- good reliability
- problem:
  - . BC Hydro power is erratic - power is important - drives heat and many other accessories
  - . post office - long deliveries
  - . no quarrel with phone - cost a lot of money for new installation
  - . radio and T.V. could be improved with repeater stations
  - . CRTC requirements are ridiculous for bringing in satellites for T.V., need $\frac{1}{2}$M - $1 M.
- I was involved with Glaydia in the U.S. in something similar (bringing in a repeater) for $26,000. total or $25. each
- radio improved:
  - . repeaters
  - . FM
- overcharge on phone: "I've paid my phone a few times."
- could beam the whole valley for $8,000.
- some outlaw stations are doing this now in some areas
- past-time: work (but in an enjoyable way)
- look for color in a new T.V.
- cable for a small community was introduced about 8 years ago - it uses a big booster:
  - . initial cost $40.
  - . no cost now to operate
  - . one resident supplying power is getting a credit of $5. on his rent
- watch more T.V. in winter (alternatives are not as extensive, e.g., can't work in garden)
- as soon as weather starts turning nice, we're always outside doing something
- work is something you never want to quit doing, "who wants a holiday from work?" because:
  - . only time you really accomplish anything
  - . only time you really get any satisfaction out of what you do
  - . time well filled
- older participant who lived in country all their life:
  - . got first T.V. in 1967
  - . got first T.V. 2 years ago
  - . what if someone were to take it away? fine, they could just pick it up
  - . got first T.V. 18 years ago
- innovation:
  - . depends on price
  - . what it is going to do/the services offered
  - . petition circulated offering, for about $10., 6 new T.V. stations
  - . no. of channels we get now (4) is sufficient
  - . maybe pay price at outset but not a monthly charge
  - . reception is basically limited to 4 channels (3 U.S., 1 Canadian)
  - . the local networks are only sorting pots

  - . we don't expect to get all these stations
  - . we don't want to get bombarded - intrusion in our lives - we moved out here for independence and isolation, prefer to keep independence of choice. And if I want it, I am "free" to go out and buy a booster if I want to. I don't have to keep up to the Jones (e.g., in city you have to have cable, etc.)

- we've always wanted to live out in the country
- we didn't leave town because we didn't have better communication (T.V., radio)
- we're out there, let's enjoy the good life
- you put too much (of the city) out in the country and people won't want to move out
- entertainment: travel to go shopping and go to the show

BUSINESS

- no traffic
- "I prefer it"
- you become accustomed to whichever you like, but I prefer the country
- more privacy
- public services are nearly nonexistent:
  - . garbage
  - . fire protection
  - . snow removal
- fire insurance is a lot higher
- don't want the hustle and bustle
- it's of my own choice that I don't have some of the city services
- $20. to operate T.V. - used to have illegal set-up to receive
- receive 4 channels - CTV has a bad picture but good sound
- use phone to place order
- nice not to have a charge between Fernie and Elko
- but not so nice to have a charge for Joffray 10 miles away
- find it expensive but more reliable than mail (combine phone call and bus/courier delivery)
- lumber co. (C&I) has a telex, they "think" that if they wanted to, they could use it
- DDD, it's great, 'we just got it' - it's a tremendous improvement over our previous system
- experiences some trouble with DDD - the call wouldn't go through even after the operator asked for the number
- private parties mixed with business, but don't mind it, they seem considerate
- 4 people: LD calls charged but not made

- radio on C&I band - use it a lot, works very well, a lot of power, good coverage
- C.B. supposed to be used to call "miles" but use it as well to give "orders"/ "work orders"; should have a different frequency
- reception on some channels is not too good even with a booster
- would like to see more channels
- radio is OK
- after 6 p.m. and before 8 a.m. radio power is cut down dramatically and so can't even receive Cranbrook (60 miles away)
- a lot of dead spots when you listen to radio and you're travelling
- don't really listen to FM
- only allowed 4W on your C.B. - gives you about 4 miles
- skip causes the biggest problem
- T.V. is OK
- radio OK in day and nothing at night
- telephone rates are high
- same cost to phone Edmonton (450 miles) and Detriot (2,500 miles) for the same time
- couldn't get calls through with 3 on a line, 2 lines were mine and a 3rd was introduced and neither party was satisfied
- cheaper to phone Kallispe than Cranbrook
- have 4 antennas but it doesn't work well, still. Have a booster too - like T.V. and doesn't know what to do - thought of adding another booster and buy another antenna
- would buy:
  - . "color" T.V.
  - . a "very good" T.V. because you want the best reception, in town the set's reception is not as critical
  - . all band T.V. antenna and thinking of getting a rotor - now turning it by hand
  - . doesn't have a T.V., he'd rather read a book
- radio: it depends on what's on it
- 1st bought:
  - . T.V. 13 years ago
  - . radio 10 to 22 years ago
  - . T.V. around 1950-55 had booster then
- would pay more ($8. per month), I wouldn't mind at all paying around $20. per month
- they have cable in Fernie and they're complaining
- "you'd pay $20./m just to watch T.V.!"
- "I wouldn't want to pay more than what they're paying in Fernie"
- not pay more than what they pay in town
- but, there are 2 sides to the coin, more than an effort to bring it to the outlying areas

- DOC didn't locate repeater at right spot so that the whole area can receive - they've relocated it, and we now get CBC very clearly
- innovation: . wait a few years (around 2)
  . why wait if it's good - I'd buy it right away
  . can't say, I would have to know more (e.g., price, service)
- would like to see C.B. power increased
- radio is better (80 mi. reception) but much more costly, e.g., just mobile unit $1,600.
- telephone service has improved 100% over the last 5 years
- care about phone service, but only willing to pay city rate
- care and willing to pay just about anything
- if Hydro could only be as good as the telephone

APPENDIX 3

DOMESTIC SURVEY

INTERVIEW SCHEDULE

Classification Section

GENERAL INFORMATION ON RESPONDENT

INSTRUCTIONS: The interview schedule must be administered to the head of household (male or female).

