PEAT MARWICK

The Interjurisdictional Impacts of Changes in Telephone Rate Structures

Final Report

March 1986

Department of Communications

PEAT MARWICK

Peat, Marwick and Partners
Management Consultants
P.O. Box 31
Commerce Court Postal Stat
Toronto, Ontario M5L 1B2
(416) 863-3500

March 26, 1986

Mr. Vincent Hill
Director-General, Telecommunications
Policy Branch
Department of Communications
300 Slater Street
Ottawa, Ontario
K1A 0C8

Dear Mr. Hill:

The Interjurisdictional Impacts of Changes in Telephone Rate Structures

We are pleased to submit our final report on the interjurisdictional impacts of changes in telephone rate structures.

Our study examined the extent to which the Canadian major telephone companies' revenues exceed the costs assigned to each of the companies' service categories and the contributions that each category makes to the carriers' common costs. An analysis of the status quo was followed by a projection of the impacts that various rate structures and alternative long-distance revenue sharing arrangements would have on the carriers and their subscribers.

The study estimated the impacts of potential long-distance rate reductions by some Canadian carriers on those carriers that would not change their rates. The study also identified several long-distance revenue sharing arrangements that could make each carrier independent of any rate changes implemented by other carriers.

Our study is briefly described in the Executive Summary of the report. The conclusions of the study are summarized in Chapter VI.

We are grateful for the assistance provided to the study by Messrs. Larry Shaw and Robert Simpson of your Department. Their direction and advice greatly enhanced the value of the study.

Mr. Andrew Elek was the Project Director of the Study. Mr. David General was the principal Research Consultant.

We enjoyed working on this interesting engagement and would be glad to provide any consulting assistance you may require in the future.

Yours very truly,

Peat, Marwick and Partners

THE INTERJURISDICTIONAL IMPACTS OF CHANGES IN TELEPHONE RATE STRUCTURES

TABLE OF CONTENTS

THE INTERJURISDICTIONAL IMPACTS OF
CHANGES IN TELEPHONE RATE STRUCTURES

LIST OF EXHIBITS

THE INTERJURISDICTIONAL IMPACTS OF
CHANGES IN TELEPHONE RATE STRUCTURES

LIST OF EXHIBITS

(Continued)

THE INTERJURISDICTIONAL IMPACT OF CHANGES IN TELEPHONE RATE STRUCTURES

EXECUTIVE SUMMARY

One of the fundamental policy issues facing the telephone carriers and their regulators is to determine the extent to which costs should be recovered from the revenues earned by the carriers within each of their major service categories.

The first part of this study examined the financial contributions that the telephone companies' major service categories provide to defray the companies' common costs under the carriers' present revenue sharing arrangements. These arrangements govern the distribution of jointly earned intercompany long distance revenues.

The contribution provided by each service category is defined as the difference between the revenues and the costs directly associated with the particular service category. The category of "Common Costs" consists primarily of the costs of the carriers' Loop and Stations that serve the carriers' subscribers. These Loop and Stations carry both local and toll traffic. As Loops and Stations have no revenues their costs must be recovered from the revenue contributions provided by the other services.

The second part of the study examined the impacts of significant reductions in long distance rates applied by some of Canada's telephone carriers, with other carriers leaving their long distance rates unchanged. The principal issue addressed by the study was the potential detrimental impacts that such partial rate reductions might have on the carriers and their subscribers in those jurisdictions in which long distance rates were not reduced.

The results of the analysis indicated that these impacts would be quite small. Even if long distance rates were reduced by as much as 20 percent by Canada's largest telephone companies, the financial losses of the smaller companies would not exceed one dollar per month per residential subscriber line. The main reason for these small impacts would be a significant increase in traffic volumes in those jurisdictions in which rates were reduced. The extra revenues generated by this traffic growth would partly offset the carriers' financial losses caused by the rate reductions.

Even though the impacts of rate reductions were found to be small, alternative revenue sharing arrangements were examined that would completely eliminate any losses of revenue by the carriers who would choose not to reduce their long distance rates. Such alternate arrangements were defined and analyzed in the last part of the study.

The effects of the alternative revenue sharing arrangements were compared with those of the Revenue Settlement Plan which is the carriers' current basis for sharing jointly earned long distance revenues. This Plan is administered by Telecom Canada to settle the revenues among telephone companies separated by at least one other company and between Canadian and foreign carriers. The Plan is also used to settle revenues between "adjacent" telephone companies under separate agreements.

The alternatives to the Revenue Settlement Plan, examined in this study, included:

- a "Modified Revenue Settlement Plan"
- a "Uniform Access Charge System", and
- a "Modified Access Charge System".

The first of these alternatives would be similar to the present Revenue Settlement Plan except that those carriers that would choose not to reduce

their long distance rates would be guaranteed the re-imbursement of a fixed percentage of their Loop and Station costs.

Access Charge Systems are quite different from the present system of revenue settlements. Whereas the Revenue Settlement Plan defines those parts of the carriers' common "Non-Traffic-Sensitive" (Loop and Station) costs that should be re-imbursed from the jointly earned intercompany long distance revenues as being in direct proportion to the traffic-sensitive costs assignable to each service, access charge system determine these portions on the basis of minutes of use. In those systems, when a carrier's Loops and Stations are used by an increased volume of inter-company long distance messages, that carrier will receive an increased share of the jointly earned revenues.

In a "Uniform Access Charge System" the access charges of all Canadian carriers, expressed in cents per minute at each of the originating and terminating ends, would be uniform. The study indicated that this charge would be approximately 20 cents per minute in 1988. Uniform access charges do not take into account the differences between the specific revenue requirements of individual carriers with different Loop and Station costs. For that reason, the introduction of a Uniform Access Charge System would cause gains or losses in relation to the status quo to individual carriers. Whereas the losses or gains of the six largest Canadian carriers would not exceed one dollar per month per residential subscriber line, the gains or losses of smaller carriers may exceed $3.00 per month per line.

This disadvantage of the Uniform Access Charge System can be eliminated by introducing a Modified Access Charge System in which each jurisdiction would be able to set its own access charges, independently of other jurisdictions. Whereas administratively more complex than the Uniform Access Charge System, the Modified Access Charge System provides the greatest flexibility among all the revenue sharing systems examined in this study.

Access Charge Systems are particularly suited to revenue settlements between a local carrier and one or several independent interexchange carriers, such as those operating in the competitive environment of the United States.

The analytical work was carried out in this study with the help of a Telephone Carrier Financial Model which is described in Chapter II. The revenue contributions of the carriers under the present Revenue Settlement Plan and under present rate structures are examined in Chapter III. The impacts of long distance rate reductions are examined in Chapter IV. The impacts of alternative revenue sharing arrangements are analyzed in Chapter V. Chapter VI summarizes the conclusions of this study.

I - INTRODUCTION

One of the fundamental policy issues facing the telephone carriers and their regulators is to determine the extent to which costs should be recovered from the revenues earned by the carriers within each of their major service categories.

SERVICE CATEGORIES

The major service categories are:

- Monopoly Local Services
- Monopoly Toll Services
- Competitive Network Services
- Competitive Terminal Services
- Access to Subscribers (Loops and Stations)
- Other Common Costs and Revenues.

The last two categories cannot be associated with any particular service. They are, nevertheless, needed for delivering the first four services to the subscribers. They are, therefore, common to those services.

As explained in more detail later in the report, the scope of the categories above, i.e., the definitions of the individual services, or of the parts of the telephone plant that belong to each service, are not entirely uniform across telephone companies in Canada.

COMMON COSTS

In this report the category of "Loops and Stations" is defined as:

- the access lines from the telephone companies' central offices to the subscribers' premises
- the inside wiring within the subscribers' premises
- one basic rotary-dial telephone set per single-line subscriber.

"Other Common Costs" include a variety of costs that can not be associated with any particular service. Examples are: headquarters administration costs, the carrying charges of working capital and of plant under construction, and any costs that remained unassigned after having applied the rules of a paticular costing methodology. Some of the "Other Common Costs" are offset by "Other Common Revenues", such as incomes from property leases or interest incomes. The excess of "Other Common Costs" over "Other Common Revenues" is defined as "Net Other Common Costs".

It is expected that after the implementation of Phase III of the CRTC Cost Inquiry the "Net Other Common Costs" category will be minimized and will not exceed 15 percent of the Loop and Station costs.*

Hence, Loop and Station costs make up the dominant part of the telephone companies' common costs.

Not only are Loop and Stations costs the dominant common costs, they are also very substantial in terms of the telephone companies' total costs. In Bell Canada's and B.C. Tel's case (see footnote below), they are in excess of 35 percent of all costs. The policies applied by the telephone companies and their regulators to the recovery of these costs from telephone company revenues are therefore of major importance and have a significant impact on the telephone companies' structure of local and long distance rates.

---

* See Bell Canada's and B.C. Tel's Five-Way Split data on page 53 of CRTC Decision #85-19: "Interexchange Competition and Related Issues."

The Loops and Stations have three basic characteristics:

1) They are equally needed for providing the subscribers with access to the telephone companies' local and toll networks, including all sub-categories of toll traffic.

2) The size of the loop and station plant is almost totally insensitive to usage (i.e., its costs are "Non-Traffic Sensitive" or "NTS"), as the vast majority of subscriber loops are under-utilized and can easily carry many times their present traffic volume without expansion.*

3) Loops and Stations have no revenues of their own and, therefore, their costs must be recovered by contributions from the revenues of the service categories that make use of them (and could not exist without them).

The key issue is to decide how much contribution each service category should make to Loop and Station costs. Since there is no causal relationship between most of these costs and the usage of the subscriber loops, time of use is not an appropriate measure by which the contributions expected from the different services can be determined. Instead, it has traditionally been policy that has determined these contributions in Canada's provinces and/or regulatory jurisdictions.

STUDY OBJECTIVES

The first objective of this study was to examine the contributions made by each service category to the Loop and Station costs of the major Canadian

---

* Strictly speaking, the access lines of multiline business subscribers are usage sensitive since their capacity is often fully utilized and their number is increased when the traffic increases. They represent, however, a relatively small percentage of all subscriber loops.

telephone companies under the present rate structures and revenue settlement arrangements.

The contributions of the following service categories were examined:

- o Monopoly Local services
- o Monopoly Toll services, including:
  - intra-company,
  - Adjacent Company,
  - TransCanada services.

Competitive services were defined in the study in the same manner as in Telecom Canada's Revenue Settlement Plan. According to that definition competitive services make practically no use of the telephone companies' common loops and stations, as the telephone companies generally supply dedicated access facilities to the users of these services. Most competitive services nevertheless generally make some contributions to the telephone companies' common costs. The approach applied in this study was to compare these contributions with "Net Other Common Costs" rather than with Loop and Station costs and to examine whether the aggregate contributions made by the competitive service categories were greater or smaller than the telephone companies' "Net Other Common Costs".

Competitive services are generally compensatory, i.e., their revenues, in aggregate, exceed their costs. Whereas competitive services make relatively small contributions to the telephone companies' total common costs, they do make sufficient contributions to defray most of the telephone companies' "Net Other Common Costs".

In those telephone companies in which the aggregate contributions made by competitive services exceed the companies' "Net Other Common Costs", a small residual contribution to Loop and Station costs is available, even though competitive services make little use of loops and stations. In those companies in which the aggregate contributions of competitive services are

less than the companies' "Net Other Common Costs", the sum total of these "non-monopoly" categories represents a small drain on the remaining services; this means that the combined contribution of the "non-monopoly" categories to Loop and Station costs is negative. It will be shown that in all of Canada's major telephone companies, the net incomes or losses generated by the combined competitive and "Other Common" categories (i.e., by the non-monopoly sector) are relatively minor; the combined net revenue contributions of the monopoly category therefore closely equal the telephone companies' Loop and Station costs.*

An analysis of the contributions made by the telephone companies' major service categories to common costs under present rate structures and revenue settlement arrangements is provided in Chapter III.

The second objective of the study was to examine the impacts of significant changes in long distance rates that might be introduced in some Canadian jurisdictions but not in others. According to present revenue sharing arrangements between the carriers, such rate changes might change the revenue shares of all telephone companies, including those that have not changed their long distance rates.

The telephone companies that would experience reductions in revenue shares as the result of long distance rate reductions in other jurisdictions would have to cope with a reduction in the contributions made by their long distance service categories to Loop and Station costs. Consequently, to cover these costs, these telephone companies would have to make up the reductions in the long distance revenues received from other carriers by

---

* As explained later in the report, this balance is expected to exist when a costing methodology is used that complies with the directives of Phase III of the CRTC Cost Inquiry.

increasing the telephone rates within their own jurisdictions. In this way the re-structuring of telephone rates in any one Canadian jurisdiction will invariably lead to the re-structuring of telephone rates, at least to some extent, in practically all other jursdictions.

The Department of Communications, being responsible for telecommunications policy in Canada, is obviously interested in the magnitudes of the impacts associated with currently proposed long distance rate reductions in some jurisdictions and in possible means by which undesirable impacts

could be mitigated. This report will show these impacts and will examine various methods of minimizing detrimental cross-impacts among jurisdictions.

This leads to the third objective of the study: to explore alternative revenue sharing arrangements among telephone carriers and to show how such arrangements may reduce the negative impacts that rate changes in one jurisdiction may have on the subscribers of other jurisdictions. The study identified several arrangements in which the subscribers of each telephone company could be largely or entirely isolated from changes that had been put in effect by other companies.

From the viewpoint of national policy such independence would be of particular importance in Canada, since it would give all regulatory bodies the ability to change the telephone rates under their jurisdiction without being impeded by any negative impacts that their decisions may have on other jurisdictions.

Chapter IV of the report describes the financial impacts of long distance rate reductions in some of Canada's jurisdictions on all other jurisdictions under today's revenue sharing arrangements. Chapter V describes these impacts under alternative arrangements.

TELEPHONE COMPANIES

Canada's ten provinces are served by nine "major" telephone companies. The word "major" refers to a telephone company that serves most of the subscribers in each province. The major telephone companies are:

- Newfoundland Telephone Company (NTC)
- The Island Telephone Company (ITC), serving PEI
- Maritime Telegraph and Telephone Company (MT&T), serving Nova Scotia
- New Brunswick Telephone Company (NBTel)
- Bell Canada (Bell), serving Ontario, Quebec and parts of the NWT
- Manitoba Telephone System (MTS)
- Saskatchewan Telecommunications (Sask. Tel)
- Alberta Government Telephones (AGT)
- British Columbia Telephone Company (B.C.Tel).

These companies have agreed to share all long distance revenues that affect more than one company by using a uniform revenue-sharing method: the Revenue Settlement Plan.

Adjacent companies share their revenues through direct settlements. The revenues of telecommunication services between two non-adjacent companies are shared through Telecom Canada. Telecom Canada is an organization formed by the nine telephone companies listed above, plus Telesat Canada, through mutual agreement, without any corporate or other legal status. Besides its responsibility for distributing commonly earned revenues Telecom Canada fulfills several other functions.

Whereas each of the nine major telephone companies is regulated by a provincial or federal authority under applicable provincial or federal laws, Telecom Canada is not directly subject to regulation under any existing legislation in Canada.

The nine major telephone companies provided approximately 11 million access lines to approximately 91 percent of Canada's telephone subscribers in 1984. Another 7 percent of Canada's subscribers were served by the following seven independent companies (ranked by size):

- Edmonton Telephones
- Quebec Telephones (serving the Lower St. Lawrence area)
- Telebec Ltee (serving parts of Quebec)
- Thunder Bay Telecommunications
- Northern Telephones (serving Timmins, Kapuskasing and other Northern Ontario cities)
- Terra Nova Telecommunications (serving parts of Newfoundland)
- NorthwesTel (serving the Yukon and parts of the NWT and B.C.).

The remaining 2 percent of Canada's subscribers are served by 52 small local telephone companies plus another 46 extremely small rural cooperatives.

Most of the independent companies have minimal or no toll facilities. Toll services to these companies are provided to the subscribers of these companies by the nine major telephone companies, which incur the costs of the services and also collect toll revenues for them. From these revenues the major carriers pay the independent companies agreed "commissions" or other forms of compensation, for providing access facilities between the independent companies' subscribers and the major carriers' toll networks.

II - THE CARRIER FINANCIAL MODEL

The telephone carrier financial model developed for the study of the "Impacts of Competition in Long Distance Message Toll Services" (September 1984, prepared by Peat Marwick for the Department of Communications and Participating Provinces - referred to subsequently as the "Competition Study") was expanded to provide the necessary forecasts for the analysis in the present study. The carrier financial model developed for the Competition Study projected, for each of nine carriers:

- the carriers' local, intracompany toll and intercompany toll traffic under any specified rate scenario
- the increases in investments, operating expenses and revenues generated by the projected traffic growth
- the contributions to (or deductions from) total company income generated by each major service category.

The model developed for the Competition Study used 1980 as the base year and made projections to the year 1990 for a range of scenarios. The investments and expenses included in the model were based on the Telecom Canada Revenue Settlement Plan (RSP) costing methodology. The classification of services was also based on the RSP. The sources used for extracting investment, expense and revenue data that were not included in the RSP were the carriers' annual reports and Statistics Canada publications.