Question G.1

- Respondent's sex ☐ male ☐ female

Question G.2

- Respondent's age ☐☐ years

Question G.3

- Number of people living with head of household in each category
  - young children (0 to 9) ☐☐
  - teenagers (9 to 15) ☐☐
  - young adults (16 to 20) ☐☐
  - senior citizens ☐☐
  - adults ☐☐

Question G.4

- Occupation of

	respondent	spouse (if applicable)
White-collar	☐	☐
Blue-collar	☐	☐
Professional/managerial	☐	☐
Farming	☐	☐
Fisherman	☐	☐
Self-employed	☐	☐
Student	☐	☐
Housewife	☐	☐
Retired	☐	☐
Not applicable		☐

Question G.5

- Respondent's level of education

☐ Elementary school or less
☐ Some high school
☐ High school graduate
☐ Some college
☐ College graduate

Question G.6

- Language most often spoken at home

☐ English ☐ French ☐ other, specify _____

OBJECTIVE AND TYPICAL USAGE OF QUESTIONS

These questions measure household characteristics which will be used to classify the sampled population into meaningful categories.

The information will be used to determine who needs and demands what, in terms of telecommunication services.

Classification Section

DATA ON RESIDENCE

Question G.7

Is this a primary residence or a secondary residence?

☐ ↓ what type of residence

- ☐ farm house
- ☐ house in village
- ☐ isolated house

☐ ↓ which month do you live here (circle appropriate month(s))

J F M A M J J A S O N D

Question G.9

How far is:

your nearest neighbour	☐☐.☐	mile(s)
the nearest grocery store	☐☐.☐	mile(s)
the nearest city	☐☐.☐	mile(s)
the nearest school	☐☐.☐	mile(s)

definitions
objectively

Question G.10

definition

Size of community ☐☐☐

INSTRUCTIONS: ALL SUBSEQUENT QUESTIONS MUST BE ANSWERED WITH REFERENCE TO THE TYPE OF RESIDENCE JUST DESCRIBED.

OBJECTIVE AND TYPICAL USAGE OF QUESTION

These questions aim at establishing the type of residence and community and the extent of isolation. Other classification data will be recorded in the respondent I.D. number (province, etc.).

As the name of the section suggests, this information will be used to classify respondents in categories meaningful to the analysis of needs and demands for telecommunication service.

Need Section

QUESTION N.1

ASK QUESTION:

"The quality of life in rural areas can be improved by providing better services to the population.

Select, from the following list, the services which you strongly feel must be improved (or up-graded).

HAND OUT CARD.

Go through the list before answering."

1. Adults' education
2. C.B.; mobile radio services
3. Electricity; hydro
4. Employment opportunities
5. Health specialists (doctors, dentists, etc.)
6. Hospital ——— Health Services
7. Housing; home improvement
8. Leisure, recreation, entertainment
9. Mail services
10. Police; Fire Station; Ambulances
11. Public Transportation
12. Radio
13. Schools
14. Senior citizens facilities
15. Sports facilities
16. Telephone
17. Television

OBJECTIVE AND TYPICAL USAGE OF QUESTION N.1

This question is intended to measure the intensity of the need for improved telecommunication services, relative to improvements in other services which might better the overall quality of life in rural areas. In other words, the objective is to find out how strongly is an improvement in telecommunication services needed as compared to improvements in other services.

The data gathered here may be analyzed on a regional basis, or related to the basic socio-economic data provided in the classification section of the questionnaire, to profile each of the need improvement segments.

In addition, these responses may be related to present levels of usage and service for each telecommunication medium.

Need Section

QUESTION N.2

HAND OUT SIX CARDS.

-1. C.B. or mobile radio breakdown
-2. Newspaper strike
-3. Postal strike
-4. Radio strike or system breakdown
-5. Telephone strike or system breakdown
-6. T.V. strike or system breakdown

ASK QUESTION:

"Which type of strike or system breakdown would be most inconvenient to you?"

REMOVE SELECTED CARD, SCORE "1", and ask question:

"Which type of strike or system breakdown would be least inconvenient to you?"

REMOVE SELECTED CARD, SCORE "6", and ask question:

"Which of the remaining types of strike or system breakdown would be most inconvenient to you?"

REMOVE SELECTED CARD, SCORE "2", and ask question:

"Which of the remaining types of strike or system breakdown would be least inconvenient to you?"

REMOVE SELECTED CARD, SCORE "5"; continue the process until the six choices are scored.

OBJECTIVE AND TYPICAL USAGE OF QUESTION N.2

This question is intended to infer a hierarchy of communication services needed. This information is meant to complement the information derived in question N.1. The results could be analyzed in such a way as to contrast differences in the hierarchy of need for communication services between designated groups of respondents (e.g. regional; socio-economic; those who reported a need for improvement in telecommunication services in question N.1. versus those who did not, etc.).

Telephone Section

QUESTION ON NEED FOR TELEPHONE

Question T.E.1 How many lines?

"How many phones do you have?"

☐ none ☐ one ☐ two ☐ three and more

If Respondent does not have a telephone ask T.N.1,
has a telephone ask T.N.2.

Question T.N.1

"Why don't you have a phone?" (unaided)

☐ not willing to answer
☐ too expensive
☐ waiting for installation
☐ impossible to get one
☐ other; specify _____
☐ don't know
☐ no need for it
☐ recently moved

SKIP to Question T.I.1 and then skip to Television section.

Question T.N.2

"Why do you have a phone; that is, (what is your phone used for / what is it used for?" (unaided)

☐ business
☐ health problems (handicapped)
☐ convenience, time saving, efficiency
☐ feel isolated; might have to call for help
☐ social reasons
☐ family reasons
☐ security (fire, burglars, etc.)
☐ other; specify _____
☐ no answer

OBJECTIVE AND TYPICAL USAGE

Questions T.E.1 and T.N.1 are self explanatory. For T.N.2 the objective is to infer the set of needs satisfied by telephone. This is accomplished through an unaided association between telephone service and the respondent's perception of derived personal benefits.

For each need category users' profiles (in terms of various socio-economic, demographic characteristics) can be investigated.

Telephone Section . 25% misclass. though 2 when 4.

QUESTION ON EQUIPMENT AND SPECIFIC MOTIVATIONS

Question T.E.2 (aided)

"Do you have" "how long have you had it"

- ☐ private line ☐☐ years ago
- ☐ two party line ☐☐ years ago
- ☐ four party line ☐☐ years ago
- ☐ multiparty; specify how many ☐☐ ☐☐ years ago
- ☐ don't know.

If private line ask T.N.3; others ask T.N.4.

Question T.N.3

"Why did you get a private line?" (unaided)

- ☐ privacy
- ☐ business
- ☐ other; specify _____
- ☐ bad experience with parties on line
- ☐ available at reasonable cost

Question T.N.4

"Have you ever inquired about getting a private line or a line with fewer parties?"

- ☐ yes
- ☐ no

↓

"Why did you not get it?"

- ☐ basic monthly charge too high
- ☐ installation cost too high
- ☐ service not available
- ☐ other; specify _____

Question T.E.3 (aided)

"Is it a long distance call to phone:

		☐ yes	☐ no	☐ don't know
1.	nearest hospital	☐	☐	☐
2.	your doctor	☐	☐	☐
3.	your dentist	☐	☐	☐
4.	elementary school	☐	☐	☐
5.	secondary school	☐	☐	☐
6.	household head's work place	☐	☐	☐
7.	fire department	☐	☐	☐
8.	police station	☐	☐	☐
9.	nearest grocer	☐	☐	☐
10.	nearest garage	☐	☐	☐
11.	town hall	☐	☐	☐

Question T.E.4 (unaided)

"Was the telephone service significantly up-graded within the last five years?" ☐ yes ☐ no ☐ don't know

If "yes":

What kind of improvement (unaided) when: ☐☐

- ☐ reduction in line load
- ☐ extension of free call area
- ☐ operator service
- ☐ better reception
- ☐ other; specify: _____

Question T.E.5

"On average how much is your <u>total</u> telephone bill each month?"
$___ ___ ___

"Not including long distances, what is your <u>basic</u> monthly charge?"
$___ ___ ___

OBJECTIVE AND TYPICAL USAGE OF QUESTIONS

Questions T.E.2 to T.E.5 aim at providing a "minimum picture" of the type of service respondents currently have. This can be analyzed on a regional and socio-economic basis. Furthermore the information will be used to interpret the data gathered in the need and forecast sections.

Questions T.N.3 and T.N.4 refer to the motivations associated with having or not having a private line or a line with fewer parties. The value of such questions is obvious.

Telephone Section

QUESTION ON IMPORTANCE OF ATTRIBUTES

Instructions: Show scale to respondent and ask question.

Question T.I.1

How important to you are the following characteristics of telephone service:	extremely important	very important	moderately important	slightly important	not important
-1. Speed of repair service					
-2. Reliability of service (few break-downs)					
-3. Speed of installation service					
-4. Operator service					
-5. Number of parties on your line					
-6. Size of the area within which you can call free					
-7. Ability to call free of charge essential services (police, hospital, etc.)					
-8. Quality of reception					
-9. Billing service					
-10. Basic monthly charge (not including long distance)					
-11. Cost of long distance calls					
-12. Cost of installation service					

OBJECTIVE AND TYPICAL USAGE OF QUESTION T.I.1

This question will reveal the hierarchy of what respondents expect from a telephone service. The hierarchies of different groups of businesses can be contrasted.

Telephone Section

QUESTION ON SATISFACTION WITH SERVICE

Instructions: Show scale to respondent and ask question.

Question T.S.1

"How satisfied are you with:"	Completely Satisfied	Reasonably Satisfied	Somewhat Dissatisfied	Extremely Dissatisfied
-1. Your telephone service in general				
-2. Speed of repair service				
-3. Reliability of service (few breakdowns)				
-4. Speed of installation service				
-5. Operator service				
-6. Number of parties on your line				
-7. Size of area within which you can call free				
-8. Ability to call, free of charge, essential services (police, hospital, etc.)				
-9. Quality of service				
-10. Billing service				
-11. Basic monthly charge (not including long distances)				
-12. Cost of long distance calls				
-13. Cost of installation service				

OBJECTIVE AND TYPICAL USAGE OF QUESTION T.S.1

The purpose of the question is self-explanatory.

Telephone Section

QUESTION T.F.1 ON BUYING INTENTIONS

READ STATEMENT

"Recent breakthroughs in telephone technology make it possible to offer you a telephone service comparable to that available in large cities; that is, anyone could get a private line and enjoy a large free calling area (that is peole in surrounding communities and essential services could be called free).

Suppose that this new improved telephone service is available to you as early as next month, and that the basic monthly charge (that is not including long distances) is $10 more per month than the one you pay now; which of the following two decisions would you make:"

HAND OUT CARD

1. I would keep the service I now have.

2. I would pay an additional $10 each month to get the new improved telephone service (although this means that I would have $10 less per month to spend on other things).

READ STATEMENT

"Now, suppose that this same new improved telephone service is available to you, as early as next month, and that the basic monthly charge (that is not including long distances) is $5 more per month than the one you pay now; which of the following two decisions would you make:"

HAND OUT CARD

1. I would keep the service I now have.

2. I would pay an additional $5 each month to get the new improved telephone service (although this means that I would have $5 less per month to spend on other things).

READ STATEMENT

"Finally, suppose that this same new improved telephone service is available to you, as early as next month, and that the basic monthly charge (that is not including long distances) is $2 more per month than the one you now pay; which of the following two decisions would you make:"

HAND OUT CARD

1. I would keep the service I now have.

2. I would pay an additional $2 each month to get the new improved telephone service (although this means that I would have $2 less per month to spend on other things).

OBJECTIVE AND TYPICAL USAGE OF QUESTION T.F.1

This question has been designed to measure rural respondents' buying intentions with respect to a level of telephone service comparable to that available in urban areas. The information will be used to derive short term demand curves. These curves can be estimated at an aggregate level, as well as under various dissagregation schemes (regional, socio-economic, level of satisfaction, need typology, etc.).