Traffic data were provided to the Competition Study by the carriers on a confidential basis. These data were not to be re-used in any subsequent study and, therefore, they have not been used in the present analysis. As indicated below, however, most of the required data were available for

EXHIBIT 1

FINANCIAL MODEL

EQV'T SUBSCRIBERS(M) - 1988: 18.914

ANNUAL GROWTH RATES (%):	
LOCAL STATIONS:	2.95
LOCAL TRAFFIC:	3.32
"INTRA"TOLL TRAFFIC:	6.99
"INTER"TOLL TRAFFIC:	10.97
LOOP	2.86
INFLATION AFTER 1982 (%):	5.00
PERIOD 1978 - 1988:	1.998
LOCAL RATES:	4.63
"INTRA"TOLL RATES:	4.05
"INTER"TOLL RATES:	1.00

PRICE ELAST.
0.738 (INTRA)
1.050 (INTER)

($MILLION)

TOTAL MINUTES (millions)): (ORIGINATING)

	1978	1988
INTRA	4100	8055
ADJACENT	335	967
TRANSCAN	875	2458

MINUTES PER AVG. RESIDENTIAL LINE (ORIGINATING) 1988

	TOTAL CANADA	MONOPOLY							RESIDUAL		
		LOCAL	"INTRA" TOLL	ADJACENT TOLL	TRANSCAN TOLL	TOTAL TOLL	SUB TOTAL	LOOP	TRANSCAN COMP	ALL OTHER	TOTAL
1978											
GROSS INVESTMENT (1978)		3,127.4	2,290.3	225.5	594.1	3,109.9	6,237.3	4,453.7	201.4	2,950.4	13,842.8
CAPITAL EXPENSE(INCL.DEP)		421.5	320.2	32.8	85.3	438.4	859.8	640.4	32.1	517.6	2,050.0
OPERATING EXPENSE		546.6	376.2	38.4	109.5	524.0	1,070.6	419.7	29.5	629.9	2,149.8
TOTAL EXPENSE		968.0	696.5	71.2	194.8	962.4	1,930.4	1,060.2	61.6	1,147.6	4,199.8
REVENUE(FULL RSP)		1,164.1	1,139.4	211.2	592.2	1,942.8	3,106.9	0.0	64.0	1,027.9	4,198.7
NET CONTRIBUTION		196.0	442.9	140.0	397.4	980.4	1,176.4	(1,060.2)	2.4	(119.7)	(1.0) (2)
CONTRIBUTION TO COMMON (1)		16.6%	37.6%	11.9%	33.8%						99.9%
$/AVG.RESIDENTIAL LINE		1.16	2.61	0.83	2.34	5.78	6.93		0.01	(0.71)	6.24
COLLECTED REVENUES				211.2	653.3						
1988											
REAL GROWTH TO 1988:											
TRAFFIC		1.266	1.965	2.859	2.785			1.326	2.785	1.000	
INVESTMENT		2.372	2.520	2.962	2.967			2.542	2.957	1.818	
FORECAST INVESTMENT		7,418.8	5,770.8	667.9	1,762.8	8,201.4	15,620.2	11,320.2	595.5	5,363.6	32,899.5
CAPITAL EXPENSE(INCL.DEP)		1,059.6	820.1	92.5	249.5	1,162.0	2,221.7	1,609.2	83.9	764.4	4,679.2
OPERATING EXPENSE		1,383.1	1,270.9	177.5	496.3	1,944.6	3,327.8	1,027.3	132.2	1,258.8	5,746.1
TOTAL EXPENSE		2,442.7	2,091.0	269.9	745.8	3,106.7	5,549.4	2,636.5	216.2	2,023.2	10,425.3
REVENUE(FULL RSP)		2,448.1	3,329.4	673.5	1,722.5	5,725.4	8,173.5	0.0	198.2	2,054.1	10,425.9
FINAL NET CONTRIBUTION (SHORTFALL)		5.4	1,238.4	403.6	976.7	2,618.7	2,624.1	(2,636.5)	(17.9)	30.9	0.6 (3)
CONTRIBUTION TO COMMON (1)		0.2%	47.2%	15.4%	37.2%						100.0%
$/AVG.RESIDENTIAL LINE		0.02	5.46	1.78	4.30	11.54	11.56		(0.08)	0.14	11.62
COLLECTED REVENUES				673.5	2,026.5						

(1): Percent of total contribution to the Loop and Residual categories by Monopoly services.

(2): Shortfall indicated due to actual revenue being greater than "Full RSP" settlement (transition provisions in 1978).

(3): Shortfall indicated due to rounding.

1978 from sources in the public domain. That year was therefore used instead of 1980 as the base year for the current study.

Exhibit 1 shows the output of the financial model for the nine major Canadian carriers combined. The model produces similar outputs separately for each carrier.

The data in the model output consist of three parts:

- the top part shows the forecast parameters inputted by the user
- the middle part shows the historical financial data for 1978
- the bottom part shows the projected financial data for 1988.

The data in the top left corner of the output show the projected annual growth rates of main stations (access lines) and traffic minutes. The growth rates for Loops are expressed in terms of real expenses (net of inflation). The growth rates shown in Exhibit 1 are weighted averages for Canada. The projected growth rates for individual carriers are identical to those assumed in the "Competition Study" referenced earlier.

Exhibit 1 shows the financial projections for the "Base Case" defined in the Competition Study, with minor modifications. In the Base Case of this study, shown in Exhibit 1, local rates were increased by an average of 4 percent per year in current dollars, with the exception of Bell Canada for which they were increased by 5 percent (considering the history of actual increases to date and the expected impacts of CRTC Decision 85-19). Intercompany (Telecom Canada and Adjacent) toll rates were assumed to increase at an average annual rate of 1 percent from 1978 to 1988 in current dollars. The increase in intra-company rates was then adjusted to balance each carrier's total revenues and expenses.

Most of these rate increases already occurred by 1985.

The price elasticities* shown in Exhibit 1 were based on the study described in the final report of the "Competition Study". The formula to calculate these elasticities would have produced an average industry-wide price elasticity of long distance traffic of 0.9 in 1982.

The "minutes" shown in the Exhibit indicate conversation minutes. They were estimated from data available on the number of conversations and on estimated call durations. The lack of hard data on conversation minutes makes those results of the financial analysis that depend on minutes of use subject to somewhat greater estimating errors than those inherent in the financial projections.

The data in the upper right corner of Exhibit 1 show the estimated minutes per average residential subscriber line. The calculation of these averages imply assumptions regarding the extent to which business lines are used more heavily than residential lines. The assumed weighting of traffic for the various types of lines and the methods of calculating averages for residential lines are described in more detail later in this Chapter.

The centre part of Exhibit 1 shows historical investment, expense and revenue data, in accordance with the cost separation method specified by the Telecom Canada Revenue Settlement Plan (RSP). The original model used in the Competition Study was modified, however, in several details as described below.

1. As noted, the year 1978 was used as the base year. Detailed data were available in the public domain for that year as the result of the CRTC Revenue Settlement Plan Inquiry of 1979. However, data not covered by the RSP were not available from that Inquiry, such as:

---

* "Elasticity" is defined as the percentage growth in traffic caused by a one percent decline in real price.

- the split of "Adjacent" costs and revenues between East and West
- "Local" revenues
- data for competitive services other than those offerred by Telecom Canada
- Other Common Costs and Revenues
- "minutes of use" data, as noted earlier.

The approaches taken to estimate the data not contained in the 1978 RSP data base are described briefly in this Chapter.

2. The model used in the Competition Study was first refined by sub-dividing the "Intercompany" category into TransCanada and Adjacent categories. Costs and revenues in the Adjacent category were next sub-divided for each individual carrier into Adjacent West and Adjacent East sub-categories on the basis of available public sources from regulatory proceedings related to Bell Canada, NBTel and the Manitoba Telephone System. Starting from the centrally located provinces and working towards the edges of the system the total Adjacent data could be split between West and East.

3. The "Local" category in the Revenue Settlement Plan includes no terminal equipment. In some jurisdictions the attachment of customer-owned terminal equipment to the telephone system is now permitted and is, therefore, classified as "competitive". For the sake of uniformity, all terminal equipment was excluded from the "Local" category in this study's financial model for all carriers.

Whereas, by using RSP <u>costs</u>, terminal equipment was automatically excluded from "Local" costs, the <u>revenues</u> derived from terminal equipment had to be excluded from the "Local" revenues

reported in company annual reports, by using estimates. Such estimates had to be made on a broad basis, since the available data did not allow an accurate separation of non-terminal (monopoly) local revenues from terminal revenues. (Both are being reported under a single "Local" heading in telephone company reports). Based on various public sources of information (available from material submitted to public hearings) it was assumed that the following percentages of "Local" revenues were derived from non-terminal (monopoly) services in 1978:

Bell Canada:	60%
Newfoundland and Island Tel. Co.	70%
Other Carriers:	65%

These revenues were entered in the "Local" revenue category of the financial model.

4. The residual category previously labelled "Net Common Costs" in the Competition Study model was sub-divided into the following categories:

   - Loops
   - Residual.

   The "Residual" category included: (1) "Other Common"* investments, expenses and revenues and (2) investments, expenses and revenues pertaining to the competitive categories. The latter included both competitive network and competitive terminal services. It was not possible to identify the data for these services individually from available information.

---

* i.e., other than "Loops"

EXHIBIT 2

RESIDUAL REVENUES (COSTS)[1]
-PROJECTED FOR 1988-

	$ (MILLION)	% OF LOOP COSTS	% OF TOTAL COSTS
Bell Canada	(60.7)	4.1	-1.0
Newfoundland	(6.1)	-14.7	-3.5
Island	1.4	12.4	3.7
Maritime	5.6	6.6	1.6
New Brunswick	(0.5)	-0.6	-0.2
Manitoba	15.6	13.5	3.7
Saskatchewan	(12.7)	-10.7	-2.9
Alberta Government	9.8	3.3	0.9
British Columbia	57.4	14.7	3.8
TOTAL	**13.0**	**0.5**	**0.1**

(1) Residual Revenues =
= (Competitive Revenues - Competitive Costs) - Net Other Common Costs

Net Other Common Costs = Common Costs - Common Revenues

In this study, as well as in the Competition Study, the Residual expenses and revenues were derived by subtracting the financial data for monopoly services from the data in the carriers' annual income statements, including all revenues and expenses other than those related to investments in other companies.

Most fortunately, in each of the nine telephone companies, the Residual revenues were very close to the Residual expenses. This balance indicated that the small net incomes generated by the competitive categories of each carrier appeared to approximately equal the net losses of the carrier's "Other Common" category. Thus, the Canadian carriers' "Residual" categories represent relatively small net revenues or expenses.

Exhibit 2 shows the net surpluses or deficiencies of the Residual category, i.e., of the combined competitive and "Other Common" categories: (1) in dollars, (2) as a percentage of Loop and Station expenses and (3) as a percentage of all expenses. It can be concluded from Exhibit 2 that in most cases the combined competitive and common categories (without Loops and Stations) could be assumed to "break even" within the accuracy of the expense estimates.

5. A separate entry was set up in the model for collection revenues. There is a difference between these and settled revenues in the TransCanada and Adjacent categories. One of several reasons for the differences is the international component of the collected revenues, which is only partially included in the carriers' settled revenues (i.e., there is a net outflow to the international carriers from Telecom Canada's collected revenues).

6. In anticipation of changes to the RSP costing method, resulting from the recent CRTC Cost Inquiry, the RSP and the 5-way Split costing methods were compared, assuming that all attributable

costs identified by the latter will be assigned to service categories in the new RSP-based costing approach. It was found that there will be negligible change in the assigned investments and capital-related charges (i.e., depreciation, income tax and financial expenses). However, there will be substantial differences in the operating costs defined under the expected rules; in 1988 they may exceed the operating costs defined by the present RSP by almost 30 percent. In 1978 the operating costs would have been 45 percent higher under the new definition than under the RSP definition. These adjustments were made to all 1978 operating expenses (including the Monopoly, Competitive and Loop categories) and the corresponding amounts were taken out of the "Other Common" expenses of the same year, leaving each carrier's total expenses unchanged.

In telephone company accounting the costs of capital are treated as any other costs. They include the combined costs of debt, return on equity and, where applicable, income taxes.

The "Capital Expense" line in the centre section of Exhibit 1 includes depreciation expenses and the "Financial and Income Tax Expenses" (costs of capital) defined by the RSP. These are calculated from the carriers' "Gross Investment" (in the line above), by applying the carriers' "Financial and Income Tax Expense Rate" to each category of investment. According to the RSP, if that rate was applied to the carriers' total gross investment in a particular year, the result would equal the carrier's total gross income, available for interest, income tax and divident payments.

The lines at the bottom of the centre section in Exhibit 1 show the contributions that each service sector made to cover the costs of Loops and Stations in 1978. "Contributions" are defined as the differences between the revenues and expenses attributed to each service sector.

The contributions are also shown in terms of dollars per month per residential access line. As noted, the division of the net contributions between the residential and business sector is explained under a separate heading later in this Chapter.

The bottom section of Exhibit 1 shows the financial projections to the year 1988, using the growth rates listed in the top section of Exhibit 1.

Two sub-models are incorporated in the complete financial model, which are used in the calculation of the projected financial results. They are:

- an "asset model", which generates pro-forma balance sheets for future years in consideration of the projected traffic growth; these balance sheets are used, in turn, to estimate depreciation expenses and financial and income tax expenses in the forecast year; the real growth of investment, calculated by this sub-model, is shown in the second line of the projected data for 1988, for each service category

- a demand forecasting model which, based on the elasticity estimates incorporated in the model, predicts the increase in traffic that would occur in each service category as the result of changes in real (inflation-adjusted) collection rates; the impacts of elasticities are only considered in testing various rate adjustments in relation to the Base Case, as the impacts of the real rate reductions implied in the Base Case have already been taken into consideration in the projections of traffic shown in Exhibit 1.

It was assumed that the "Financial and Income Tax Expense Rate" for 1988 will be 12 percent of net assets for privately-owned carriers and 9 percent for government-owned carriers. This figure was converted to a percentage of gross assets and applied to the projected gross investments; the

projected depreciation expenses were then added to obtain the "Capital Expense" line in the bottom part of Exhibit 1.

Economies of scale in operating expenses were recognized by applying the projected cost inflation factor only to the original operating expenses reported in the 1978 RSP but not to the 45 percent markup applied to these expenses on account of the predicted changes resulting from the CRTC Cost Inquiry.

In conclusion it should be noted that the lack of public data made it necessary to use relatively old information as the basis for projecting 1988 costs and revenues. It was also necessary to make certain estimates, as explained above. Undoubtedly, the reliability of the projections could have been improved if more up-to-date and more complete data had been available to this study.

Nevertheless, it is believed that the data used in the study were sufficiently accurate for the purpose for which they are used. It is particularly important to note that unavoidable forecasting errors are likely to be much greater than the small estimating errors in the 1978 base data. Hence the study results would not be much more accurate if precise information had been available for all 1978 data.

EQUIVALENT SUBSCRIBER ACCESS LINES

The tables in Exhibit 1 show the contributions to Loop and Station Costs made by each service category per average residential telephone line in 1978 and 1988. To calculate these averages, business lines were converted into equivalent residential lines by using these approximations:

EXHIBIT 3

SUBSCRIBER ACCESS LINES - 1978
(000)

Province	Residential	Actual Business(1)	Equivalent Business(1)	Equivalent Total	Equivalent Business/ Equivalent Total %
Newfoundland	131.9	30.3	92.4	224.3	41.3
P.E.I.	34.4	6.3	22.0	56.4	39.3
Nova Scotia	251.9	54.7	171.2	423.1	40.5
New Brunswick	195.4	44.6	134.1	329.5	40.6
Quebec	4,888.4	1,357.5	4,153.9	9,042.3	46.0
Ontario					
Manitoba	345.6	77.1	260.6	606.2	43.0
Saskatchewan	311.5	67.7	215.8	527.3	48.7
Alberta	667.5	187.4	633.0	1,300.5	48.7
British Columbia	895.8	229.5	735.9	1,631.7	45.1
Yukon & NWT	14.2	11.6	26.6	40.8	65.2
CANADA	**7,736.6**	**2,066.7**	**6,445.5**	**14,182.1**	**45.5**

(1) Excludes WATS lines, coin and mobile phones.

- One regular business line is equivalent to three residential lines.

- One Centrex line is equivalent to three residential lines (with an average of one and a half sets per line, i.e., one Centrex telephone set is equivalent to two residential lines).

- One PBX trunk is equivalent to six residential lines (with an average of six sets per PBX trunk, i.e., one PBX-connected telephone set is equivalent to one residential line).

One basis for these definitions was the average basic local revenues derived from each type of line, which are roughly proportional to the number of "equivalent" lines indicated above.

It can also be estimated that the relative usage of the system by business subscribers is broadly proportional to the "equivalent" lines indicated above. If that were perfectly true, the average business subscriber would make about three times as many toll calls on a regular business line and six times as many on a PBX trunk as a residential subscriber per household line. This is indeed not far from the actual situation. The peak local load imposed on the system by the users of regular business lines is also roughly equal to the multiples as above. Consequently, both the contributions made and the traffic imposed by business subscribers on the system can be assumed to be proportional to the "equivalent" lines defined above.

The number of "equivalent subscriber lines" computed by these rules is shown in Exhibit 3 for each province. Note that the numbers in Exhibit 3 are provincial totals (from Statistics Canada reports) and not telephone company totals.

It is thus implicitly assumed in the results of the study that Canada's independent telephone companies break even internally, i.e., they do not provide any contribution to (or impose any burden on) the common costs of the nine major Canadian telephone companies. The approach taken in the study also implies that any rate re-structuring that would be implemented by the major companies would also be implemented by the independent companies within their territories.

As noted in Chapter I, approximately 9 percent of Canada's telephone subscribers are served by independent telephone companies. However, most of the long distance services are provided by the nine major telephone companies to all Canadian subscribers, including those whose local services and loops are provided by the independent carriers.

III - THE REVENUE SETTLEMENT PLAN - THE "BASE CASE"

As described in Chapter I, the nine major telephone companies in Canada settle their jointly earned revenues through the Revenue Settlement Plan introduced in 1977. Adjacent companies settle the revenues collected for telephone messages that cross their borders through separate settlements. Messages that cross the territories of more than two companies settle their revenues within Telecom Canada (formerly the TransCanada Telephone System). The Revenue Settlement Plan is used in all these settlements. For the sake of simplicity we shall describe the Telecom Canada Revenue Settlement Plan which has nine participants. The Adjacent settlements follow identical rules, except that in each settlement there are only two participants.

Only the settlement of monopoly long distance revenues is described below. All of these revenues, collected by Telecom Canada's nine telephone company members, are generated by those messages that cross the territories of more than two Canadian carriers or that cross the Canadian border. They are classified as "Telecom Canada" revenues and are paid monthly by the Telecom Canada member carriers into a common pool. The member carriers retain, however, any commissions payable to independent companies for their carriage of Telecom Canada messages.

Each month, Telecom Canada applies the following steps to its members' collected revenues:

(i) All the member companies' revenues relating to monopoly Telecom Canada services are placed in the pool.

(ii) The net revenues collected on behalf of Teleglobe Canada are paid out to that organization: these are the revenues derived from Canada-Overseas telephone services.

(iii) Revenues are settled with US carriers: these may represent either net receipts or net outpayments to or from the pool.

(iv) Revenues are settled with Telesat Canada, which is the tenth member of Telecom Canada but is not one of the nine "telephone" carriers participating in the Revenue Settlement Plan.

(v) The costs directly assigned by the member companies to Telecom Canada services are reimbursed. These are called Recoverable Assigned Costs (RAC-S).

(vii) The residual portion of the pool, called the Contribution Revenue Pool, is distributed as described below.

As indicated by Steps (v) and (vi), the Telecom Canada revenue pool basically consists of two parts:

- a part that covers the telephone companies' direct costs

- a surplus part that provides contributions to Common Costs and/or cross-subsidies within the telephone companies operations.

It is also important to note that after the Recoverable Assigned Costs have been paid out to the member companies, the distribution of the surplus, i.e., of the excess of the long distance revenues over corresponding costs becomes an issue of policy within Telecom Canada. As indicated in Exhibit 1, Telecom Canada's excess revenues represented approximately two-thirds of the total domestic revenues collected Telecom Canada in 1978 and are still expected to represent more than one half of such revenues in 1988. As explained in Chapter I the implicit purpose of these excess revenues is to compensate the member carriers for their provision of access facilities (loops) between their subscribers and their toll networks, as the costs of

these access facilities are not part of the Recoverable Assigned Costs for which the carriers receive direct re-imbursements.

Telecom Canada's residual revenue pool remaining after the re-imbursement of the Recoverable Assigned Costs, i.e., the "Contribution Revenue Pool", is distributed among the member companies according to the following revenue sharing process:

(i) The Loop and Station costs (C) of each carrier are divided up in proportion to the identifiable direct transmission and switching plant costs associated with the following services:

Services	Identifiable Direct Costs
Local	L
Intra-company monopoly toll	I
Adjacent company monopoly toll	A
TransCanada monopoly toll	T

(ii) A portion of the Loop and Station costs is allocated to Trans-Canada services in proportion to the ratio of identifiable costs. This is called the "Member Participation Measure" (MPM) of the particular carrier:

$$MPM = \frac{T}{L + I + A + T} \; C \qquad (1)$$

(iii) Each member to the Telecom Canada revenue sharing agreement submits its MPM monthly to Telecom Canada. The residual revenue pool of that month is then divided among the members in proportion to their MPM's.

The settlement methods with adjacent companies are identical in form, except that the Member Participation Measures used in these settlements are those parts of the Station and Loop costs that are proportional to the

identifiable Adjacent service costs (A) instead of the TransCanada service cost (T). Whereas in the TransCanada settlement nine MPM's are considered, in each of the Adjacent settlements only two such measures are considered.

It is easy to see from Equation (1) that a change in traffic in any of the service categories will affect a carrier's Member Participation Measure. In the total revenue distribution process, even if the total revenue pool remained the same, the fact that some members' MPM changed, will change the proportion in which the pool is shared by all the members, and, therefore, a change in any one member's Measure will change the revenue shares of all other members.

However, the revenue and traffic changes resulting from rate re-structuring in any one member company's operation will not only affect the ratio of MPM's but also the magnitude of the pool itself. This may have detrimental effects on other carriers and their subscribers. The magnitude of these effects is described in Chapter IV. Following the analysis of the magnitude of cross-company effects, methods will be shown in Chapter V by which the harmful cross-impacts of rate re-structuring in some parts of Canada on other jurisdictions can be mitigated or completely eliminated.

THE BASE CASE

The "Base Case" is a projection of traffic, rates and financial results under the present rate structures and revenue settlement agreements among carriers in accordance with the present Revenue Settlement Plan. The summary financial statements for all nine major Canadian carriers combined were shown in Exhibit 1. The assumptions regarding rate increases in the 1978-88 forecast period were stated on Page II-2 and noted in Exhibit 1. Assumptions regarding traffic growth were also shown in Exhibit 1.

EXHIBIT 4

CARRIER REVENUES AND EXPENSES

(million $)

	1978					1988				
	Monopoly Revenues	Monopoly Expenses	Net Contri-bution	Loop Expenses	Residual Net Revenues (Costs)*	Monopoly Revenues	Monopoly Expenses	Net Contri-bution	Loop Expenses	Residual Net Revenues (Costs)*
Bell Canada	1,770.7	1,069.3	701.4	(600.1)	(101.3)	4,505.6	2,955.1	1,550.5	(1,489.5)	(61.0)
Newfoundland	60.5	38.2	22.3	(18.7)	(3.6)	153.9	106.2	47.7	(41.6)	(6.1)
Island	13.5	8.5	5.0	(5.1)	0.1	32.1	22.2	9.9	(11.3)	1.4
Maritime	116.8	77.1	39.7	(37.4)	(2.3)	287.2	207.3	79.9	(85.4)	5.5
New Brunswick	92.6	52.5	40.1	(37.9)	(2.2)	230.3	143.7	86.6	(86.1)	(0.5)
Manitoba	122.6	82.7	39.9	(48.3)	8.4	418.6	244.3	99.8	(115.6)	15.8
Saskatchewan	134.8	86.5	48.3	(44.9)	(3.4)	383.1	251.6	131.5	(118.8)	(12.7)
Alberta Government	364.1	217.2	146.9	(126.5)	(20.4)	937.0	650.4	286.6	(296.3)	9.7
British Columbia	431.3	298.4	132.9	(141.2)	8.3	1,300.3	968.6	331.6	(391.8)	60.2
CANADA	3,106.9	1,930.4	1,176.5	(1,060.2)	(116.3)	8,173.5	5,549.4	2,624.2	(2,636.5)	12.3

*Including small imbalance in overcovering (undercovering) of total expenses

EXHIBIT 5

(BASE CASE)

Scenario 1988

Toll Reduction (%): 0%
Services Affected: All Toll
Companies Affected: None
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	52.4%	5.6%	31.8%	.0%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.8%	.0%	100.0%
Island	11.9%	13.6%	9.4%	65.1%	.0%	100.0%
Maritime	5.8%	32.9%	12.0%	49.2%	.0%	100.0%
New Brunswick	6.5%	35.6%	28.7%	29.2%	.0%	100.0%
Manitoba	-25.5%	42.2%	41.4%	41.9%	.0%	100.0%
Saskatchewan	-8.7%	33.0%	37.0%	38.8%	.0%	100.0%
Alberta Gov't	-5.3%	27.9%	35.3%	42.1%	.0%	100.0%
British Columbia	-35.9%	59.7%	24.5%	51.7%	.0%	100.0%
Canada	0.2%	47.2%	15.4%	37.2%	.0%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	MONOPOLY				RESIDUAL			
	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	5.85	0.63	3.55	(0.12)	(0.32)	10.73	.00
Newfoundland	1.90	1.20	2.48	7.95	(0.42)	(1.30)	11.81	(.00
Island	1.22	1.39	0.96	6.65	0.02	1.39	11.64	.00
Maritime	0.70	3.95	1.44	5.90	(0.02)	0.85	12.83	(.00
New Brunswick	1.03	5.66	4.57	4.63	0.14	(0.24)	15.80	(.00
Manitoba	(2.80)	4.63	4.55	4.61	0.01	1.72	12.72	(.00
Saskatchewan	(1.35)	5.10	5.72	6.00	0.02	(1.52)	13.97	.00
Alberta Gov't	(0.62)	3.30	4.17	4.98	(0.11)	0.51	12.22	.00
British Columbia	(4.00)	6.66	2.74	5.77	0.05	1.99	13.20	.00
CANADA	0.02	5.46	1.78	4.30	(0.08)	0.14	11.62	.00

Exhibit 4 shows the revenues, expenses and contributions to common costs provided by all monopoly services of the nine major carriers in 1978 and projected to 1988. The Loop and Station costs are also shown as well as the residual net costs or revenues.

The relative contributions expected to be made in 1988 to Loop and Station costs by the various service categories in each carrier's operation are summarized in Exhibit 5.

The upper portion of the Exhibit shows the percentage participation of each service category within the monopoly sector in contributing to Loop and Station costs.

Exhibit 5 indicates that in 1988 the contributions of monopoly local services would range from a positive contribution of 14.0 percent of all monopoly contributions in Newfoundland to a burden of 35.9 percent in British Columbia. It is interesting to note that the average for Canada is an almost perfect breakeven (no contribution, no burden).

The following are the projected average contributions of individual toll services in Canada and the ranges for individual companies:

- Intra-company: 47.2% (8.9% to 59.7%) of all monopoly services
- Adjacent company: 15.4% (5.6% to 37.0%) of all monopoly services
- TransCanada: 37.2% (29.2% to 65.1%) of all monopoly services.

The lower part of Exhibit 5 shows the actual net dollar contributions that an average residential line is expected to make to Loop and Station Costs per month in each jurisdiction. It is projected that in 1988 the total contribution of the monopoly services per residential line will range from

$10.73 to $15.80 per month, with a Canadian average of $11.56 (in 1988 dollars). The contributions are expected to be the highest per residential line in New Brunswick. The total contributions are the lowest in Bell Canada's system.

Exhibit 5 indicates that the revenues of the local services do not cover the expenses directly assignable to these services in Western Canada. Local services provide a positive contribution to Loop and Station costs in Eastern Canada, ranging from $0.70 to $1.90 per month.

As noted, on a Canada-wide basis, the average contribution of local services to common costs is projected to be practically zero in 1988. The costs of access will, therefore, be covered almost entirely by contributions from the toll services, made up of the following average amounts:

- Intra-company toll: $5.46 ($1.20 to $6.66)
- Adjacent toll: $1.78 ($0.63 to $5.72)
- TransCanada toll: $4.30 ($3.55 to $7.95)

To provide some information on the contribution of competitive services "TransCanada Competitive" services were separated from the rest of the residual category in Exhibit 5. This was the only competitive service for which public information was available. As indicated, in some provinces this service is expected to provide a small positive contribution to Loop and Station costs; in others, its revenues may be smaller than the expenses assigned to this service category and, therefore, in these provinces "TransCanada Competitive" services may impose a small burden on the other services.

In total, positive contributions from the competitive categories are projected to outweigh the Net Common Costs of the carriers by $0.06 per line per month in all of Canada in 1988, with individual carriers ranging from a shortfall of $1.72 in Newfoundland to a surplus of $2.04 in B.C.

EXHIBIT 6

RELATIVE CONTRIBUTION OF LOCAL AND INTRA-COMPANY TOLL SERVICES TO COMMON COSTS

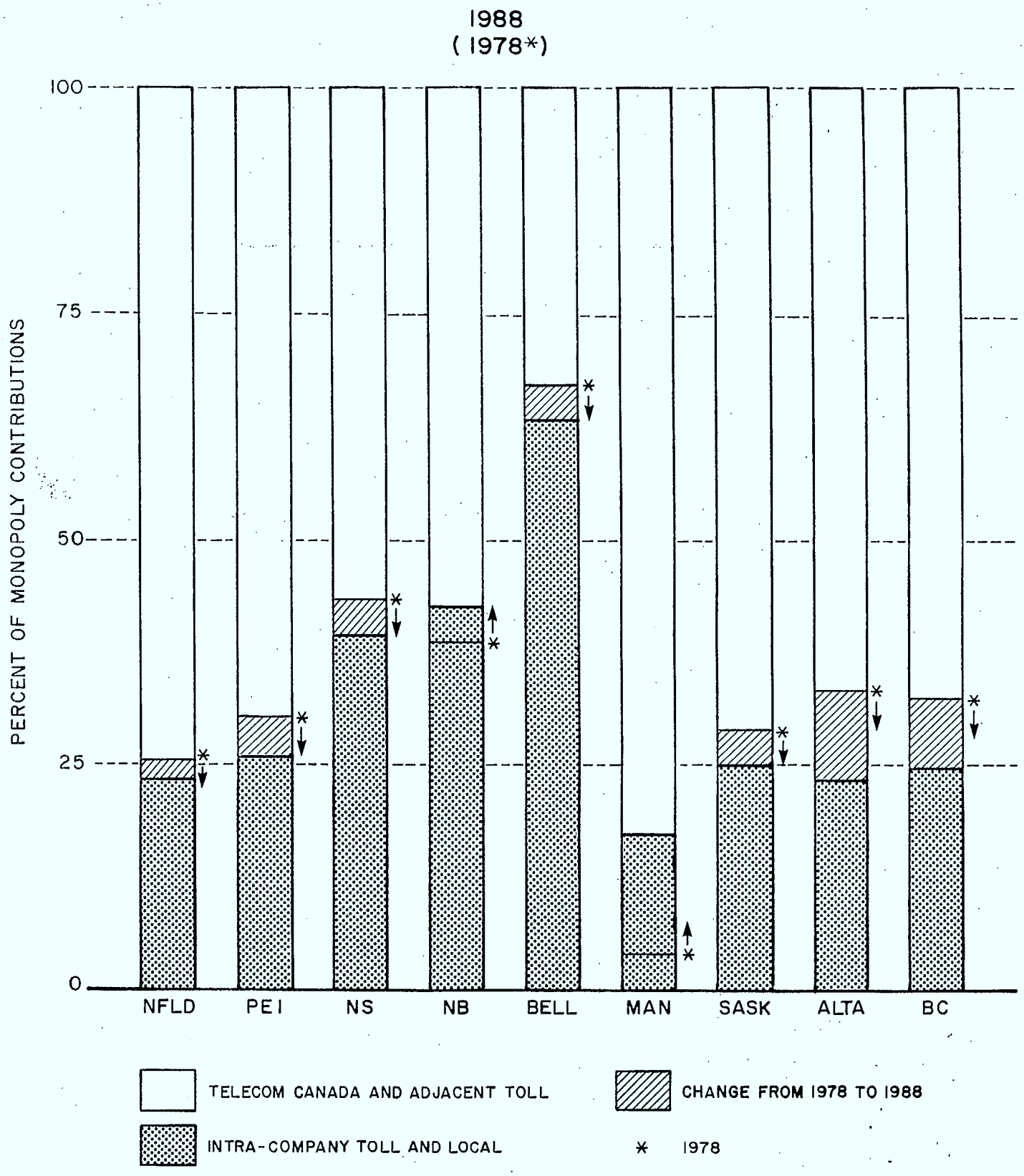

Exhibit 6 shows a graphical grouping of contributions from services within companies (local plus "intra") vs. contributions from inter-company services in 1978 and 1988.

Exhibit 5 shows that in 1978 intercompany toll services made by far the largest revenue contributions to most telephone companies' common costs and will continue to do so in 1988 in the "Base Case". In contrast, in most jursdictions, the contributions provided by local and intra-company toll services to common costs have been and are projected to remain in the range of 20 to 30 percent of the total contributions made by the monopoly service sector.

The Exhibit indicates that Maritime T&T, NBTel and, in particular, Bell Canada, are somewhat different from the other telephone companies, showing relatively smaller contributions from intercompany services and greater contributions from intra-company services.

EXHIBIT 7

TOTAL REVENUE SHORTFALLS

COMPARED TO BASE CASE

($/month per Equivalent Residential Line)

Example:
1.91 Shortfall
(0.22) Surplus

RATE REDUCTION: 20%

PARTICIPATING CARRIERS:	Bell/B.C.Tel EXISTING RSP			Bell/B.C.Tel/AGT EXISTING RSP			Bell/B.C.Tel/NBTel/MT&T EXISTING RSP			All Carriers EXISTING RSP		
	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL*	ALL TOLL	INTRA ONLY	PART OF TOLL*	ALL TOLL
Bell Canada	1.91	1.98	2.04	1.89	2.00	2.11	1.88	2.07	2.16	1.86		2.22
Nfld.	(0.22)	0.02	0.48	(0.26)	0.24	0.59	(0.31)	0.33	0.89	2.53		3.66
Island Tel	(0.18)	0.02	0.34	(0.22)	0.21	0.45	(0.24)	0.30	0.78	1.06		2.24
Maritime T&T	(0.17)	0.01	0.34	(0.20)	0.18	0.42	2.56	2.68	3.37	2.52		3.56
NBTel	(0.21)	(0.08)	0.47	(0.24)	0.05	0.62	2.17	3.36	3.56	2.14		3.77
Manitoba TS	(0.23)	(0.09)	0.22	(0.25)	0.03	0.28	(0.26)	0.11	0.38	2.38		3.44
Sask.Tel	(0.16)	0.02	0.32	(0.30)	0.03	0.81	(0.31)	0.13	0.86	2.75		4.30
AGT	(0.18)	(0.04)	0.63	2.40	3.35	3.32	2.39	3.39	3.36	2.34		3.50
B.C.Tel	2.53	2.37	2.94	2.46	3.30	3.20	2.45	3.36	3.24	2.42		3.37
Uniform Access Charge (cents)												

* Only for calls originating and terminating in "participating" territories

IV - RATE REDUCTION SCENARIOS UNDER THE EXISTING REVENUE SETTLEMENT PLAN

Rate reductions could be applied to long distance services by any carrier at any time. In order to provide a starting point for this analysis it was assumed that Bell Canada and B.C.Tel would be the first to reduce their long distance rates, simply because these carriers have already suggested such reductions and the CRTC, in Decision 85-19, has expressed its views that such reductions would be in the public interest.

TOLL RATE REDUCTION BY BELL AND B.C.TEL

The shortfalls of revenues caused by toll rate reductions of 20 percent by Bell and B.C.Tel are shown in Exhibit 7. All shortfalls are related to the Base Case, i.e., the case of no toll rate reductions and continuation of the present revenue settlement rules among carriers. Supporting details are provided in Appendix A.

Among the cases summarized in Exhibit 7, it was first assumed that only intra-company toll rates would be decreased by Bell and B.C.Tel. With such reductions under the existing RSP, those carriers that would not reduce their toll rates would actually benefit: they show small surpluses, ranging to a maximum of 20 cents per month per equivalent residential line. The reason for these surpluses is the RSP revenue sharing formula in which larger volumes of intra-company traffic would cause a greater allocation of Loop and Station Costs to the "intra" category and a smaller allocation to the intercompany categories. Thus, Bell and B.C.Tel's Member Participation Measures would become smaller and, consequently, the other carriers receive larger revenue shares.

As shown in Exhibit 7, the impacts of this option on the non-participating companies would nevertheless be small. This is also true in the case in which toll calls originating and terminating in Bell or B.C.Tel territory

would be subject to the reduced rates (second data column of Exhibit 7). In that case the impacts of the reductions on the magnitude of the revenue pool may outweigh the effects described above and some carriers would show shortfalls, albeit of negligible magnitude.

Route Averaging or Reciprocity

When some of the carriers apply significant reductions to their inter-company rates, the reductions may be applied in two different ways:

- only for calls made between the carriers that have reduced their rates

- for all long distance calls originating in the jurisdictions that have reduced their rates.

The first alternative maintains the principle of "reciprocity", i.e., the rates between two locations would be identical regardless of direction. However, the principle of "route averaging" would not be maintained since it may happen that the rates for a shorter distance might be higher than those for a longer distance.

In the second alternative, the situation would be reversed. Route averaging would be maintained but it may happen that the rates from one location to the other would be different from the rates applicable in the opposite direction.

The second alternative is shown in the third data column of Exhibit 7. The revenue shortfalls experienced by those jurisdictions that did not participate in the rate reductions would be somewhat greater in this case than in the first alternative but still relatively modest: at most 63 cents per month per residential subscriber line.

The shortfalls in those jurisdictions in which the toll rate reductions had been implemented would, of course, be much higher. With 20 percent toll rate reductions the shortfalls would range from $2.04 to $2.94 per month per residential line.