Television Section

QUESTION ON NEED FOR TELEVISION

Question TV.E.1

"How many colour TV's are used in your home?"

☐ none ☐ one ☐ two ☐ three and more

"How many black and white TV's are used in your home?"

☐ none ☐ one ☐ two ☐ three and more

If respondent does not have any TV ask TV.N.1
If respondent has at least one TV set ask TV.N.2

Question TV.N.1

"Why don't you use a TV in your home"? (unaided)

☐ don't watch TV; not interested
☐ too expensive to get one
☐ reception equipment too expensive
☐ bad reception or no reception
☐ no station in my own language
☐ cannot watch (blind, etc.)
☐ other; specify _____
☐ no answer

SKIP to Question TV.I.1 and then to question TV.F.1

Question TV.N.2

"Why do you have a TV; what is it used for?" (unaided)

☐ information
☐ entertainment
☐ education for kids
☐ keep me company when alone
☐ to kill time
☐ handicapped
☐ keeps kids quiet
☐ other; specify _____
☐ no answer

OBJECTIVE AND TYPICAL USAGE OF QUESTIONS

Questions TV.E.1 and TV.N.1 are self-explanatory. The objective of TV.N.2 is to infer the set of needs satisfied by television; this is accomplished through an unaided association between television usage and the respondent's perception of derived personal benefits.

For each category, users' profiles (in terms of various socio-economic demographic characteristics) can be investigated.

Television Section

QUESTIONS ON EQUIPMENT

Question TV.E.2 (aided)

"How many ☐ American ☐ English Canadian ☐ French Canadian ☐ Educational channels do you get on your TV?"

Question TV.E.3 (aided)

"With your TV set, do you have:"

1. an outside antenna	☐ no	☐ yes
2. a tower	☐ no	☐ yes
3. a rotor	☐ no	☐ yes
4. a booster	☐ no	☐ yes

If at least one "yes" is scored:

"In total, how much did you pay for your TV reception equipment including the installation charges?" $ ☐☐☐

Question TV.E.4

"Do you have a cable TV?" ☐ no ☐ yes

If no, skip to next question.

"How much does it cost per month?" $ ☐☐

"When did you get it?" ☐☐ years ago

"When was it available for the first time in your area?"

☐☐ years ago

Question TV.E.5

"Was the television service significantly improved or up-graded within the last three years?" ☐ yes ☐ no ☐ don't know

If "yes"

"What kind of improvement(s) (unaided)

☐ more channels available
☐ better reception
☐ better programming
☐ other; specify _____

OBJECTIVE AND TYPICAL USAGE OF QUESTIONS

Question TV.E.2 measures the perceived (not necessarily actual) level of choice of channels. Questions TV.E.3 and TV.E.4 inquire about the type of reception equipment being used and question TV.E.5 is intended to measure perceived improvement in service. This last question will be used to properly interpret answers to questions relative to the satisfaction with service. Subquestions of TV.E.4 will eventually be used to estimate parameters for the long-run demand forecasting model.

Television Section

QUESTION ON IMPORTANCE OF ATTRIBUTES

Instructions: Show scale to respondent and ask question.

Question TV.I.1

How important to you are the following characteristics of television service	extremely important	very important	moderately important	slightly important	not important
-1. Overall quality of picture on all channels					
-2. Overall quality of sound on all channels					
-3. National programming					
-4. Local programming					
-5. Number of French channels received					
-6. Number of English channels received					
-7. Cost of reception equipment required					
-8. Reliability of reception equipment					

OBJECTIVE AND TYPICAL USAGE OF QUESTION

This question will reveal a hierarchy of what respondents expect from television service. The hierarchies of different groups of people (differentiated on the basis of actual equipment, regional and socio-economic characteristics, etc.) can be contrasted. Essentially, this question will be analyzed in such a way as to determine "who wants what".

Television Section

QUESTION ON SATISFACTION WITH SERVICE

Instructions: Show scale to respondent and ask question.

Question TV.S.1

"How satisfied are you with:"	Completely Satisfied	Reasonably Satisfied	Somewhat Dissatisfied	Extremely Dissatisfied
-1. The television service in general				
-2. Overall quality of picture on all channels				
-3. Overall quality of sound on all channels				
-4. National programming				
-5. Local programming				
-6. Number of French channels received				
-7. Number of English channels received				
-8. Cost of reception equipment required				
-9. Reliability of reception equipment				

OBJECTIVE AND TYPICAL USAGE OF QUESTION

The purpose of that question is self-explanatory.

Television Section

QUESTION TV.F.1 ON BUYING INTENTIONS

READ STATEMENT

"Recent breakthroughs in television broadcasting technology make it possible to offer you a television service comparable to that available in large cities; that is, anyone could get more than six different channels and the reception on each channel would be perfect".

"Suppose that this new improved television service is available to you as early as next month, and costs $25 per month; which of the following two decisions would you make:

HAND OUT CARD

-1. I would not buy the new service.

-2. I would pay $25 each month to get the new improved television service (although this means that I would have $25 less to spend on other things).

READ STATEMENT

"Now, suppose that the same new improved television service is available to you, as early as next month, and costs $15 per month; which of the following two decisions would you make:"

HAND OUT CARD

-1. I would not buy the new service.

-2. I would pay $15 each month to get the new improved television service (although this means that I would have $15 less to spend on other things).

READ STATEMENT

"Finally, suppose that the same new improved television service is available to you, as early as next month, and costs $10 per month; which of the following two decisions would you make:"

HAND OUT CARD

-1. I would not buy the new service.

-2. I would pay $10 each month to get the new improved television service (although this means that I would have $10 less to spend on other things).

OBJECTIVE AND TYPICAL USAGE OF QUESTION

This question has been designed to measure rural respondents' buying intentions with respect to a level of television service comparable to that available in urban areas with CATV. The information will be used to derive short term demand curves. These curves can be estimated at an aggregate level as well as under various disaggregation schemes (regional, socio-economic, level of satisfaction, need typology, etc.).