The main reason for the relatively small impact of significant toll rate reductions on the telephone companies' revenues is the elasticity of long distance telephone demand. Using the results of the Competition Study, it was assumed in the present study that in 1988 the elasiticity of intra-company long distance demand will be in the order of -0.7 while the elasticity of intercompany demand will be in the order of -1.0 (with some variations among carriers). These elasticities mean that a one percent rate reduction in these service categories would result in a traffic growth of 0.7 or 1.0 percent respectively. Thus, a substantial part of the revenue loss caused by a rate reduction would be offset by the additional revenue derived from the ensuing traffic growth.

It should be noted that revenue changes caused by transitting traffic were ignored in the analysis. These are revenues accruing to Telecom Canada members who provide facilities for transmitting messages that neither originate nor termate in their territories.

Data for estimating the small impacts related to transitting traffic were not available to the study team.

It can be generally stated that while the consideration of transitting traffic would slightly increase the revenues of the carriers that provide facilities for such traffic under reduced-rate scenarios, it would decrease the revenues of other Telecom Canada members by very small amounts.

FURTHER CARRIERS REDUCE THEIR TOLL RATES

Exhibit 7 also shows the impacts of one to three further carriers joining the group that would decide to reduce its toll rates by 20 percent.

These are examples for possible further alternatives. Comparing the second and third groups of data with the first in Exhibit 7 it is evident that the entry of additional carriers in the rate-discounting group would have significant impacts on the additional carriers themselves but would have relatively little impact on the remaining carriers.

In the examples AGT was assumed to join the group first, followed by Maritime T&T and NBTel.

For example, AGT's joining the "toll rate reduction program" would increase Saskatchewan subscribers' monthly loss from 32 cents (in the Bell/B.C.Tel case) to 81 cents. NBTel and MT&T's joining would have little impact in the West but would increase Newfoundland subscribers' losses from 48 cents (in the Bell/B.C.Tel case) to 89 cents per month.

Of course, the companies that would join the "rate reduction program" would experience significant revenue shortfalls themselves, ranging from $2.11 to $3.58.

ALL CARRIERS REDUCE THEIR TOLL RATES

The revenue shortfalls resulting from universal toll rate reductions of 20 percent across Canada are shown in the last data group of Exhibit 7.

It is interesting to observe that in this case the revenue shortfalls of the various carriers are within a relatively narrow range: broadly between $2 and $4 per month per equivalent residential line.

EXHIBIT 8

TOTAL REVENUE SHORTFALLS
COMPARED TO BASE CASE
($/month per Equivalent Residential Line)

Example:
1.91 Shortfall
(0.22) Surplus

RATE REDUCTION: 40%

PARTICIPATING CARRIERS:	Bell/B.C.Tel EXISTING RSP			All Carriers EXISTING RSP		
	INTRA ONLY	PART OF TOLL*	ALL TOLL	INTRA ONLY	PART OF TOLL*	ALL TOLL
Bell Canada		4.83	5.28			5.76
Nfld.		0.16	1.71			9.53
Island Tel		0.14	1.36			6.02
Maritime T&T		0.11	1.25			8.99
NBTel		(0.10)	1.80			9.39
Manitoba TS		(0.13)	1.11			8.44
Sask.Tel		0.13	1.22			10.73
AGT		(0.91)	1.92			8.88
B.C.Tel		5.76	7.59			8.78
Uniform Access Charge (cents)						

* Only for calls originating and terminating in "participating" territories

Bell Canada and the Island Telephone Company could be the least affected while SaskTel would be the most affected.

If a typical revenue shortfall was, say, $3 per month and the telephone company recovered that shortfall from an increase in local charges, any subscriber with an average long distance telephone bill in excess of $15 would benefit from the change. Due to the 20-percent reduction the long distance bill of such subscribers would decrease by more than $3, as long as they made no more calls than before.

40-PERCENT TOLL RATE REDUCTIONS

Exhibit 8 shows the impacts of 40-percent toll rate reductions.

As shown in Exhibit 8, with toll rate reductions of such size the revenue shortfalls would become more significant but still quite small for those carriers that would not participate in the "rate reduction program". The impacts would be quite small in the case in which "reciprocity" was maintained, i.e., calls made from "participating" territories to "non-participating" territories would not be subject to toll rate reductions.

The impacts would be quite significant, however, if all carriers reduced their toll rates. The carriers' revenue shortfalls would range from $5.76 to $10.73.

If these shortfalls were to be recovered from local rates, the relative increases in these rates would be fairly significant but would still be considerably less than the increases of over 100 percent shown in some previous studies. In those studies, the reduction of long distance rates was accompanied by a simultaneous reduction in the differentials between residential and business rates and between local rate groups (i.e., exchange sizes). The present study did not consider such further adjustments for several reasons:

- they would have clouded the issues related strictly to the effects of the reductions in long distance rates

- no rationale could be identified for narrowing the gaps between residential and business rates, since businesses would be the greatest beneficiaries of long distance rate reductions

- the existing rationale for maintaining the existing differentials among local rate groups would not change as the result of reductions in long distance rates.

The implicit assumption was therefore made in the definition of "equivalent residential lines" that any changes in local rates would be spread proportionally across local exchange tariffs.

V - ALTERNATIVE REVENUE SHARING ARRANGEMENTS

The previous Chapter has shown that rate re-structing by some of the carriers will affect other carriers and their subscribers, due to the nature of the existing Revenue Settlement Plan.

In this Chapter we explore the impacts of alternative revenue settlement arrangements and examine the extent to which such arrangements might mitigate or eliminate the detrimental impacts of toll rate reductions in some jurisdictions on the carriers and their subscribers in other jurisdictions.

Two broad groups of revenue sharing arrangements were examined in this study:

- o Revenue Settlements.
- o Carrier Access Charges.

All of the examined arrangements had one feature in common: the carriers were assumed to be first re-imbursed for their identifiable direct costs from the pool of jointly earned revenues. These costs are the demonstrated operating expenditures and capital expenses directly associated with the transmission and switching of the traffic that generated the revenues subject to distribution.

The differences among the alternatives examined in the study were the methods of distributing the residual part of the jointly earned revenue pool, i.e., the part remaining after the re-imbursement of direct costs. This part of the revenue pool is intended to cover parts of the telephone companies' common costs, i.e., to make a "contribution" toward these costs.

Since the largest common cost element of a carrier is that of the local subscriber plant (loops), the contribution derived by each carrier from the

revenue pool can be regarded as a charge by the carrier to the pool (i.e., to all the other members) for distributing the members' messages through its local subscriber plant.

REVENUE SETTLEMENTS

Traditionally, in revenue settlement arrangements, the formula for sharing the residual or "contribution" part of the revenue pool has either been based on investments assigned to particular services or to capital and operating costs attributed to the services.

In such systems, a change in the revenues collected by one party will affect the magnitude of the revenue pool and, therefore, will usually affect the revenue shares received by all parties. This is the principle of Telecom Canada's current Revenue Settlement Plan. A similar approach is used for settlements between Adjacent telephone companies which distribute their jointly earned revenues separately from Telecom Canada and from other Adjacent Company settlements.

Even though it was shown in the preceding Section that long distance rate reductions in some jurisdictions would have relatively small impacts on other jurisdications in terms of cents per month per residential subscriber line, the present Revenue Settlement Plan can be modified to eliminate these impacts entirely.

This can be accomplished by fixing the revenue shares of certain carriers so that they become immune to the impacts of changes in other jursdictions. Under such arrangements, the decline in the common revenue pool resulting from certain members reducing their collected long distance rates would affect only the payouts to those members. Payments from the pool to other members would not be affected.

Accordingly, it should be possible to design a "Modified RSP" which would consist of the following rules:

(i) At the time the new settlement plan is implemented, some of the telephone companies would be assigned a guaranteed settlement revenue. For the purpose of this study this guaranteed revenue was assumed to be equal to a fixed percentage of the telephone company's common costs*. This may be called "contribution percentage". A fixed or "guaranteed" contribution percentage will provide the subscribers of those companies that had opted for not reducing their long distance rates, protection against harmful effects arising from rate reductions elsewhere. The percentage value that would be assigned to each telephone company might be the actual percentage in the year preceeding the inauguration of the plan, or some other negotiated figure. A basic contribution percentage would be determined for each company.

(ii) Each telephone company would be paid its Recoverable Assigned Costs from the TransCanada and Adjacent revenue pools, as before.

(iii) Those companies that opt for a guaranteed settlement would then receive payments from the residual contribution pool equal to their fixed percentage determined under (i).

(iv) Finally, the remaining amount in the contribution pool would be distributed among the companies not opting for guaranteed settlements in the same proportion as their basic contribution percentages determined under (i).

---

* Loop and Station costs plus "Net Other Common Costs" (Other Common Costs less Common Revenues).

EXHIBIT 10

TOTAL REVENUE SHORTFALLS
COMPARED TO BASE CASE
($/month per Equivalent Residential Line)

Example:
1.91 Shortfall
(0.22) Surplus

RATE REDUCTION: 40%

PARTICIPATING CARRIERS:

	Bell/B.C.Tel GUARANTEED SETTLEMENTS		All Carriers GUARANTEED SETTLEMENTS		
	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL
Bell Canada		4.84	5.67			
Nfld.		0	0			
Island Tel		0	0			
Maritime T&T		0	0			
NBTel		0	0	Same as Existing RSP (Exhibit 8)		
Manitoba TS		0	0			
Sask.Tel		0	0			
AGT		0	0			
B.C.Tel		5.73	8.84			
Uniform Access Charge (cents)						

EXHIBIT 9

TOTAL REVENUE SHORTFALLS
COMPARED TO BASE CASE
($/month per Equivalent Residential Line)

Example:
1.91 Shortfall
(0.22) Surplus

RATE REDUCTION: 20%

PARTICIPATING CARRIERS:	Bell/B.C.Tel GUARANTEED SETTLEMENTS			Bell/B.C.Tel/AGT GUARANTEED SETTLEMENTS			Bell/B.C.Tel/AGT/NBTel/MT&T GUARANTEED SETTLEMENTS			All Carriers GUARANTEED SETTLEMENTS		
	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL
Bell Canada	1.85	1.97	2.14	1.85	2.02	2.17	1.86	2.09	2.20			
Nfld.	0	0	0	0	0	0	0	0	0			
Island Tel	0	0	0	0	0	0	0	0	0			
Maritime T&T	0	0	0	0	0	0	2.52	2.90	3.59			
NBTel	0	0	0	0	0	0	2.14	3.39	3.64			
Manitoba TS	0	0	0	0	0	0	0	0	0	Same As Existing RSP (Exhibit 7)		
Sask.Tel	0	0	0	0	0	0	0	0	0			
AGT	0	0	0	2.32	3.33	3.53	2.32	3.37	3.53			
B.C.Tel	2.42	2.34	3.35	2.41	3.35	3.32	2.42	3.40	3.33			
Uniform Access Charge (cents)												

The carriers that do not opt for guaranteed settlements would thus assume the risk of declines in TransCanada or Adjacent revenues but would also enjoy the benefits of potential increases in such revenues in relation to those of other services.

The advantage of this system would be to allow some of the carriers to radically restructure their rates without hurting other carriers. It would be understood that those carriers that would be allowed by the regulators to restructure their rates would be expected by the other Telecom Canada members to choose the non-guaranteed option.

Exhibits 9 and 10 show the impacts of the modified RSP on the carriers participating in the "rate reduction program" (with the other carriers experiencing, of course, no effects). Details are presented in Appendix B.

CARRIER ACCESS CHARGES

The settlement of jointly earned revenues through a system of access charges* would represent a significant departure from the present settlement arrangements in Canada.

Under the present arrangements, revenues are settled on the basis of cost allocations, i.e., those carriers that handle more traffic in a particular service sector obtain a larger share of the revenues by devoting a larger

---

* The access charges paid to a local carrier, as defined in this report, are charges paid by other carriers for accessing the local carriers' subscribers. They are therefore "carrier access charges", as distinct from the types of "subscriber access charges" now being applied in the U.S. Subscriber accesss charges are meant to be direct payments by the subscribers for the non-traffic sensitive (NTS) costs of the telephone lines that connect them to the telephone company's central office. In Canada, there are no equivalent separate access charges, since the telephone companies do not distinguish those parts of the monthly local user changes that are intended to pay for access from those parts that pay for local exchange services.

portion of their facilities and their operations to that service. Costs represent indirect measurements of service provision. In contrast, settlements based on access charges would depend on the number of message minutes handled by a carrier in the particular service sector and would therefore be directly related to usage.

As under present arrangements, the directly identifiable costs would first be recovered by each carrier. The remaining revenues would then be distributed in proportion to the time during which the loops of each carrier were used to carry messages belonging to the particular service sector.

Both incoming and outgoing minutes would be measured. The system may be based on conversation minutes, holding minutes or billed minutes.

Such a system is currently being used by the U.S. interstate carriers to compensate the local carriers for providing access to their subscribers from the point of interconnection between the interstate carrier and the local subscriber plant to the subscribers.

Two alternative arrangements were examined in the study:

- Uniform carrier access charges across Canada ("Uniform Access Charge System").

- Specific carrier access charges set by each carrier ("Modified Access Charge System").

In the first arrangement identical carrier access charges would be paid by each Canadian carrier to each other carrier, based on the system average. For some carriers the introduction of this arrangement would significantly change the percentage contributions derived from long distance services even if long distance subscriber (collection) rates remained the same as in the present system. The study results shown in this report indicate which

EXHIBIT 11

Scenario 1988

Toll Reduction (%): 0%
Services Affected: All Toll
Companies Affected: None
Settlement Method: Uniform Access Charge (0.2016)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	52.4%	3.3%	34.3%	-0.3%	100.0%
Newfoundland	14.0%	8.9%	13.1%	39.3%	24.7%	100.0%
Island	11.9%	13.6%	24.9%	83.0%	-33.4%	100.0%
Maritime	5.9%	33.0%	27.3%	55.0%	-21.2%	100.0%
New Brunswick	6.4%	35.7%	40.6%	18.4%	-1.1%	100.0%
Manitoba	-25.5%	42.2%	44.5%	35.5%	3.4%	100.0%
Saskatchewan	-8.7%	33.0%	38.5%	31.8%	5.5%	100.0%
Alberta Gov't	-5.3%	27.9%	38.5%	45.8%	-7.0%	100.0%
British Columbia	-35.9%	59.7%	22.5%	46.9%	6.7%	100.0%
Canada	0.2%	47.2%	15.2%	37.5%	.0%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	MONOPOLY				RESIDUAL			
	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	5.85	0.37	3.83	(0.12)	(0.32)	10.75	0.03
Newfoundland	1.90	1.20	1.78	5.31	(0.42)	(1.30)	8.47	(3.34)
Island	1.22	1.39	2.55	8.48	0.02	1.39	15.06	3.42
Maritime	0.71	3.95	3.28	6.59	(0.02)	0.85	15.37	2.54
New Brunswick	1.02	5.67	6.45	2.92	0.14	(0.24)	15.97	0.17
Manitoba	(2.80)	4.63	4.89	3.89	0.01	1.72	12.35	(0.37)
Saskatchewan	(1.35)	5.10	5.95	4.91	0.02	(1.52)	13.12	(0.85)
Alberta Gov't	(0.62)	3.30	4.56	5.42	(0.11)	0.51	13.05	0.83
British Columbia	(4.00)	6.67	2.51	5.24	0.05	1.99	12.45	(0.75)

carriers would experience an increase in revenue from the TransCanada and Adjacent service categories and which carriers would experience a decline as the result of the adoption of this system.

In the second arrangement the access charges would be set separately by each carrier. The original charges would be set in such a manner that the expected revenues from TransCanada and Adjacent services would provide a fixed percentage contribution to the carriers' Common Costs. The percentage could be fixed on the basis of a particular year or through negotiations.

Similarly to the "Modified RSP", not all the carriers may opt for "guaranteed" access charges fixed in the manner above. In such a "Modified Access Charge System" some carriers would set their own specific access charges, independently of the other carriers. The carriers with such set charges would then be paid first from the residual contribution revenue pool. The remainder of the pool would next be distributed among the carriers that have not opted for set charges. The access charges for these carriers would be modified in proportion to their original charges. Carriers that reduce their long distance charges by large amounts would be expected to opt out of the system of set charges.

When some carriers reduce their long distance rates the revenue pools decline. In the Uniform Access Charge System all carriers would receive proportionately reduced access charges. In the Modified Access Charge System only those carriers would receive reduced revenues who applied large reductions to their long distance charges and opted out of the set-charge system.

The Impacts of Uniform Access Charges

Exhibit 11 shows the changes caused by uniform access charges relative to the Base Case (the continuation of the present RSP). Under unchanged

EXHIBIT 12

ESTIMATED INTERCOMPANY CONVERSATION MINUTES - 1988

(millions per year - rounded)

	DESTINATION:										
ORIGIN:	Bell	Nfld.T	ITC	MTT	NBTel	MTS	Sask.T	AGT	BCTel	Int'l	TOTAL
Bell	-	20	10	50	50	80	50	160	140	940	1,500
Nfld.T	14	-	1	13	1	2	2	6	6	5	50
ITC	6	1	-	7	1	1	1	3	3	2	25
MTT	30	17	4	-	37	4	6	14	13	20	145
NBTel	60	1	1	29	-	2	3	8	7	20	130
MTS	65	3	1	8	2	-	30	24	21	35	190
Sask.T	40	3	1	6	2	40	-	90	20	28	230
AGT	150	10	5	23	7	20	85	-	160	115	575
BCTel	115	10	5	19	5	16	20	200	-	190	580
Int'l	940	5	2	20	20	35	28	115	190	-	1,355
TOTAL	1,420	70	30	175	125	200	225	620	560	1,355	4,780

EXHIBIT 13

TOTAL REVENUE SHORTFALLS
COMPARED TO BASE CASE
($/month per Equivalent Residential Line)

RATE REDUCTION: 20%

Example:
1.91 Shortfall
(0.22) Surplus

PARTICIPATING CARRIERS:	Bell/B.C.Tel UNIFORM ACCESS CHARGES			Bell/B.C.Tel/AGT UNIFORM ACCESS CHARGES			Bell/B.C.Tel/AGT/NBTel/MT&T UNIFORM ACCESS CHARGES			All Carriers UNIFORM ACCESS CHARGES		
	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL
Bell Canada	1.82	1.85	1.87	1.82	2.10	2.06	1.82	2.19	2.15	1.82		2.30
Nfld.	3.34	3.55	4.02	3.34	4.12	4.28	3.34	4.36	4.27	5.78		6.44
Island Tel	(3.42)	(3.08)	(2.28)	(3.42)	(2.19)	(1.91)	(3.42)	(1.82)	(1.79)	(2.22)		(1.00)
Maritime T&T	(2.54)	(2.24)	(1.50)	(2.54)	(1.44)	(1.13)	0	0.15	0.68	0		0.95
NBTel	(0.17)	0.12	0.75	(0.17)	0.87	1.19	2.09	2.14	2.75	2.09		3.13
Manitoba TS	0.37	0.64	1.22	0.37	1.35	1.59	0.37	1.64	1.76	2.90		3.71
Sask.Tel	0.85	1.19	2.13	0.85	2.06	2.34	0.85	2.42	2.57	3.65		4.72
AGT	(0.83)	(0.52)	0.06	1.48	1.47	2.00	1.48	1.74	2.22	1.48		2.50
B.C.Tel	3.21	3.00	3.31	3.21	3.18	3.55	3.21	3.41	3.72	3.21		4.02
Uniform Access Charge (cents)	20.2	19.5	17.1	20.2	17.9	16.2	20.2	17.3	15.8	20.2		15.0

long distance rates the necessary uniform access charge would be 20.2 cents per conversation minute at each end in 1988. Comparing the bottom portion of Exhibits 5 and 11, it can be seen that the shortfalls and surpluses resulting from the change from the RSP to the Uniform Access Charge System would range from a shortfall of $3.34 per month in Newfoundland to a gain of $3.42 in P.E.I. The gainers would be:

- P.E.I.
- Nova Scotia
- New Brunswick
- Alberta.