Combined Delivery Section

QUESTION T/TV.F.1 ON BUYING INTENTIONS

READ STATEMENT

"Telecommunication research has recently developped a special cable that could bring to your home, at the same time a telephone service and a television service comparable to those available in large cities. That is you would get: at least six different channels with perfect reception on each channel, and a telephone service with a private line and a big free calling area (you would not have to make long distances to call people in surrounding communities or to call essential services such as police, hospital, schools).

Suppose that this new Telephone/TV cable is available to you as early as next month, and costs $40 per month; which of the following two decisions would you make:"

HAND OUT CARD

1. I would not buy the new Telephone/TV cable.

2. I would pay $40 each month to get the new Telephone/TV cable.

READ STATEMENT

"Now, suppose that the same new Telephone/TV cable is available to you, as early as next month, and costs $30 per month; which of the following two decisions would you make:"

HAND OUT CARD

1. I would not buy the new Telephone/TV cable.

2. I would pay $30 each month to get the new Telephone/TV cable.

READ STATEMENT

"Finally, suppose that the same new Telephone/TV cable is available to you, as early as next month, and costs $20 per month; which of the following two decisions would you make:"

HAND OUT CARD

1. I would not buy the new Telephone/TV service.

2. I would pay $20 each month to get the new Telephone/TV cable.

OBJECTIVE AND TYPICAL USAGE OF QUESTION

This question has been designed to measure rural residents buying intentions with respect to a coaxical, fiberoptic type of medium which would provide a level of TV and Telephone service comparable to that available in rural areas.

This information will be used to derive short term demand curves. These curves can be estimated at an aggregate level as well as under various disaggregation schemes (regional, socio-economic, level of satisfaction, need typology, etc.)

Radio Section

QUESTIONS ON NEED FOR RADIO

Question R.E.1

"How many AM/FM radio sets are used in your house?"

☐ none ☐ one ☐ two ☐ three and more

"How many "AM only" radio sets are used in your house?"

☐ none ☐ one ☐ two ☐ three and more

"How many cars in your home are equipped with?"

AM/FM radio ☐

AM only radio ☐

If Respondent does not have any radio ask R.N.1 ☐
has at least one radio ask R.N.2 ☐

Question R.N.1

"Why don't you use a radio in your home?" (unaided)

☐ not interested
☐ bad or no reception
☐ no station in my own language
☐ deaf
☐ does not have the money
☐ other; specify _____
☐ no answer

SKIP to Question R.I.1 and then to section on mobile radio.

Question R.N.2

"Why do you have a radio; what is it used for?" (unaided)

☐ local news
☐ national news
☐ education, learning
☐ music
☐ background noise; feel less alone
☐ habit
☐ other; specify _____

OBJECTIVE AND TYPICAL USAGE OF QUESTIONS

Questions R.E.1 and R.N.1 are self-explanatory. The objective of R.N. 2 is to infer the set of needs satisfied by radio. This is accomplished through an unaided association between television usage and the respondent's perception of derived personal benefits.

For each need category, users' profiles (in terms of various socio-economic and demographic characteristics) can be investigated.

Radio Section

QUESTIONS ON EQUIPMENT

Question R.E.2

"Do you have an outside antenna for radio reception?"

☐ yes ☐ no ☐ don't know

Question R.E.3

"How Many AM ☐ U.S. ☐ English ☐ French radio stations can you get with a fair reception?"

"How many FM ☐ U.S. ☐ English ☐ French radio stations can you get with a fair reception?"

Question R.E.4

"Was your radio broadcasting service significantly improved or up-graded within the last three years?"

☐ yes ☐ no ☐ don't know

If "yes"

"What kind of improvement (unaided)

☐ reception of FM stations
☐ more AM stations
☐ better reception
☐ better programming
☐ other; specify _____

OBJECTIVE AND TYPICAL USAGE OF QUESTIONS

Question R.E.4 measure the perceived (not necessarily actual) level of choice of radio stations on AM and FM bands respectively. Question R.E.2 is self-explanatory and question R.E.4 is intended to measure perceived improvement in service. This last question will be used to properly interpret answers to questions about satisfaction with service.

Radio Section

QUESTION ON IMPORTANCE OF ATTRIBUTES

Instructions: Show scale to respondents and ask question.

Question R.I.1

How important to you are the following characteristics of Radio broadcasting service:	extremely important	very important	moderately important	slightly important	not important
-1. Quality of reception in the day time					
-2. Quality of reception at night time					
-3. Number of American Stations received					
-4. Number of English Canadian Stations received					
-5. Number of French Canadian Stations received					
-6. Availability of broadcasts on the AM band					
-7. Availability of broadcasts on the FM band					
-8. National programming					
-9. Local programming					

OBJECTIVE AND TYPICAL USAGE OF QUESTION

Answers to this question will reveal the hierarchy of what respondents expect from radio broadcasting. The hierarchies of different groups of people (differentiated on the basis of equipment, regional and socio-economic characteristics, etc.) can be contrasted. Essentially, this question will be analyzed in such a way as to determine "who wants what".

Radio Section

QUESTION ON SATISFACTION WITH SERVICE

Instructions: Show scale to respondent and ask question.

Question R.S.1

"How satisfied are you with:"	Completely Satisfied	Reasonably Satisfied	Somewhat Dissatisfied	Extremely Dissatisfied
-1. Overall radio broadcasting service				
-2. Quality of reception in the day time				
-3. Quality of reception at night time				
-4. Number of American Stations received				
-5. Number of English Canadian Stations received				
-6. Number of French Canadian Stations received				
-7. Availability of broadcasts on the AM band				
-8. Availability of broadcasts on the FM band				
-9. National programming				
-10. Local programming				

OBJECTIVE AND TYPICAL USAGE OF QUESTION

The purpose of that question is self-explanatory.

Radio Section

QUESTION R.F.1 ON BUYING INTENTIONS

"Would you pay $2 per month to get a better radio broadcasting service (perfect reception on AM and FM bands, greater selection of stations on AM and FM bands)?"

yes ☐ no ☐

OBJECTIVE AND PURPOSE OF QUESTION

The objective is simply to find out who would pay to get a better radio service. No forecasts will be derived from this question.

Mobile Radio Section

QUESTIONS ON EQUIPMENT AND NEED

Question MR.E.1

"Do you have any mobile radio (C.B.) equipment?"

☐ yes ☐ no → skip to next section

Question MR.N.1

"What is your mobile radio (C.B.) used for?" (unaided)

☐ business
☐ security
☐ fun; hobby; like to talk to other people
☐ convenience
☐ outdoor sport
☐ not using it
☐ other; specify _____

Question MR.E.2

"How many mobiles do you have?" ☐

"How long have you had one?" ☐ years

"How often do you use it:"

☐ once a week or more
☐ once a month
☐ twice a year
☐ once a year or less
☐ never

OBJECTIVE AND TYPICAL USAGE OF QUESTIONS

Questions MR.E.1 and MR.E.2 aim at measuring whether people are equipped with mobile radio (C.B.) and their frequency of usage. The objective of MR.N.1 is to infer the set of needs satisfied by mobile radio; this is accomplished through an unaided association between usage and the respondent's perception of derived benefits. For each need category a users' profile can be sketched.

Mobile Radio Section

QUESTION ON IMPORTANCE OF ATTRIBUTES

Instructions: Show scale to respondent and ask question.

Question MR.I.1

How important to you are the following characteristics of mobile radio (C.B.)	extremely important	very important	moderately important	slightly important	not important
-1. Range (maximum distance with fair communication)					
-2. Quality of reception					
-3. Easiness to get a channel when needed					
-4. Cost of buying equipment					

OBJECTIVE OF QUESTION AND TYPICAL USAGE

This question will reveal what respondents expect from mobile radio services. The hierarchies of different types of people (differentiated on the basis of actual equipment, regional and socio-economic characteristics, etc.) can be contrasted. Essentially this question will be analyzed in such a way as to determine "who wants what".

Mobile Radio Equipment

QUESTION ON SATISFACTION WITH SERVICE

Instructions: Show scale to respondent and ask question.

Question MR.S.1

"How satisfied are you with:"	Completely Satisfied	Reasonably Satisfied	Somewhat Dissatisfied	Extremely Dissatisfied
-1. Mobile radio (C.B.) service in general				
-2. Range (maximum distance with fair communication)				
-3. Quality of reception				
-4. Easiness to get a channel when needed				
-5. Cost of buying equipment				

OBJECTIVE OF QUESTION AND TYPICAL USAGE

The purpose of that question is self-explanatory.

Final Section

QUESTIONS TO BE ASKED LAST

Question T.E.6

I would like to have some information about the telephone company serving you, and the type of billing system it uses. Could you please show me one of your more recent telephone bills?

☐ yes ☐ no

Get from the bill: ask for:

- name of company: - name of company:

_____ _____

- basic monthly charge

$ ☐☐.☐☐

Question G.7

What is the total household income (before taxes) (includes the revenues of all members of household).

☐ $ 0 - $ 4,999
☐ $ 5,000 - $ 9,999
☐ $10,000 - $14,999
☐ $15,000 - $19,999
☐ $20,000 - $24,999
☐ $25,000 - $29,999
☐ $30,000 and more
☐ refuse to answer

OBJECTIVE AND TYPICAL USAGE OF INFORMATION

These two questions belong to other parts of the questionnaire, but will be asked at the very end of the interview. Question G.6 is self-explanatory. T.E.5, is designed to give data on the actual basic monthly telephone charge. This figure will be compared to the perceived basic monthly charges. The information will be used to investigate a potential perceptual bias and, eventually, to adjust forecasts accordingly.

APPENDIX 4

BUSINESS SURVEY

INTERVIEW SCHEDULE

Classification Section

GENERAL INFORMATION ON BUSINESS

INSTRUCTION: This survey schedule must be administered to the person who makes decisions about telephone and mobile radio equipment.

Question G.1

What is the main activity of this business:

- ☐ Agriculture
- ☐ Communication industry
- ☐ Construction
- ☐ Finance, Insurance, Real Estate
- ☐ Fishing, trapping
- ☐ Forestry
- ☐ Manufacturing
- ☐ Mines & oils
- ☐ Personal services
- ☐ Trade
- ☐ Transportation
- ☐ Utilities
- ☐ Other; specify _____

Question G.2

"How many full time employees?" ☐☐☐

"What was last year total revenue?" ☐☐☐☐000 of $

Question G.3

How far is:

the nearest bank	☐☐☐.☐	mile(s)
the nearest city	☐☐☐.☐	
the main market	☐☐☐.☐	
the main supplier	☐☐☐.☐	

OBJECTIVE AND TYPICAL USAGE OF INFORMATION

These questions will provide the basic classification data required to categorize the businesses into meaningful categories.

The information will be used to establish a relationship between the type of business and telecommunication needs and demand.

The I.D. number of the questionnaire will contain other classification data (province, community, etc.)

Need Section

QUESTION N.1

ASK QUESTION:

"The efficiency of doing business in rural areas can be improved by providing better public services to the community.

Select, from the following list, the services which you strongly feel must be improved (or up-graded), in order to make the operation of your business more efficient."

HAND OUT CARD.

Go through the list before answering."

1. Adults' education
2. C.B.; mobile radio services
3. Electricity; hydro
4. Employment opportunities
5. Health specialists (doctors, dentists, etc.)
6. Hospital
7. Housing; home improvement
8. Leisure, recreation, entertainment
9. Mail services
10. Police; Fire Station; Ambulances
11. Public Transportation
12. Radio
13. Schools
14. Senior citizens facilities
15. Sports facilities
16. Telephone
17. Television

OBJECTIVE AND TYPICAL USAGE OF QUESTION N.1

This question is intended to measure the intensity of the need for improved telecommunication services, relative to improvements in other services which might better the efficiency of doing business in rural areas. In other words, the objective is to find out how strongly is an improvement in telecommunication services needed as compared to improvements in other services.

The data gathered here may be analyzed on a regional basis, or related to the basic data provided in the classification section of the questionnaire, to profile each of the need improvement segments.