The losers would be:

- Manitoba
- British Columbia
- Saskatchewan
- Newfoundland.

For Bell Canada there would be practically no change.

For testing this revenue sharing alternative the minutes of conversation had to be estimated. The 1988 estimates are shown in Exhibit 12, based on traffic data supplied in 1978 to the CRTC Inquiry on the RSP, on Statistics Canada information and on the traffic growth assumptions implied in this study.

With long distance rate reductions of 20 percent the total impacts on Canadian subscribers, relative to the current Base Case, are shown for the various alternatives in Exhibit 13. Under the uniform access charge system, the cross-impacts of long distance rate reductions would be additional to the basic impacts resulting from the introduction of the access charge system. These additional impacts would generally be in the same

EXHIBIT 14

TOTAL REVENUE SHORTFALLS
COMPARED TO BASE CASE
($/month per Equivalent Residential Line)

Example:
1.91 Shortfall
(0.22) Surplus

RATE REDUCTION: 40%

PARTICIPATING CARRIERS:

	Bell/B.C.Tel UNIFORM ACCESS CHARGES			All Carriers UNIFORM ACCESS CHARGES		
	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL
Bell Canada		4.60	4.94			5.94
Nfld.		3.86	5.19			11.52
Island Tel		(2.61)	(0.58)			3.06
Maritime T&T		(1.81)	0.19			6.57
NBTel		0.52	2.75			8.16
Manitoba TS		1.01	2.65			8.62
Sask.Tel		1.65	4.10			10.80
AGT		(0.10)	1.65			7.93
B.C.Tel		6.23	7.51			9.22
Uniform Access Charge (cents)		18.7	13.0			9.1

order of magnitude as the cross-impacts under the present Revenue Settlement Plan system.

The impacts of 40 percent rate reductions are shown in Exhibit 14. Supporting details are presented in Appendix C.

The Advantages and Disadvantages of Access Charge Systems

Access charge systems are particularly attractive where intercompany long distance services are provided by more than one long distance carrier. If competing carriers were to provide interexchange services in Canada, Telecom Canada and the present Adjacent Agreements could be replaced by arms-length interprovincial long distance services, similar to those provided by AT&T, MCI and other carriers in the U.S. However, the significant changes in revenues that a Uniform Access Charge System would cause in some jurisdictions might make the introduction of such a system difficult.

Such adverse impacts could be eliminated, however, by the introduction of a Modified Access Charge System in which each jurisdiction would determine its own access charges. These could be fixed in such a manner that none of the carriers would suffer gains or losses from changing to the new system.

The study indicated that in a system of such non-uniform access charges a unilateral reduction of intercompany toll rates by one carrier would actually benefit all the other carriers since the reduced-rate carriers would originate more messages and thus increase the number of terminating minutes in all other carriers' territories. This, in turn, would increase the access charge revenues of those carriers.

Non-uniform access charges open the possibility for a system in which each province can be completely independent of the others and determine its

EXHIBIT 16

CARRIER ACCESS CHARGES

(per conversation minutes at each end)

	¢
Bell Canada	20.0
Newfoundland	29.6
Island	14.0
Maritime	15.0
New Brunswick	19.8
Manitoba	21.1
Saskatchewan	21.7
Alberta Government	18.5
British Columbia	22.1
Canada (Uniform Access Charge)	20.2

EXHIBIT 15

Scenario 1988

Toll Reduction (%): 0%
Services Affected: All Toll
Companies Affected: None
Settlement Method: Modified Access Charge

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	52.4%	3.3%	34.1%	.0%	100.0%
Newfoundland	14.0%	8.9%	19.3%	57.7%	0.1%	100.0%
Island	11.9%	13.6%	17.3%	57.4%	-0.3%	100.0%
Maritime	5.9%	33.0%	20.3%	40.8%	-0.1%	100.0%
New Brunswick	6.4%	35.7%	39.8%	18.0%	0.1%	100.0%
Manitoba	-25.5%	42.2%	46.5%	37.0%	-0.2%	100.0%
Saskatchewan	-8.7%	33.0%	41.5%	34.3%	.0%	100.0%
Alberta Gov't	-5.3%	27.9%	35.4%	42.0%	.0%	100.0%
British Columbia	-35.9%	59.7%	24.7%	51.5%	-0.1%	100.0%
Canada	0.2%	47.2%	15.1%	37.5%	.0%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	MONOPOLY				RESIDUAL			
	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	5.85	0.37	3.81	(0.12)	(0.32)	10.73	.00
Newfoundland	1.90	1.20	2.61	7.80	(0.42)	(1.30)	11.79	(0.02)
Island	1.22	1.39	1.77	5.87	0.02	1.39	11.67	0.03
Maritime	0.71	3.95	2.44	4.91	(0.02)	0.85	12.84	0.01
New Brunswick	1.02	5.67	6.33	2.86	0.14	(0.24)	15.78	(0.02)
Manitoba	(2.80)	4.63	5.11	4.07	0.01	1.72	12.74	0.02
Saskatchewan	(1.35)	5.10	6.42	5.30	0.02	(1.52)	13.97	(.00)
Alberta Gov't	(0.62)	3.30	4.18	4.97	(0.11)	0.51	12.23	0.01
British Columbia	(4.00)	6.67	2.76	5.75	0.05	1.99	13.20	0.01

own specific revenue requirements from intercompany services. It could thus be each province's privilege to set low access charges in exchange for a rate reduction by the interprovincial service provider. In this way a province could stimulate long distance traffic and gain the associated consumer benefits (at the expense of some increases in local rates to compensate for the telephone company's lost revenue). Conversely, a province may opt for high access charges and discourage long distance traffic but, at the same time, increase the telephone company's revenues from the long distance sector.

Whereas a Modified Access Charge System would maximize the independence of the provinces, it may create a rather complex rate structure in Canada and impose a significant management burden on the intercompany service provider and his regulator. In such a system the interprovincial service provider would have to deal with the complexities of the system and negotiate separately with each regional/local carrier.

The Impacts of Modified Access Charges

Exhibit 15 shows the contributions derived from each service category in the Modified Access Charge System with no change in long distance rates. In this alternative each carrier would have a different access charge so as not to cause any shortfalls or surpluses in total revenue contributions in relation to the RSP base case. The access charges required to achieve this goal are shown in Exhibit 16.

The only difference between the financial implications of this case and the RSP Base Case is a shift of contributions between the Adjacent and Trans-Canada categories, since the access charges of a particular carrier are assumed to be identical for both categories. However, in aggregate, the contributions of the Adjacent and TransCanada categories would be equal to those of the Base Case.

EXHIBIT 18

TOTAL REVENUE SHORTFALLS
COMPARED TO BASE CASE
($/month per Equivalent Residential Line)

RATE REDUCTION: 40%

Example:
1.91 Shortfall
(0.22) Surplus

PARTICIPATING CARRIERS:	Bell/B.C.Tel			All Carriers		
	MODIFIED ACCESS CHARGES			MODIFIED ACCESS CHARGES		
	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL
Bell Canada		4.83	6.11			5.96
Nfld.		0	(1.48)			9.26
Island Tel		0	(1.16)			5.27
Maritime T&T		0	(0.89)			8.22
NBTel		0	(1.24)			8.27
Manitoba TS		0	(1.36)			8.35
Sask.Tel		0	(1.02)			10.24
AGT		0	(1.50)			8.46
B.C.Tel		5.90	9.18			8.73
Uniform Access Charge (cents)						

EXHIBIT 17

TOTAL REVENUE SHORTFALLS
COMPARED TO BASE CASE
($/month per Equivalent Residential Line)

RATE REDUCTION: 20%

Example:
1.91 Shortfall
(0.22) Surplus

PARTICIPATING CARRIERS:	Bell/B.C.Tel			Bell/B.C.Tel/AGT			Bell/B.C.Tel/AGT/NBTel/MT&T			All Carriers		
	MODIFIED ACCESS CHARGES			MODIFIED ACCESS CHARGES			MODIFIED ACCESS CHARGES			MODIFIED ACCESS CHARGES		
	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL	INTRA ONLY	PART OF TOLL	ALL TOLL
Bell Canada	1.84	1.97	2.34							1.85		2.33
Nfld.	0	0	(0.65)							2.44		3.41
Island Tel	0	0	(0.45)							1.20		1.99
Maritime T&T	0	0	(0.40)							2.54		3.22
NBTel	0	0	(0.55)							2.26		3.29
Manitoba TS	0	0	(0.60)							2.53		3.36
Sask.Tel	0	0	(0.46)							2.80		3.96
AGT	0	0	(0.67)							2.31		3.24
B.C.Tel	2.45	2.41	3.48							2.46		3.35
Uniform Access Charge (cents)												

The impacts of rate reductions under the Modified Access Charge System are shown in Exhibits 17 and 18. They are smaller or greater than those under the Uniform Access Charge System, depending on the original impacts of the Uniform Access Charge System. Supporting details are presented in Appendix D.

It can be concluded that there is little difference between the impacts of the Modified Access Charge System and the Modified Revenue Settlement Plan, even though the two systems are based on completely different methods of accounting and measurement.

VI - CONCLUSIONS

Several conclusions can be reached from the results of the study. They relate to:

- the revenue contributions of toll traffic
- observations regarding the Revenue Settlement Plan (RSP)
- rate reduction scenarios under the RSP
- revenue settlements through a modified RSP or a system of access charges.

THE REVENUE CONTRIBUTIONS OF TOLL TRAFFIC

The common costs of the telephone companies, consisting of Loop and Station costs and "Other Net Common Costs", made up over 30% of the carriers' total costs in 1978 and are projected to make up over 25% in 1988.

The Loop and Station costs that must be covered by contributions from the Monopoly sector vary within a relatively narrow range among Canadian carriers when expressed in terms of dollars per "equivalent" subscriber line.* The range is projected to be between $10.73 and $15.80 in 1988, with an average of $11.62 per month.

---

* "Equivalent" subscriber lines are defined as: one PBX trunk equalling six residential lines and one regular business line or one Centrex trunk equalling three residential lines. Costs as well as rate increases were assumed to be allocated by the carriers to each subscriber group in these proportions.

It was shown in Exhibit 5 of the report that the monthly charges paid for local service hardly cover the directly assigned costs of these services and leave practically nothing to cover the carriers' Loop and Station costs. In fact, local services in the Western provinces are burdens on the system. Consequently, practically all the Loop and Station costs are covered by the contributions derived from toll services.

Under current rate structures intercompany toll services make large revenue contributions to these common costs (46% of all monopoly contributions in 1978, 53% in 1988). In the majority of jursdictions, the contributions provided by local and intra-company toll services to common costs do not amount to more than 20 to 30 percent of the total contributions made by the monopoly service sector.

Since intercompany (Telecom Canada and Adjacent) services provide much larger contributions to the Loop and Station costs of most carriers than the carriers' intra-company services, the ways in which intercompany toll revenues are shared among telephone companies are vital to the financial structures and, therefore, to the rate structures of the companies. Non-uniform provincial/regional regulations may thus have significant impacts on the carriers by affecting their intercompany revenue settlements.

The relative magnitudes of these contributions are in excess of those in the United States where interstate traffic covers, on average, only 27 percent of the costs of the local subscriber plants (even though some States may deviate significantly from this average). The lower contributions made by interstate services are the primary reasons for the generally lower interstate toll rates in the United States compared to those in Canada.

OBSERVATIONS REGARDING THE REVENUE SETTLEMENT PLAN

Telecom Canada's Revenue Settlement Plan reflects a sound rationale for distributing jointly earned revenues among participating carriers. It has some weaknesses, however, which would become apparent if radically different policies were to be imposed by provincial/regional regulations on individual members of the Plan.

The features of the present Plan are as follows:

1. Costs that are directly assignable to a particular service are re-imbursed to each member. This is a straightforward and fair approach, with the minor observation that about 15 percent of the costs in the monopoly sector, that might be allocated to individual services on a causal basis, are presently left unallocated and are not re-imbursed. After the implementation of the CRTC Cost Inquiry recommendations this deficiency might be eliminated.

2. Even if the Cost Inquiry recommendations were to be implemented, the direct cost re-imbursements above would still leave almost 60 percent of the intercompany toll revenues undistributed in 1988 (and a significantly larger portion of these revenues in preceding years). The RSP distributes these residual revenues, the so-called "Contribution Revenues", in proportion to the Loop and Station costs of each member carrier, adjusted by the relative proportion of intercompany traffic handled by each carrier. The approach, as described in Par. 3, implicitly recognizes the role of the Contribution Revenues as compensation payments for access to the carriers' subscribers through their loops and stations.

3. The total Contribution Revenue pool is divided among the signatories to the Revenue Settlement Plan (the "members") in proporportion to their "Member Participation Measures". These measures are fractions of each member's Loop and Station costs, reflecting the proportion of those costs that were directly assignable to each of the carrier's monopoly services. Thus, for example, if a carrier allocated 20 percent of his monopoly service costs to the Telecom Canada sector, the same proportion, i.e., 20 percent of his Loop and Station costs, will form that carrier's Member Participation Measure.

4. This approach represents the principle of "Fully Distributed Costs". The common Loop and Station costs are "fully distributed" over the identifiable costs of individual services, and the amount allocated to a particular service forms the basis for deriving the share of jointly earned contribution revenues generated by that service.

The Revenue Settlement Plan appears to be a fair method for distributing jointly earned revenues among carriers. It is certainly not the only fair method of distribution but it has the strength of enjoying the agreement of ten independent corporations. It was developed and implemented in an era in which provincial/regional regulations in Canada followed largely similar policies and relies for its effectiveness on the continuation of largely similar policies.

Potential Shortcomings of the Plan

Problems with the Plan would arise, however, if the policies of any particular jursdication were to change. For example, the regulators of one or more carriers might decide that the public interest would be best served if

long distance telephone rates were significantly reduced. Such a decision may apply to:

- only intra-company rates, or
- both intra-company and intercompany rates.

In the first case the impacts of such a policy change on carriers in other jursdictions would be relatively small. In fact, the impacts would be positive in terms of revenue shares gained from the Telecom Canada and Adjacent settlement pools by those companies that were not parties to the policy change.

The cross-impacts of long distance rate reductions are more serious when particular carriers are instructed or allowed by their regulators to reduce their intercompany rates to a significant extent. Such reductions will reduce the pools of jointly earned revenues, and therefore, exert a negative impact on all the other carriers that participate in the pools.

Since the long distance rates of the Revenue Settlement Plan participants, and of participants to Adjacent Carrier Agreements, are subject to the veto of any one member, it may not be possible to implement significant rate reductions by a sub-group of carriers under the present arrangements. Such change might be prevented by the other members, even though some of the carriers and their regulators might have proved to their own satisfaction, and to the satisfaction of their constitutents, that long distance rate reductions would be in the public interest.

ALTERNATIVE RATE STRUCTURES AND REVENUE SHARING ARRANGEMENTS

This study explored:

- the extent to which the subscribers of each province would be affected by major long distance rate reductions in other provinces, and

- methods by which individual provinces could be isolated from the effects of rate reductions in other provinces.

The results of the study were summarized in Chapters IV and V and Exhibits 7 through 18 of the Report. They indicated that the impacts of long distance rate reductions on carriers not participating in the reductions would be relatively small, even if current revenue sharing arrangements were not changed.

Several cases were examined in which some of the carriers were assumed to reduce their long distance rates and others not. In such situations intercompany rates may be reduced in two ways:

- only between those carriers that reduced their toll rates, or

- for all messages originating in the jurisdictions in which toll rate reductions have been applied.

Each of these options would result in a change from the present principles governing rate scales.

In the first case the principle or route averaging would be violated, i.e., long distance rates over longer distances may be lower than rates for shorter distances.

In the second, the priniciple of reciprocity would be violated, i.e., a call from one province to the other may cost less or more than the equivalent call made in the opposite direction.

The study found that under the first option the impacts of long distance rate reductions by some carriers on the carriers and subscribers of other jursidictions would not be higher than a few cents per month per average residential subscriber line. Under the second option the impacts would be somewhat greater but still relatively small: ranging from 22 cents to 89 cents per month per line, assuming long distance rate reductions of 20 percent by the external carriers (depending on the jurisdictions and the number of carriers that would reduce their long distance rates). With long distance rate reductions of 40 percent the impacts on non-reducing carriers would still be less than $2.00 per month per line in most cases.

Even these impacts can be eliminated, however, by the application of a Modified Revenue Settlement Plan in which all carriers that opted for no reductions in long distance rates would be guaranteed re-imbursement of an unchanged percentage of their common costs from the revenue settlement pool. Such a plan would slightly reduce the revenue settlements received by those carriers who opted for long distance rate reductions.

With such an arrangement the subscribers of the non-reducing carriers would enjoy the benefits of receiving more telephone calls (originating in the toll rate reducing jurisdictions) at no extra cost to them.

Access Charge Systems

The study also examined entirely different systems of revenue distributions: systems of carrier access charges.

Whereas the Revenue Settlement Plan compensates the carriers for the toll use of their Loops and Stations on the basis of incurred traffic-sensitive costs, access charge systems compensate the carriers for the use of their Loops and Stations on the basis of minutes of usage. Accordingly, each carrier would be compensated from the carriers' long distance revenue pool on the basis of the number of minutes during which their Loops and Stations were used for carrying long distance messages.

Access charge systems are particularly attractive in those cases in which intercompany long distance services are provided by one or more independent interexchange carriers. Such systems would be particularly suited, therefore, as revenue settlement arrangements if competition among interexchange carriers, such as exists today in the United States, were allowed in Canada. Access charge systems would also be administratively simple as they do not require elaborate measurements of costs.