In addition, these responses may be related to present levels of usage and service for each telecommunication medium.

Need Section

QUESTION N.2

HAND OUT FIVE CARDS.

1. C.B. or mobile radio breakdown
2. Teletype equipment breakdown
3. Postal strike
4. Courier service strike or breakdown
5. Telephone strike or system breakdown

ASK QUESTION:

"Which type of strike or system breakdown would most affect the operations of your business?"

REMOVE SELECTED CARD, SCORE it a "1", and ask question:

"Which of the remaining type of strike or system breakdown would most affect the operations of your business?"

REMOVE SELECTED CARD, SCORE it a "2", and ask question:

"Which of the remaining types of strike or system breakdown would most affect the operations of your business?"

REMOVE SELECTED CARD, SCORE it a "3", and ask question:

"Which of the remaining type of strike or system breakdown would most affect the operations of your business?"

REMOVE SELECTED CARD, SCORE it a "4".

SCORE LAST CARD A "5".

OBJECTIVE AND TYPICAL USAGE OF QUESTION N.2

This question is intended to infer a hierarchy of communication services needed. This information is meant to complement the information derived in question N.1. The results could be analyzed in such a way as to contrast differences in the hierarchy of need for communication services between designated types of businesses.

Telephone Section

QUESTIONS ON REGULAR EQUIPMENT

Question T.E.1

"How many telephone sets do you use?" ☐☐☐

Question T.E.2

"How many lines (different telephone numbers) do you have?" ☐☐

If only one ask T.E.3
If more than one ask T.E.4

Question T.E.3

"Are you on a: (check only one)

- private line ☐
- two party line ☐
- four party line ☐
- multiparty line ☐

SKIP to T.E.5

Question T.E.4

"How many private branch exchanges (set with multiline switchboard; show picture) do you have?"

☐☐

Question T.E.5

"Name of company serving you?" _____

Question T.E.6

"Could you check on your last bill, the basic monthly charge (amount paid not including long distances)?"

☐ checked ☐ not checked

amount in $ ___ ___ ___

OBJECTIVE AND TYPICAL USAGE OF INFORMATION

The questions are self-explanatory.

Telephone Section

QUESTIONS ON SPECIAL EQUIPMENT

Question T.E.7

"Are you connected to a data bank or computing service?"

☐ yes ☐ no
if "no" go to T.E.9

Question T.E.8

"What is the average monthly cost for this service?"

$[| |] go to T.E.10

Question T.E.9

"Are you thinking of being connected to a data bank or computing service within the next 3 years?"

☐ yes ☐ no ☐ don't know

If "no" go to T.E.11

QUESTION T.E.10

"What do you (or would you) use this service for?" (unaided)

☐ Accounting services
☐ Inventory control
☐ Financial data
☐ Market data
☐ Other; specify _____

Question T.E.11

"Do you use any teletype equipment such as Telex?"

☐ yes ☐ no

If "yes" go to question T.E.13

Question T.E.12

"Are you thinking of using some sort of teletype equipment with the next 3 years?"

☐ yes ☐ no
if "no" skip the next two questions

Question T.E. 13

"Do you: ☐ own the terminal
☐ rent the terminal
☐ rent the service from another firm

Question T.E.14

"What is your average monthly expenditure on this equipment (or service)?"

and/or

$ ☐☐☐

OBJECTIVE AND TYPICAL USAGE OF INFORMATION

The above questions will permit an analysis of the kind of business using teletype equipment and subscribing to special services involving telecommunication equipment.

50 sample

Telephone Section

QUESTION ON IMPORTANCE OF ATTRIBUTES

Instructions: Show scale to respondent and ask question.

Question T.I.1

How important to you are the following characteristics of telephone service:	extremely important	very important	moderately important	slightly important	not important
-1. Speed of repair service					
-2. Reliability of service (few break-downs)					
-3. Speed of installation service					
-4. Operator service					
-5. Number of parties on your line					
-6. Size of the area within which you can call free					
-7. Ability to call free of charge essential services (police, hospital, etc.)					
-8. Quality of reception					
-9. Billing service					
-10. Basic monthly charge (not including long distance)					
-11. Cost of long distance calls					
-12. Cost of installation service					

OBJECTIVE AND TYPICAL USAGE OF QUESTION T.I.1

This question will reveal the hierarchy of what respondents expect from a telephone service. The hierarchies of different groups of people (differentiated on the basis of actual equipment, regional, socio-economic, etc.) can be contrasted. Essentially, this question will be analyzed in such a way as to determine "who wants what".

Telephone Section

QUESTION ON SATISFACTION WITH SERVICE

Instructions: Show scale to respondent and ask question.

Question T.S.1

"How satisfied are you with:"	Completely Satisfied	Reasonably Satisfied	Somewhat Dissatisfied	Extremely Dissatisfied
-1. Your telephone service in general				
-2. Speed of repair service				
-3. Reliability of service (few breakdowns)				
-4. Speed of installation service				
-5. Operator service				
-6. Number of parties on your line				
-7. Size of area within which you can call free				
-8. Ability to call, free of charge, essential services (police, hospital, etc.)				
-9. Quality of service				
-10. Billing service				
-11. Basic monthly charge (not including long distances)				
-12. Cost of long distance calls				
-13. Cost of installation service				

OBJECTIVE AND TYPICAL USAGE OF QUESTION T.S.1

The purpose of the question is self-explanatory.

Telephone Section

BUYING INTENTIONS

Question T.F.1

"Recent breakthroughs in telephone technology make it possible to offer a telephone service in rural areas comparable to that available in big cities (that is private line and large free call area).

Suppose that this new improved telephone service is available to you as early as next month and that the basic monthly charge (that is not including long distances) is 100% higher than the one you pay now; would you subscribe to the new service, before the end of the year?

☐ yes ☐ no

Now suppose that this same new improved telephone service is available to you as early as next month and that the basic monthly charge (not including long distances) is 50% higher than the one you pay now; would you subscribe to the new service, before the end of the year?