Two types of access charge systems where examined: the Uniform Access Charge System and the Modified Access Charge System.

In the former, all access charges received by the carriers from the joint long distance revenue pools for the intercompany toll use of their Loops and Stations (expressed in cents per minute) would be uniform across Canada. Under such a system, some of the carriers would benefit and others would suffer losses in relation to today's revenue settlement arrangements. The Uniform Access Charge System does not recognize the differences among the revenue requirements of the carriers resulting from the different Loop and Station costs in different jurisdictions.

This shortcoming would be remedied by a Modified Access Charge System in which each carrier would be able to set its own access charges. Even though administratively more complex, a Modified Access Charge System would not drastically change the status quo and would not be much different in terms of impacts from the Modified Revenue Settlement Plan.

In a Uniform Access Charge System, without any rate changes, some carriers' gains or losses vis a vis the present system could be as high as $3.40 per month per residential subscriber line, even though the gains or losses of the six largest carriers would be below one dollar per month. The estimated uniform access charge in 1988 would be approximately 20 cents per minute, each at the originating and at the terminating end. In a Modified Access Charge System this charge would vary from 14 cents to 30 cents per minute.

Current long distance revenue settlement arrangements between the interstate and local carriers in the United States are similar to the Modified Access Charge System examined in this study. This type of system has been considered by the Federal Communications Commission and the State Regulators as best suited for the present competitive environment in that country. It is the objective of the Federal Communications Commission, however, to move toward a more uniform system and to establish a rather complex compensation scheme for local carriers with exceptionally high Loop and Station costs. Furthermore, in the U.S., all long distance access charges will eventually be paid directly by the subscribers: a system compatible with current U.S. trends but completely different from the systems evaluated in this study for Canada.

APPENDIX A

EXISTING RSP

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Teleco.

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	5.5%	31.3%	17.1%	100.0%
Newfoundland	14.0%	8.9%	18.3%	60.4%	-1.6%	100.0%
Island	11.9%	13.6%	9.4%	66.8%	-1.8%	100.0%
Maritime	5.9%	33.0%	12.0%	50.6%	-1.4%	100.0%
New Brunswick	6.4%	35.7%	29.3%	30.0%	-1.3%	100.0%
Manitoba	-25.5%	42.2%	42.3%	43.1%	-2.1%	100.0%
Saskatchewan	-8.7%	33.0%	37.0%	39.9%	-1.0%	100.0%
Alberta Gov't	-5.3%	27.9%	35.6%	43.2%	-1.5%	100.0%
British Columbia	-35.9%	37.7%	24.2%	51.3%	22.6%	100.0%
Canada	0.2%	34.7%	15.4%	37.2%	12.5%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Teleco.

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.62	3.50	(0.12)	(0.32)	8.82	(1.91)
Newfoundland	1.90	1.20	2.48	8.17	(0.42)	(1.30)	12.03	0.22
Island	1.22	1.39	0.96	6.83	0.02	1.39	11.82	0.18
Maritime	0.71	3.95	1.44	6.06	(0.02)	0.85	13.00	0.17
New Brunswick	1.02	5.67	4.66	4.76	0.14	(0.24)	16.01	0.21
Manitoba	(2.80)	4.63	4.65	4.73	0.01	1.72	12.95	0.23
Saskatchewan	(1.35)	5.10	5.72	6.17	0.02	(1.52)	14.13	0.16
Alberta Gov't	(0.62)	3.30	4.21	5.11	(0.11)	0.51	12.40	0.18
British Columbia	(4.00)	4.21	2.70	5.72	0.05	1.99	10.67	(2.53)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.9%	5.5%	30.7%	17.7%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.6%	0.2%	100.0%
Ialand	11.9%	13.6%	9.4%	64.9%	0.2%	100.0%
Maritime	5.9%	33.0%	12.0%	49.1%	0.1%	100.0%
New Brunswick	6.4%	35.7%	29.3%	29.1%	-0.5%	100.0%
Manitoba	-25.5%	42.2%	42.4%	41.8%	-0.9%	100.0%
Saskatchewan	-8.7%	33.0%	37.0%	38.7%	0.1%	100.0%
Alberta Gov't	-5.3%	27.9%	35.7%	42.0%	-0.3%	100.0%
British Columbia	-35.9%	37.8%	24.2%	52.7%	21.3%	100.0%
Canada	0.2%	34.7%	15.4%	36.7%	13.1%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.62	3.43	(0.11)	(0.32)	8.75	(1.98)
Newfoundland	1.90	1.20	2.48	7.93	(0.42)	(1.30)	11.79	(0.02)
Ialand	1.22	1.39	0.96	6.63	0.02	1.39	11.62	(0.02)
Maritime	0.71	3.95	1.44	5.89	(0.02)	0.85	12.82	(0.01)
New Brunswick	1.02	5.67	4.66	4.62	0.14	(0.24)	15.88	0.08
Manitoba	(2.80)	4.63	4.65	4.59	0.01	1.72	12.81	0.09
Saskatchewan	(1.35)	5.10	5.72	5.98	0.02	(1.52)	13.95	(0.02)
Alberta Gov't	(0.62)	3.30	4.22	4.96	(0.11)	0.51	12.26	0.04
British Columbia	(4.00)	4.21	2.69	5.87	0.07	1.99	10.82	(2.37)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	5.2%	30.1%	18.3%	100.0%
Newfoundland	14.0%	8.9%	18.3%	55.3%	3.5%	100.0%
Island	11.9%	13.6%	9.4%	61.8%	3.3%	100.0%
Maritime	5.9%	32.9%	12.0%	46.5%	2.7%	100.0%
New Brunswick	6.4%	35.7%	28.3%	26.2%	3.4%	100.0%
Manitoba	-25.5%	42.2%	43.6%	37.8%	2.0%	100.0%
Saskatchewan	-8.7%	32.9%	37.0%	36.8%	2.0%	100.0%
Alberta Gov't	-5.3%	27.9%	32.9%	39.2%	5.3%	100.0%
British Columbia	-36.1%	38.0%	22.0%	49.6%	26.5%	100.0%
Canada	0.2%	34.8%	14.7%	35.2%	15.2%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.58	3.35	(0.07)	(0.32)	8.69	(2.04)
Newfoundland	1.90	1.20	2.47	7.48	(0.43)	(1.30)	11.34	(0.47)
Island	1.22	1.39	0.96	6.33	0.01	1.39	11.31	(0.33)
Maritime	0.71	3.95	1.44	5.58	(0.04)	0.85	12.50	(0.33)
New Brunswick	1.02	5.67	4.50	4.16	0.14	(0.24)	15.25	(0.54)
Manitoba	(2.80)	4.63	4.79	4.15	0.01	1.72	12.50	(0.22)
Saskatchewan	(1.35)	5.10	5.73	5.70	(.00)	(1.52)	13.66	(0.31)
Alberta Gov't	(0.62)	3.30	3.90	4.64	(0.13)	0.51	11.60	(0.62)
British Columbia	(4.00)	4.21	2.45	5.50	0.12	1.99	10.26	(2.94)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: B.C. Tel/Bell Canada/A.G.T.
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	5.5%	31.5%	16.9%	100.0%
Newfoundland	14.0%	8.9%	18.3%	60.7%	-1.9%	100.0%
Island	11.9%	13.6%	9.4%	67.2%	-2.1%	100.0%
Maritime	5.9%	33.0%	12.0%	50.8%	-1.7%	100.0%
New Brunswick	6.4%	35.7%	29.3%	30.1%	-1.5%	100.0%
Manitoba	-25.5%	42.2%	42.3%	43.3%	-2.3%	100.0%
Saskatchewan	-8.7%	33.0%	37.6%	40.1%	-1.9%	100.0%
Alberta Gov't	-5.3%	8.4%	34.9%	41.7%	20.3%	100.0%
British Columbia	-35.9%	37.7%	24.6%	51.5%	22.0%	100.0%
Canada	0.2%	32.5%	15.4%	37.2%	14.7%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.62	3.52	(0.12)	(0.32)	8.84	(1.89)
Newfoundland	1.90	1.20	2.48	8.21	(0.42)	(1.30)	12.07	0.26
Island	1.22	1.39	0.96	6.87	0.02	1.39	11.86	0.22
Maritime	0.71	3.95	1.44	6.09	(0.02)	0.85	13.03	0.20
New Brunswick	1.02	5.67	4.66	4.78	0.14	(0.24)	16.04	0.24
Manitoba	(2.80)	4.63	4.65	4.76	0.01	1.72	12.97	0.25
Saskatchewan	(1.35)	5.10	5.82	6.20	0.02	(1.52)	14.27	0.30
Alberta Gov't	(0.62)	0.99	4.13	4.93	(0.11)	0.51	9.83	(2.40)
British Columbia	(4.00)	4.21	2.74	5.75	0.05	1.99	10.74	(2.46)
Canada	0.02	3.54	1.67	4.05	(0.07)	0.13	9.34	(1.60)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada/A.G.T.
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.9%	5.5%	30.4%	17.9%	100.0%
Newfoundland	14.0%	8.9%	18.3%	57.0%	1.8%	100.0%
Island	11.9%	13.6%	9.4%	63.0%	2.0%	100.0%
Maritime	5.9%	33.0%	12.0%	47.7%	1.5%	100.0%
New Brunswick	5.4%	35.7%	29.3%	28.3%	0.3%	100.0%
Manitoba	-25.5%	42.2%	42.4%	40.6%	0.3%	100.0%
Saskatchewan	-8.7%	33.0%	38.0%	37.6%	0.2%	100.0%
Alberta Gov't	-5.3%	8.4%	26.9%	41.6%	28.4%	100.0%
British Columbia	-35.9%	37.8%	17.8%	50.7%	29.6%	100.0%
Canada	0.2%	32.5%	13.7%	36.0%	17.6%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.62	3.39	(0.11)	(0.32)	8.72	(2.00)
Newfoundland	1.90	1.20	2.48	7.70	(0.42)	(1.30)	11.57	(0.24)
Island	1.22	1.39	0.96	6.45	0.02	1.39	11.43	(0.21)
Maritime	0.71	3.95	1.44	5.72	(0.02)	0.85	12.65	(0.18)
New Brunswick	1.02	5.67	4.66	4.49	0.14	(0.24)	15.75	(0.05)
Manitoba	(2.80)	4.63	4.66	4.46	0.01	1.72	12.69	(0.03)
Saskatchewan	(1.35)	5.10	5.88	5.81	0.02	(1.52)	13.95	(0.03)
Alberta Gov't	(0.62)	0.99	3.18	4.90	(0.08)	0.51	8.87	(3.35)
British Columbia	(4.00)	4.21	1.98	5.65	0.07	1.99	9.90	(3.30)
Canada	0.02	3.54	1.49	3.92	(0.07)	0.13	9.03	(1.91)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada/A.G.T.
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	5.2%	29.5%	19.0%	100.0%
Newfoundland	14.0%	8.9%	18.3%	54.5%	4.3%	100.0%
Island	11.9%	13.6%	9.4%	60.7%	4.4%	100.0%
Maritime	5.9%	32.9%	12.0%	45.7%	3.5%	100.0%
New Brunswick	6.4%	35.6%	28.3%	25.7%	3.9%	100.0%
Manitoba	-25.5%	42.1%	43.6%	37.2%	2.5%	100.0%
Saskatchewan	-8.7%	32.9%	35.0%	35.6%	5.3%	100.0%
Alberta Gov't	-5.3%	8.4%	29.8%	38.8%	28.3%	100.0%
British Columbia	-36.1%	38.0%	21.2%	48.1%	28.8%	100.0%
Canada	0.2%	32.6%	14.1%	34.4%	18.6%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.58	3.28	(0.07)	(0.32)	8.61	(2.11)
Newfoundland	1.90	1.20	2.47	7.37	(0.43)	(1.30)	11.22	(0.59)
Island	1.22	1.39	0.96	6.21	0.01	1.39	11.19	(0.45)
Maritime	0.71	3.95	1.44	5.50	(0.05)	0.85	12.40	(0.42)
New Brunswick	1.02	5.67	4.50	4.09	0.13	(0.24)	15.18	(0.62)
Manitoba	(2.80)	4.63	4.79	4.09	.00	1.72	12.44	(0.28)
Saskatchewan	(1.35)	5.10	5.42	5.51	(.00)	(1.52)	13.16	(0.81)
Alberta Gov't	(0.62)	0.99	3.50	4.56	(0.03)	0.51	8.90	(3.32)
British Columbia	(4.00)	4.21	2.35	5.34	0.12	1.99	10.00	(3.20)
Canada	0.02	3.54	1.53	3.73	(0.03)	0.13	8.92	(2.02)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: B.C. Tel/Bell Canada/A.G.T./N.B. Tel/M.T.T.
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	5.6%	31.6%	16.8%	100.0%
Newfoundland	14.0%	8.9%	18.5%	60.8%	-2.3%	100.0%
Island	11.9%	13.6%	9.5%	67.3%	-2.4%	100.0%
Maritime	5.9%	11.7%	11.8%	49.2%	21.4%	100.0%
New Brunswick	6.4%	21.5%	29.0%	29.5%	13.6%	100.0%
Manitoba	-25.5%	42.2%	42.3%	43.4%	-2.4%	100.0%
Saskatchewan	-8.7%	33.0%	37.6%	40.1%	-2.0%	100.0%
Alberta Gov't	-5.3%	8.4%	34.9%	41.8%	20.2%	100.0%
British Columbia	-35.9%	37.7%	24.6%	51.6%	21.9%	100.0%
Canada	0.2%	31.4%	15.4%	37.2%	15.8%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.62	3.52	(0.12)	(0.32)	8.84	(1.88)
Newfoundland	1.90	1.20	2.51	8.23	(0.42)	(1.30)	12.12	0.31
Island	1.22	1.39	0.97	6.88	0.02	1.39	11.88	0.24
Maritime	0.71	1.41	1.41	5.90	(0.02)	0.85	10.26	(2.56)
New Brunswick	1.02	3.41	4.61	4.68	0.14	(0.24)	13.64	(2.16)
Manitoba	(2.80)	4.63	4.65	4.77	0.01	1.72	12.98	0.26
Saskatchewan	(1.35)	5.10	5.82	6.21	0.02	(1.52)	14.28	0.31
Alberta Gov't	(0.62)	0.99	4.13	4.94	(0.11)	0.51	9.84	(2.39)
British Columbia	(4.00)	4.21	2.74	5.76	0.05	1.99	10.75	(2.45)
Canada	0.02	3.42	1.67	4.05	(0.07)	0.13	9.22	(1.72)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada/A.G.T./N.B. Tel/M.T.T.
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.9%	5.3%	30.0%	18.6%	100.0%
Newfoundland	14.0%	8.9%	18.7%	55.9%	2.5%	100.0%
Island	11.9%	13.6%	9.6%	61.9%	2.9%	100.0%
Maritime	5.9%	11.8%	8.8%	49.4%	24.1%	100.0%
New Brunswick	6.4%	21.5%	23.4%	27.4%	21.2%	100.0%
Manitoba	-25.5%	42.2%	42.4%	39.9%	1.0%	100.0%
Saskatchewan	-8.7%	33.0%	38.0%	36.9%	0.8%	100.0%
Alberta Gov't	-5.3%	8.4%	26.9%	41.2%	28.8%	100.0%
British Columbia	-35.9%	37.8%	17.8%	50.2%	30.2%	100.0%
Canada	0.2%	31.4%	13.3%	35.6%	19.5%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.59	3.35	(0.11)	(0.32)	8.66	(2.07)
Newfoundland	1.90	1.20	2.53	7.57	(0.42)	(1.30)	11.48	(0.33)
Island	1.22	1.39	0.98	6.33	0.02	1.39	11.34	(0.30)
Maritime	0.71	1.41	1.05	5.90	0.03	0.85	9.94	(2.88)
New Brunswick	1.02	3.41	3.71	4.35	0.17	(0.24)	12.44	(3.36)
Manitoba	(2.80)	4.63	4.66	4.38	0.01	1.72	12.61	(0.11)
Saskatchewan	(1.35)	5.10	5.88	5.71	0.02	(1.52)	13.85	(0.13)
Alberta Gov't	(0.62)	0.99	3.17	4.85	(0.07)	0.51	8.83	(3.39)
British Columbia	(4.00)	4.21	1.98	5.59	0.07	1.99	9.84	(3.36)
Canada	0.02	3.42	1.44	3.87	(0.06)	0.13	8.82	(2.12)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: B.C.Tel/Bell Canada/A.G.T./N.B. Tel/M.T.T.
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	5.2%	29.2%	19.4%	100.0%
Newfoundland	14.0%	8.9%	17.0%	53.6%	6.5%	100.0%
Island	11.9%	13.6%	7.1%	59.8%	7.7%	100.0%
Maritime	5.9%	11.8%	8.2%	45.7%	28.3%	100.0%
New Brunswick	6.5%	21.6%	23.3%	25.9%	22.7%	100.0%
Manitoba	-25.5%	42.1%	42.9%	37.0%	3.4%	100.0%
Saskatchewan	-8.7%	32.9%	35.0%	35.3%	5.5%	100.0%
Alberta Gov't	-5.3%	8.4%	29.8%	38.5%	28.6%	100.0%
British Columbia	-36.1%	38.0%	21.2%	47.7%	29.2%	100.0%
Canada	0.2%	31.5%	13.7%	34.1%	20.4%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.57	3.24	(0.07)	(0.32)	8.57	(2.16)
Newfoundland	1.90	1.20	2.30	7.25	(0.43)	(1.30)	10.92	(0.89)
Island	1.22	1.39	0.72	6.12	0.01	1.39	10.86	(0.78)
Maritime	0.71	1.41	0.98	5.44	0.07	0.85	9.45	(3.37)
New Brunswick	1.02	3.41	3.67	4.09	0.26	(0.24)	12.22	(3.58)
Manitoba	(2.80)	4.63	4.72	4.06	(.00)	1.72	12.34	(0.38)
Saskatchewan	(1.35)	5.10	5.42	5.47	(.00)	(1.52)	13.11	(0.86)
Alberta Gov't	(0.62)	0.99	3.50	4.52	(0.03)	0.51	8.86	(3.36)
British Columbia	(4.00)	4.21	2.35	5.29	0.12	1.99	9.95	(3.24)
Canada	0.02	3.42	1.49	3.69	(0.03)	0.13	8.72	(2.21)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: All Canada
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	5.6%	31.7%	16.7%	100.0%
Newfoundland	14.0%	-9.2%	18.2%	58.2%	18.7%	100.0%
Island	11.9%	1.9%	9.5%	66.3%	10.4%	100.0%
Maritime	5.9%	11.7%	12.0%	49.4%	21.0%	100.0%
New Brunswick	6.4%	21.5%	29.0%	29.6%	13.5%	100.0%
Manitoba	-25.5%	19.1%	41.9%	42.8%	21.7%	100.0%
Saskatchewan	-8.7%	14.9%	37.1%	39.0%	17.8%	100.0%
Alberta Gov't	-5.3%	8.4%	35.1%	42.0%	19.8%	100.0%
British Columbia	-35.9%	37.7%	24.6%	51.9%	21.7%	100.0%
Canada	0.2%	29.2%	15.4%	37.2%	17.9%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.62	3.54	(0.12)	(0.32)	8.86	(1.86)
Newfoundland	1.90	(1.24)	2.47	7.88	(0.42)	(1.30)	9.28	(2.53)
Island	1.22	0.20	0.97	6.78	0.02	1.39	10.58	(1.06)
Maritime	0.71	1.41	1.44	5.92	(0.02)	0.85	10.31	(2.52)
New Brunswick	1.02	3.41	4.61	4.70	0.14	(0.24)	13.65	(2.14)
Manitoba	(2.80)	2.10	4.61	4.70	0.01	1.72	10.34	(2.38)
Saskatchewan	(1.35)	2.30	5.73	6.03	0.02	(1.52)	11.22	(2.75)
Alberta Gov't	(0.62)	0.99	4.15	4.96	(0.11)	0.51	9.89	(2.34)
British Columbia	(4.00)	4.21	2.74	5.79	0.05	1.99	10.77	(2.42)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: All Companies
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	5.2%	28.5%	20.0%	100.0%
Newfoundland	14.0%	-9.2%	16.0%	52.2%	27.0%	100.0%
Island	12.0%	1.9%	4.4%	59.7%	21.9%	100.0%
Maritime	5.9%	11.8%	7.5%	44.8%	29.9%	100.0%
New Brunswick	6.5%	21.6%	22.1%	26.0%	23.9%	100.0%
Manitoba	-25.7%	19.3%	37.0%	37.8%	31.6%	100.0%
Saskatchewan	-8.8%	15.0%	31.0%	34.9%	27.9%	100.0%
Alberta Gov't	-5.3%	8.4%	29.4%	37.7%	29.8%	100.0%
British Columbia	-36.1%	38.0%	20.9%	46.9%	30.3%	100.0%
Canada	0.2%	29.4%	13.2%	33.5%	23.8%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.58	3.17	(0.07)	(0.32)	8.50	(2.22)
Newfoundland	1.90	(1.24)	2.17	7.08	(0.46)	(1.30)	8.15	(3.66)
Island	1.22	0.20	0.45	6.09	0.04	1.39	9.40	(2.24)
Maritime	0.71	1.41	0.90	5.33	0.07	0.85	9.26	(3.56)
New Brunswick	1.02	3.41	3.49	4.10	0.24	(0.24)	12.03	(3.77)
Manitoba	(2.80)	2.10	4.03	4.12	0.10	1.72	9.28	(3.44)
Saskatchewan	(1.35)	2.30	4.76	5.37	0.12	(1.52)	9.68	(4.30)
Alberta Gov't	(0.62)	0.99	3.45	4.42	(0.03)	0.51	8.72	(3.50)
British Columbia	(4.00)	4.21	2.32	5.20	0.12	1.99	9.83	(3.37)

Scenario 1988

Toll Reduction (%): 40%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	11.9%	5.4%	29.2%	43.3%	100.0%
Newfoundland	14.0%	8.9%	18.3%	57.6%	1.2%	100.0%
Island	11.9%	13.6%	9.4%	63.7%	1.3%	100.0%
Maritime	5.9%	33.0%	12.0%	48.2%	0.9%	100.0%
New Brunswick	6.4%	35.7%	30.0%	28.6%	-0.6%	100.0%
Manitoba	-25.5%	42.2%	43.4%	41.1%	-1.2%	100.0%
Saskatchewan	-8.7%	33.0%	37.0%	38.0%	0.8%	100.0%
Alberta Gov't	-5.3%	27.9%	36.2%	41.2%	-0.1%	100.0%
British Columbia	-36.0%	7.2%	23.8%	53.2%	51.7%	100.0%
Canada	0.2%	16.6%	15.4%	35.6%	32.1%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	1.33	0.61	3.26	(0.11)	(0.32)	5.89	(4.83)
Newfoundland	1.90	1.20	2.48	7.79	(0.42)	(1.30)	11.65	(0.16)
Island	1.22	1.39	0.96	6.52	0.02	1.39	11.50	(0.14)
Maritime	0.71	3.95	1.44	5.78	(0.02)	0.85	12.71	(0.11)
New Brunswick	1.02	5.67	4.76	4.54	0.14	(0.24)	15.90	0.10
Manitoba	(2.80)	4.63	4.77	4.51	0.01	1.72	12.85	0.13
Saskatchewan	(1.35)	5.10	5.72	5.88	0.02	(1.52)	13.85	(0.13)
Alberta Gov't	(0.62)	3.30	4.28	4.87	(0.11)	0.51	12.23	0.01
British Columbia	(4.00)	0.81	2.65	5.92	0.09	1.99	7.44	(5.76)
Canada	0.02	1.81	1.67	3.87	(0.07)	0.13	7.44	(3.49)

Scenario 1988

Toll Reduction (%): 40%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	12.0%	4.5%	25.4%	47.8%	100.0%
Newfoundland	14.0%	8.9%	18.2%	46.2%	12.6%	100.0%
Island	11.9%	13.6%	9.4%	51.8%	13.3%	100.0%
Maritime	5.9%	32.8%	12.0%	38.9%	10.4%	100.0%
New Brunswick	6.4%	35.7%	26.0%	20.7%	11.3%	100.0%
Manitoba	-25.5%	42.2%	43.3%	29.9%	10.1%	100.0%
Saskatchewan	-8.7%	32.8%	37.1%	30.9%	7.9%	100.0%
Alberta Gov't	-5.3%	27.8%	28.9%	32.3%	16.2%	100.0%
British Columbia	-36.4%	7.3%	17.9%	42.2%	69.0%	100.0%
Canada	0.2%	16.8%	13.2%	29.4%	40.4%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	1.33	0.50	2.80	.00	(0.32)	5.45	(5.28)
Newfoundland	1.90	1.20	2.47	6.26	(0.44)	(1.30)	10.10	(1.71)
Island	1.22	1.39	0.96	5.31	.00	1.39	10.28	(1.36)
Maritime	0.71	3.95	1.44	4.69	(0.07)	0.85	11.58	(1.25)
New Brunswick	1.02	5.67	4.13	3.28	0.14	(0.24)	14.00	(1.80)
Manitoba	(2.80)	4.63	4.76	3.29	.00	1.72	11.61	(1.11)
Saskatchewan	(1.35)	5.10	5.75	4.81	(0.03)	(1.52)	12.75	(1.22)
Alberta Gov't	(0.62)	3.30	3.43	3.83	(0.15)	0.51	10.30	(1.92)
British Columbia	(4.00)	0.81	1.97	4.64	0.20	1.99	5.60	(7.59)
Canada	0.02	1.81	1.43	3.18	.00	0.13	6.58	(4.36)

Scenario 1988

Toll Reduction (%): 40%
Services Affected: All Toll to All Companies
Companies Affected: All Companies
Settlement Method: Regular R.S.P. and Adjacent

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	12.0%	4.3%	21.2%	52.2%	100.0%
Newfoundland	13.9%	-33.8%	11.7%	38.2%	70.0%	100.0%
Island	12.0%	-12.9%	-3.1%	44.8%	59.2%	100.0%
Maritime	6.0%	-16.5%	0.8%	33.5%	76.2%	100.0%
New Brunswick	6.5%	3.8%	11.3%	18.3%	60.0%	100.0%
Manitoba	-26.0%	-7.9%	27.4%	28.2%	78.3%	100.0%
Saskatchewan	-8.8%	-8.3%	20.9%	26.0%	70.3%	100.0%
Alberta Gov't	-5.4%	-18.2%	19.4%	27.8%	76.2%	100.0%
British Columbia	-36.4%	7.3%	14.2%	35.1%	79.7%	100.0%
Canada	0.2%	4.3%	9.1%	24.9%	61.5%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	1.33	0.48	2.34	(.00)	(0.32)	4.96	(5.76)
Newfoundland	1.90	(4.60)	1.59	5.21	(0.51)	(1.30)	2.28	(9.53)
Island	1.22	(1.31)	(0.31)	4.56	0.07	1.39	5.62	(6.02)
Maritime	0.71	(1.95)	0.09	3.96	0.18	0.85	3.84	(8.99)
New Brunswick	1.02	0.60	1.78	2.87	0.38	(0.24)	6.41	(9.39)
Manitoba	(2.80)	(0.85)	2.95	3.04	0.22	1.72	4.28	(8.44)
Saskatchewan	(1.35)	(1.26)	3.19	3.96	0.23	(1.52)	3.24	(10.73)
Alberta Gov't	(0.62)	(2.11)	2.27	3.24	0.06	0.51	3.34	(8.88)
British Columbia	(4.00)	0.81	1.56	3.87	0.20	1.99	4.42	(8.78)
Canada	0.02	0.46	0.98	2.67	0.05	0.13	4.32	(6.62)

A P P E N D I X B

MODIFIED RSP

(GUARANTEED SETTLEMENTS)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Fixed % Settlements for Non-Participants

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	5.6%	31.7%	16.6%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.8%	-0.1%	100.0%
Island	11.9%	13.6%	9.4%	65.0%	.0%	100.0%
Maritime	5.9%	33.0%	12.0%	49.2%	-0.1%	100.0%
New Brunswick	6.4%	35.7%	28.8%	29.2%	.0%	100.0%
Manitoba	-25.5%	42.2%	41.4%	41.9%	-0.1%	100.0%
Saskatchewan	-8.7%	33.0%	37.0%	38.8%	0.1%	100.0%
Alberta Gov't	-5.3%	27.9%	35.3%	42.1%	.0%	100.0%
British Columbia	-35.9%	37.7%	24.5%	51.9%	21.7%	100.0%
Canada	0.2%	34.7%	15.4%	37.2%	12.5%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.63	3.54	(0.12)	(0.32)	8.87	(1.85)
Newfoundland	1.90	1.20	2.48	7.96	(0.42)	(1.30)	11.82	0.01
Island	1.22	1.39	0.96	6.65	0.02	1.39	11.64	(.00)
Maritime	0.71	3.95	1.44	5.90	(0.02)	0.85	12.83	0.01
New Brunswick	1.02	5.67	4.57	4.63	0.14	(0.24)	15.81	0.01
Manitoba	(2.80)	4.63	4.55	4.61	0.01	1.72	12.73	0.01
Saskatchewan	(1.35)	5.10	5.72	6.00	0.02	(1.52)	13.96	(0.01)
Alberta Gov't	(0.62)	3.30	4.17	4.98	(0.11)	0.51	12.23	0.01
British Columbia	(4.00)	4.21	2.74	5.80	0.05	1.99	10.78	(2.42)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Fixed % Settlements for Non-Participants

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.9%	5.6%	30.7%	17.7%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.8%	-0.1%	100.0%
Island	11.9%	13.6%	9.4%	65.0%	.0%	100.0%
Maritime	5.9%	33.0%	12.0%	49.2%	-0.1%	100.0%
New Brunswick	6.4%	35.7%	28.8%	29.2%	.0%	100.0%
Manitoba	-25.5%	42.2%	41.4%	41.9%	-0.1%	100.0%
Saskatchewan	-8.7%	33.0%	37.0%	38.8%	0.1%	100.0%
Alberta Gov't	-5.3%	27.9%	35.3%	42.1%	.0%	100.0%
British Columbia	-35.9%	37.8%	24.6%	52.6%	21.0%	100.0%
Canada	0.2%	34.7%	15.4%	36.7%	13.1%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.63	3.42	(0.11)	(0.32)	8.75	(1.97)
Newfoundland	1.90	1.20	2.48	7.96	(0.42)	(1.30)	11.82	0.01
Island	1.22	1.39	0.96	6.65	0.02	1.39	11.64	(.00)
Maritime	0.71	3.95	1.44	5.90	(0.02)	0.85	12.83	0.01
New Brunswick	1.02	5.67	4.57	4.63	0.14	(0.24)	15.81	0.01
Manitoba	(2.80)	4.63	4.55	4.61	0.01	1.72	12.73	0.01
Saskatchewan	(1.35)	5.10	5.72	6.00	0.02	(1.52)	13.96	(0.01)
Alberta Gov't	(0.62)	3.30	4.17	4.98	(0.11)	0.51	12.23	0.01
British Columbia	(4.00)	4.21	2.74	5.86	0.07	1.99	10.86	(2.34)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Fixed % Settlements for Non-Participants

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	5.4%	29.1%	19.3%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.8%	.0%	100.0%
Island	11.9%	13.6%	9.4%	65.0%	0.1%	100.0%
Maritime	5.9%	32.9%	12.0%	49.1%	0.1%	100.0%
New Brunswick	6.4%	35.7%	28.8%	29.2%	.0%	100.0%
Manitoba	-25.5%	42.2%	41.4%	41.9%	.0%	100.0%
Saskatchewan	-8.7%	32.9%	37.0%	38.7%	0.1%	100.0%
Alberta Gov't	-5.3%	27.9%	35.2%	42.0%	0.2%	100.0%
British Columbia	-36.1%	38.0%	20.1%	47.9%	30.1%	100.0%
Canada	0.2%	34.8%	14.7%	35.2%	15.2%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.59	3.23	(0.07)	(0.32)	8.58	(2.14)
Newfoundland	1.90	1.20	2.47	7.96	(0.43)	(1.30)	11.81	(.00)
Island	1.22	1.39	0.96	6.65	0.01	1.39	11.63	(0.01)
Maritime	0.71	3.95	1.44	5.90	(0.04)	0.85	12.81	(0.01)
New Brunswick	1.02	5.67	4.57	4.63	0.14	(0.24)	15.80	.00
Manitoba	(2.80)	4.63	4.55	4.61	0.01	1.72	12.72	.00
Saskatchewan	(1.35)	5.10	5.73	6.00	(.00)	(1.52)	13.96	(0.02)
Alberta Gov't	(0.62)	3.30	4.16	4.98	(0.13)	0.51	12.20	(0.02)
British Columbia	(4.00)	4.21	2.23	5.31	0.12	1.99	9.85	(3.34)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: B.C.Tel/Bell Canada/A.G.T.
Settlement Method: Fixed % Settlements for Non-Participants

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	5.6%	31.7%	16.6%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.8%	-0.1%	100.0%
Island	11.9%	13.6%	9.4%	65.0%	.0%	100.0%
Maritime	5.9%	33.0%	12.0%	49.2%	-0.1%	100.0%
New Brunswick	6.4%	35.7%	28.8%	29.2%	.0%	100.0%
Manitoba	-25.5%	42.2%	41.4%	41.9%	-0.1%	100.0%
Saskatchewan	-8.7%	33.0%	37.0%	38.8%	0.1%	100.0%
Alberta Gov't	-5.3%	8.4%	35.2%	42.1%	19.6%	100.0%
British Columbia	-35.9%	37.7%	24.6%	52.0%	21.6%	100.0%
Canada	0.2%	32.5%	15.4%	37.2%	14.7%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.63	3.54	(0.12)	(0.32)	8.87	(1.85)
Newfoundland	1.90	1.20	2.48	7.96	(0.42)	(1.30)	11.82	0.01
Island	1.22	1.39	0.96	6.65	0.02	1.39	11.64	(.00)
Maritime	0.71	3.95	1.44	5.90	(0.02)	0.85	12.83	0.01
New Brunswick	1.02	5.67	4.57	4.63	0.14	(0.24)	15.81	0.01
Manitoba	(2.80)	4.63	4.55	4.61	0.01	1.72	12.73	0.01
Saskatchewan	(1.35)	5.10	5.72	6.00	0.02	(1.52)	13.96	(0.01)
Alberta Gov't	(0.62)	0.99	4.16	4.97	(0.11)	0.51	9.90	(2.32)
British Columbia	(4.00)	4.21	2.74	5.80	0.05	1.99	10.79	(2.41)
Canada	0.02	3.54	1.67	4.05	(0.07)	0.13	9.34	(1.60)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada/A.G.T.
Settlement Method: Fixed % Settlements for Non-Participants

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.9%	5.6%	30.2%	18.1%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.8%	-0.1%	100.0%
Island	11.9%	13.6%	9.4%	65.0%	.0%	100.0%
Maritime	5.9%	33.0%	12.0%	49.2%	-0.1%	100.0%
New Brunswick	6.4%	35.7%	28.8%	29.2%	.0%	100.0%
Manitoba	-25.5%	42.2%	41.4%	41.9%	-0.1%	100.0%
Saskatchewan	-8.7%	33.0%	37.0%	38.8%	0.1%	100.0%
Alberta Gov't	-5.3%	8.4%	27.4%	41.2%	28.3%	100.0%
British Columbia	-35.9%	37.8%	17.8%	50.3%	30.0%	100.0%
Canada	0.2%	32.5%	13.7%	36.0%	17.6%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.63	3.37	(0.11)	(0.32)	8.71	(2.02)
Newfoundland	1.90	1.20	2.48	7.96	(0.42)	(1.30)	11.82	0.01
Island	1.22	1.39	0.96	6.65	0.02	1.39	11.64	(.00)
Maritime	0.71	3.95	1.44	5.90	(0.02)	0.85	12.83	0.01
New Brunswick	1.02	5.67	4.57	4.63	0.14	(0.24)	15.81	0.01
Manitoba	(2.80)	4.63	4.55	4.61	0.01	1.72	12.73	0.01
Saskatchewan	(1.35)	5.10	5.72	6.00	0.02	(1.52)	13.96	(0.01)
Alberta Gov't	(0.62)	0.99	3.23	4.86	(0.08)	0.51	8.89	(3.33)
British Columbia	(4.00)	4.21	1.98	5.61	0.07	1.99	9.85	(3.35)
Canada	0.02	3.54	1.49	3.92	(0.07)	0.13	9.03	(1.91)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: B.C.Tel/Bell Canada/A.G.T.
Settlement Method: Fixed % Settlements for Non-Participants