☐ yes ☐ no

Finally, suppose that this same new improved telephone service is available to you as early as next month and that the basic monthly charge (not including long distances) is 25% higher than the one you pay now; would you subscribe to the new service, before the end of the year?"

☐ yes ☐ no

OBJECTIVE AND TYPICAL USAGE OF QUESTION

This question has been designed to measure respondents' buying intentions with respect to a level of telephone service comparable to that available in urban areas.

The information will be used to derive short term demand curves. These curves can be estimated at an aggregate level as well as for various categories of businesses distinguished on the basis of relevant criteria (regional, type of activity, level of service, needs, etc.).

MOBILE RADIO INFORMATION SHEET

Definitions of the Categories of Mobile Radio Service

System: A mobile radio system consists of at least one fixed base station and at least one mobile radio unit capable of communicating with each other. Radios on different systems do not communicate with each other.

GRS: General Radio Service. GRS is the Canadian version of the American CB or Citizen's Band category. The user owns and operates his system on one or more of the channels allotted to this service.

Private: A private system is one in which the equipment is owned by a business enterprise and operated by its employees. It is licensed for operation on a specific channel(s) in the mobile radio band.

GLMRS: General Land Mobile Radio Service. This is a service offered by the telephone companies as an extension of their normal telephone service. It consists of a radio-telephone installed in a vehicle which can operate on one or more channels in a specific area. The terms General Mobile, Public Mobile, Radio-telephone and Mobile Telephone are all used to describe this type of service.

RCCMRS: Radio Common Carrier Mobile Radio Service. This service is distinguished by the rental of a repeater station operating on two frequencies - one sending and one receiving - to many users. The users may either own or lease their mobile equipment.

Paging: Paging is considered a "one-way" system and involve the transmitting of tone or tone and voice messages to pocket receivers. A paging system can accommodate many users.

Mobile Radio Section

QUESTIONS ON EQUIPMENT AND NEEDS

INSTRUCTIONS: Give the respondent the attached form where the various types of mobile radio services are described.

Question MR.E.1

"How many mobiles (units) do you use in each category?"	"Do you own or use this equipment?"		If equipment is owned, total purchase cost	If equipment is rented, monthly cost
☐☐ GRS(CB)	☐ own	☐ rent	$ _ _ _ _ _	$ _ _ _
☐☐ Private	☐ own	☐ rent	$ _ _ _ _ _	$ _ _ _
☐☐ GLMRS	☐ own	☐ rent	$ _ _ _ _ _	$ _ _ _
☐☐ RCCMRS	☐ own	☐ rent	$ _ _ _ _ _	$ _ _ _
☐☐ Paging	☐ own	☐ rent	$ _ _ _ _ _	$ _ _ _

If none is used SKIP to question MR.N.3

Question MR.N.1

"What is the main usage of each of the above mentioned mobile radio systems?"

	GRS	Private	GLMRS	RCCMRS	Paging
Communication within the plant or building	☐	☐	☐	☐	☐
Communication with vehicles on the road	☐	☐	☐	☐	☐
Communication between units on work sites	☐	☐	☐	☐	☐
Other, specify _____	☐	☐	☐	☐	☐

Question MR.N.2

"What is the main purpose for using this equipment?"

	GRS	Private	GLMRS	RCCMRS	Paging
Security (emergency)	☐	☐	☐	☐	☐
Saving time	☐	☐	☐	☐	☐
Convenience	☐	☐	☐	☐	☐
Personal communications	☐	☐	☐	☐	☐

Question MR.N.3 (for those who do not use mobile radio)

"Are you thinking of using some sort of mobile radio equipment within the next 3 years?"

☐ yes ☐ no ☐ don't know

OBJECTIVE AND TYPICAL USAGE OF QUESTIONS

These questions will provide the basic information on the type and cost of equipment(s) used as well as the main reasons for using it.

The data will be used to determine which type of business uses a given equipment and why.

Mobile Radio Section

QUESTION ON IMPORTANCE OF ATTRIBUTES

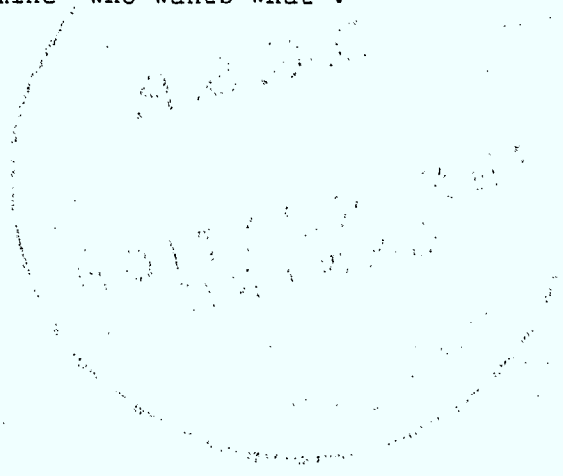
Instructions: Show scale to respondent and ask question.

Question MR.I.1

How important to you are the following characteristics of mobile radio (C.B.)	extremely important	very important	moderately important	slightly important	not important
-1. Range (maximum distance with fair communication)					
-2. Quality of reception when there is no skip					
-3. Easiness to get a channel when needed					
-4. Cost of buying equipment					

OBJECTIVE OF QUESTION AND TYPICAL USAGE

This question will reveal what is expected from mobile radio services. The hierarchies of different types of businesses (differentiated on the basis of actual equipment, regional, etc.) can be contrasted. Essentially this question will be analyzed in such a way as to determine "who wants what".



Mobile Radio Equipment

QUESTION ON SATISFACTION WITH SERVICE

Instructions: Show scale to respondent and ask question.

Question MR.S.1

"How satisfied are you with:"	Completely Satisfied	Reasonably Satisfied	Somewhat Dissatisfied	Extremely Dissatisfied
-1. Mobile radio (C.B.) service in general				
-2. Range (maximum distance with fair communication)				
-3. Quality of reception when there is no skip				
-4. Easiness to get a line when needed				
-5. Cost of buying equipment				

OBJECTIVE OF QUESTION AND TYPICAL USAGE

The purpose of that question is self-explanatory.