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	5.4%	28.8%	19.6%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.8%	.0%	100.0%
Island	11.9%	13.6%	9.4%	65.0%	0.1%	100.0%
Maritime	5.9%	32.9%	12.0%	49.1%	0.1%	100.0%
New Brunswick	6.4%	35.6%	28.8%	29.1%	.0%	100.0%
Manitoba	-25.5%	42.1%	41.4%	41.9%	.0%	100.0%
Saskatchewan	-8.7%	32.9%	36.9%	38.7%	0.2%	100.0%
Alberta Gov't	-5.3%	8.4%	28.9%	37.9%	30.1%	100.0%
British Columbia	-36.1%	38.0%	21.2%	47.0%	29.9%	100.0%
Canada	0.2%	32.6%	14.1%	34.4%	18.6%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.59	3.20	(0.07)	(0.32)	8.55	(2.17)
Newfoundland	1.90	1.20	2.47	7.96	(0.43)	(1.30)	11.80	(0.01)
Island	1.22	1.39	0.96	6.65	0.01	1.39	11.63	(0.01)
Maritime	0.71	3.95	1.44	5.90	(0.05)	0.85	12.81	(0.02)
New Brunswick	1.02	5.67	4.57	4.63	0.13	(0.24)	15.80	(.00)
Manitoba	(2.80)	4.63	4.55	4.61	.00	1.72	12.72	.00
Saskatchewan	(1.35)	5.10	5.72	6.00	(.00)	(1.52)	13.94	(0.04)
Alberta Gov't	(0.62)	0.99	3.39	4.45	(0.03)	0.51	8.69	(3.53)
British Columbia	(4.00)	4.21	2.35	5.22	0.12	1.99	9.88	(3.32)
Canada	0.02	3.54	1.53	3.73	(0.03)	0.13	8.92	(2.02)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: B.C. Tel/Bell Canada/A.G.T./N.B. Tel./M/T.T.
Settlement Method: Fixed % Settlements for Non-Participants

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	5.6%	31.7%	16.6%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.8%	-0.1%	100.0%
Island	11.9%	13.6%	9.4%	65.0%	.0%	100.0%
Maritime	5.9%	11.7%	11.9%	49.4%	21.0%	100.0%
New Brunswick	6.4%	21.5%	29.0%	29.6%	13.5%	100.0%
Manitoba	-25.5%	42.2%	41.4%	41.9%	-0.1%	100.0%
Saskatchewan	-8.7%	33.0%	37.0%	38.8%	0.1%	100.0%
Alberta Gov't	-5.3%	8.4%	35.2%	42.0%	19.7%	100.0%
British Columbia	-35.9%	37.7%	24.6%	51.9%	21.6%	100.0%
Canada	0.2%	31.4%	15.4%	37.2%	15.8%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.63	3.54	(0.12)	(0.32)	8.87	(1.86)
Newfoundland	1.90	1.20	2.48	7.96	(0.42)	(1.30)	11.82	0.01
Island	1.22	1.39	0.96	6.65	0.02	1.39	11.64	.00
Maritime	0.71	1.41	1.43	5.93	(0.02)	0.85	10.31	(2.52)
New Brunswick	1.02	3.41	4.61	4.71	0.14	(0.24)	13.66	(2.14)
Manitoba	(2.80)	4.63	4.55	4.61	0.01	1.72	12.73	0.01
Saskatchewan	(1.35)	5.10	5.72	6.00	0.02	(1.52)	13.96	(0.01)
Alberta Gov't	(0.62)	0.99	4.16	4.97	(0.11)	0.51	9.90	(2.32)
British Columbia	(4.00)	4.21	2.74	5.79	0.05	1.99	10.78	(2.42)
Canada	0.02	3.42	1.67	4.05	(0.07)	0.13	9.22	(1.72)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada/A.G.T./N.B. Tel./M.T.T.
Settlement Method: Fixed % Settlements for Non-Participants

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.9%	5.4%	29.8%	18.7%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.8%	-0.1%	100.0%
Island	11.9%	13.6%	9.4%	65.0%	.0%	100.0%
Maritime	5.9%	11.8%	9.0%	49.0%	24.3%	100.0%
New Brunswick	6.4%	21.5%	23.4%	27.2%	21.4%	100.0%
Manitoba	-25.5%	42.2%	41.4%	41.9%	-0.1%	100.0%
Saskatchewan	-8.7%	33.0%	37.0%	38.8%	0.1%	100.0%
Alberta Gov't	-5.3%	8.4%	27.4%	40.9%	28.6%	100.0%
British Columbia	-35.9%	37.8%	17.8%	49.8%	30.5%	100.0%
Canada	0.2%	31.4%	13.3%	35.6%	19.5%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.60	3.32	(0.11)	(0.32)	8.64	(2.09)
Newfoundland	1.90	1.20	2.48	7.96	(0.42)	(1.30)	11.82	0.01
Island	1.22	1.39	0.96	6.65	0.02	1.39	11.64	.00
Maritime	0.71	1.41	1.07	5.85	0.03	0.85	9.93	(2.90)
New Brunswick	1.02	3.41	3.71	4.32	0.17	(0.24)	12.40	(3.39)
Manitoba	(2.80)	4.63	4.55	4.61	0.01	1.72	12.73	0.01
Saskatchewan	(1.35)	5.10	5.72	6.00	0.02	(1.52)	13.96	(0.01)
Alberta Gov't	(0.62)	0.99	3.23	4.82	(0.07)	0.51	8.85	(3.37)
British Columbia	(4.00)	4.21	1.98	5.55	0.07	1.99	9.79	(3.40)
Canada	0.02	3.42	1.44	3.87	(0.06)	0.13	8.82	(2.12)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada/A.G.T./N.B. Tel./M/T.T.
Settlement Method: Fixed % Settlements for Non-Participants

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	5.3%	28.7%	19.8%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.8%	.0%	100.0%
Island	11.9%	13.6%	9.4%	65.0%	0.1%	100.0%
Maritime	5.9%	11.8%	7.1%	44.9%	30.2%	100.0%
New Brunswick	6.5%	21.6%	23.3%	25.5%	23.1%	100.0%
Manitoba	-25.5%	42.1%	41.4%	41.9%	.0%	100.0%
Saskatchewan	-8.7%	32.9%	36.9%	38.7%	0.2%	100.0%
Alberta Gov't	-5.3%	8.4%	28.9%	37.9%	30.1%	100.0%
British Columbia	-36.1%	38.0%	21.2%	46.9%	30.0%	100.0%
Canada	0.1%	31.5%	13.7%	34.1%	20.4%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.58	3.19	(0.07)	(0.32)	8.53	(2.20)
Newfoundland	1.90	1.20	2.48	7.96	(0.43)	(1.30)	11.81	.00
Island	1.22	1.39	0.96	6.65	0.01	1.39	11.63	(0.01)
Maritime	0.71	1.41	0.84	5.35	0.07	0.85	9.24	(3.59)
New Brunswick	1.02	3.41	3.67	4.03	0.26	(0.24)	12.15	(3.64)
Manitoba	(2.80)	4.63	4.55	4.61	(.00)	1.72	12.72	(.00)
Saskatchewan	(1.35)	5.10	5.72	6.00	(.00)	(1.52)	13.94	(0.04)
Alberta Gov't	(0.62)	0.99	3.39	4.45	(0.03)	0.51	8.69	(3.53)
British Columbia	(4.00)	4.21	2.35	5.21	0.12	1.99	9.87	(3.33)
Canada	0.02	3.42	1.49	3.69	(0.03)	0.13	8.72	(2.21)

--

Scenario 1988

Toll Reduction (%): 40%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Fixed % Settlements for Non-Participants

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	11.9%	5.6%	28.9%	43.4%	100.0%
Newfoundland	14.0%	8.9%	18.3%	58.8%	-0.1%	100.0%
Island	11.9%	13.6%	9.4%	65.0%	.0%	100.0%
Maritime	5.9%	33.0%	12.0%	49.2%	-0.1%	100.0%
New Brunswick	6.4%	35.7%	28.8%	29.2%	.0%	100.0%
Manitoba	-25.5%	42.2%	41.4%	41.9%	-0.1%	100.0%
Saskatchewan	-8.7%	33.0%	37.0%	38.8%	0.1%	100.0%
Alberta Gov't	-5.3%	27.9%	35.3%	42.1%	.0%	100.0%
British Columbia	-36.0%	7.2%	24.6%	52.7%	51.5%	100.0%
Canada	0.2%	16.6%	15.4%	35.6%	32.1%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	1.33	0.63	3.22	(0.11)	(0.32)	5.88	(4.84)
Newfoundland	1.90	1.20	2.48	7.96	(0.42)	(1.30)	11.82	0.01
Island	1.22	1.39	0.96	6.65	0.02	1.39	11.64	(.00)
Maritime	0.71	3.95	1.44	5.90	(0.02)	0.85	12.83	0.01
New Brunswick	1.02	5.67	4.57	4.63	0.14	(0.24)	15.81	0.01
Manitoba	(2.80)	4.63	4.55	4.61	0.01	1.72	12.73	0.01
Saskatchewan	(1.35)	5.10	5.72	6.00	0.02	(1.52)	13.96	(0.01)
Alberta Gov't	(0.62)	3.30	4.17	4.98	(0.11)	0.51	12.23	0.01
British Columbia	(4.00)	0.81	2.74	5.86	0.09	1.99	7.47	(5.73)
Canada	0.02	1.81	1.67	3.87	(0.07)	0.13	7.44	(3.49)

Scenario 1988

Toll Reduction (%): 40%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Fixed % Settlements for Non-Participants

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	12.0%	4.5%	21.9%	51.3%	100.0%
Newfoundland	14.0%	8.9%	18.2%	58.7%	0.1%	100.0%
Island	11.9%	13.6%	9.4%	64.9%	0.2%	100.0%
Maritime	5.9%	32.8%	12.0%	49.1%	0.2%	100.0%
New Brunswick	6.4%	35.7%	28.8%	29.1%	.0%	100.0%
Manitoba	-25.5%	42.2%	41.4%	41.9%	.0%	100.0%
Saskatchewan	-8.7%	32.8%	37.1%	38.6%	0.2%	100.0%
Alberta Gov't	-5.3%	27.8%	35.2%	42.1%	0.2%	100.0%
British Columbia	-36.4%	7.3%	12.4%	36.3%	80.3%	100.0%
Canada	0.2%	16.8%	13.2%	29.4%	40.4%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	1.33	0.50	2.41	.00	(0.32)	5.06	(5.67)
Newfoundland	1.90	1.20	2.47	7.96	(0.44)	(1.30)	11.79	(0.02)
Island	1.22	1.39	0.96	6.65	.00	1.39	11.62	(0.02)
Maritime	0.71	3.95	1.44	5.91	(0.07)	0.85	12.80	(0.03)
New Brunswick	1.02	5.67	4.57	4.63	0.14	(0.24)	15.80	.00
Manitoba	(2.80)	4.63	4.55	4.61	.00	1.72	12.72	.00
Saskatchewan	(1.35)	5.10	5.75	6.00	(0.03)	(1.52)	13.94	(0.03)
Alberta Gov't	(0.62)	3.30	4.17	4.99	(0.15)	0.51	12.20	(0.02)
British Columbia	(4.00)	0.81	1.36	4.00	0.20	1.99	4.35	(8.84)
Canada	0.02	1.81	1.43	3.18	.00	0.13	6.58	(4.36)

APPENDIX C

UNIFORM ACCESS CHARGES

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Uniform Access Charge (0.2016)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	3.3%	34.3%	16.3%	100.0%
Newfoundland	14.0%	8.9%	13.1%	39.3%	24.7%	100.0%
Island	11.9%	13.6%	24.9%	83.0%	-33.4%	100.0%
Maritime	5.9%	33.0%	27.3%	55.0%	-21.2%	100.0%
New Brunswick	6.4%	35.7%	40.6%	18.4%	-1.1%	100.0%
Manitoba	-25.5%	42.2%	44.5%	35.5%	3.4%	100.0%
Saskatchewan	-8.7%	33.0%	38.5%	31.8%	5.5%	100.0%
Alberta Gov't	-5.3%	27.9%	38.5%	45.8%	-7.0%	100.0%
British Columbia	-35.9%	37.7%	22.5%	46.9%	28.7%	100.0%
Canada	0.2%	34.7%	15.2%	37.5%	12.5%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.37	3.83	(0.12)	(0.32)	8.91	(1.82)
Newfoundland	1.90	1.20	1.78	5.31	(0.42)	(1.30)	8.47	(3.34)
Island	1.22	1.39	2.55	8.48	0.02	1.39	15.06	3.42
Maritime	0.71	3.95	3.28	6.59	(0.02)	0.85	15.37	2.54
New Brunswick	1.02	5.67	6.45	2.92	0.14	(0.24)	15.97	0.17
Manitoba	(2.80)	4.63	4.89	3.89	0.01	1.72	12.35	(0.37)
Saskatchewan	(1.35)	5.10	5.95	4.91	0.02	(1.52)	19.12	(0.85)
Alberta Gov't	(0.62)	3.30	4.56	5.42	(0.11)	0.51	13.05	0.83
British Columbia	(4.00)	4.21	2.51	5.24	0.05	1.99	9.99	(3.21)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Uniform Access Charge (0.1955)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.9%	3.2%	34.1%	16.6%	100.0%
Newfoundland	14.0%	8.9%	12.7%	38.1%	26.3%	100.0%
Island	11.9%	13.6%	24.2%	80.4%	-30.1%	100.0%
Maritime	5.9%	33.0%	26.5%	53.3%	-18.7%	100.0%
New Brunswick	6.4%	35.7%	39.4%	17.8%	0.7%	100.0%
Manitoba	-25.5%	42.2%	43.1%	34.4%	5.8%	100.0%
Saskatchewan	-8.7%	33.0%	37.3%	30.8%	7.7%	100.0%
Alberta Gov't	-5.3%	27.9%	37.4%	44.4%	-4.4%	100.0%
British Columbia	-35.9%	37.8%	21.9%	49.4%	26.9%	100.0%
Canada	0.2%	34.7%	14.7%	37.3%	13.1%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.36	3.80	(0.11)	(0.32)	8.87	(1.85)
Newfoundland	1.90	1.20	1.72	5.15	(0.42)	(1.30)	8.26	(3.55)
Island	1.22	1.39	2.47	8.22	0.02	1.39	14.72	3.08
Maritime	0.71	3.95	3.17	6.39	(0.02)	0.85	15.06	2.24
New Brunswick	1.02	5.67	6.26	2.83	0.14	(0.24)	15.68	(0.12)
Manitoba	(2.80)	4.63	4.74	3.78	0.01	1.72	12.08	(0.64)
Saskatchewan	(1.35)	5.10	5.77	4.76	0.02	(1.52)	12.79	(1.19)
Alberta Gov't	(0.62)	3.30	4.42	5.25	(0.11)	0.51	12.75	0.52
British Columbia	(4.00)	4.21	2.44	5.50	0.07	1.99	10.20	(3.00)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Uniform Access Charge (0.1713)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	3.3%	33.7%	16.8%	100.0%
Newfoundland	14.0%	8.9%	11.2%	36.2%	29.7%	100.0%
Island	11.9%	13.6%	21.2%	75.6%	-22.3%	100.0%
Maritime	5.9%	32.9%	23.2%	50.5%	-12.5%	100.0%
New Brunswick	6.4%	35.7%	37.2%	16.0%	4.7%	100.0%
Manitoba	-25.5%	42.2%	41.6%	30.6%	11.1%	100.0%
Saskatchewan	-8.7%	32.9%	32.6%	29.4%	13.8%	100.0%
Alberta Gov't	-5.3%	27.9%	35.5%	41.4%	0.5%	100.0%
British Columbia	-36.1%	38.0%	21.7%	46.6%	29.8%	100.0%
Canada	0.2%	34.8%	14.0%	35.9%	15.1%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.36	3.74	(0.07)	(0.32)	8.86	(1.87)
Newfoundland	1.90	1.20	1.51	4.90	(0.43)	(1.30)	7.79	(4.02)
Island	1.22	1.39	2.17	7.74	0.02	1.39	13.92	2.28
Maritime	0.71	3.95	2.78	6.07	(0.04)	0.85	14.32	1.50
New Brunswick	1.02	5.67	5.92	2.54	0.14	(0.24)	15.05	(0.75)
Manitoba	(2.80)	4.63	4.57	3.37	0.01	1.72	11.50	(1.22)
Saskatchewan	(1.35)	5.10	5.06	4.56	(.00)	(1.52)	11.84	(2.13)
Alberta Gov't	(0.62)	3.30	4.20	4.90	(0.12)	0.51	12.16	(0.06)
British Columbia	(4.00)	4.21	2.41	5.17	0.12	1.99	9.89	(3.31)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: B.C. Tel/Bell Canada/A.G.T.
Settlement Method: Uniform Access Charge (0.2016)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	3.3%	34.3%	16.3%	100.0%
Newfoundland	14.0%	8.9%	13.1%	39.3%	24.7%	100.0%
Island	11.9%	13.6%	24.9%	83.0%	-33.4%	100.0%
Maritime	5.9%	33.0%	27.3%	55.0%	-21.2%	100.0%
New Brunswick	6.4%	35.7%	40.6%	18.4%	-1.1%	100.0%
Manitoba	-25.5%	42.2%	44.5%	35.5%	3.4%	100.0%
Saskatchewan	-8.7%	33.0%	38.5%	31.8%	5.5%	100.0%
Alberta Gov't	-5.3%	8.4%	38.5%	45.8%	12.5%	100.0%
British Columbia	-35.9%	37.7%	22.5%	46.9%	28.7%	100.0%
Canada	0.2%	32.5%	15.2%	37.5%	14.7%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.37	3.83	(0.12)	(0.32)	8.91	(1.82)
Newfoundland	1.90	1.20	1.78	5.31	(0.42)	(1.30)	8.47	(3.34)
Island	1.22	1.39	2.55	8.48	0.02	1.39	15.06	3.42
Maritime	0.71	3.95	3.28	6.59	(0.02)	0.85	15.37	2.54
New Brunswick	1.02	5.67	6.45	2.92	0.14	(0.24)	15.97	0.17
Manitoba	(2.80)	4.63	4.89	3.89	0.01	1.72	12.35	(0.37)
Saskatchewan	(1.35)	5.10	5.95	4.91	0.02	(1.52)	13.12	(0.85)
Alberta Gov't	(0.62)	0.99	4.56	5.42	(0.11)	0.51	10.74	(1.48)
British Columbia	(4.00)	4.21	2.51	5.24	0.05	1.99	9.99	(3.21)
Canada	0.02	3.54	1.65	4.08	(0.07)	0.13	9.34	(1.60)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada/A.G.T.
Settlement Method: Uniform Access Charge (0.1792)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.9%	3.0%	32.1%	18.8%	100.0%
Newfoundland	14.0%	8.9%	11.7%	34.9%	30.5%	100.0%
Island	11.9%	13.6%	22.2%	73.7%	-21.4%	100.0%
Maritime	5.9%	33.0%	24.3%	48.9%	-12.0%	100.0%
New Brunswick	6.4%	35.7%	36.1%	16.3%	5.5%	100.0%
Manitoba	-25.5%	42.2%	39.6%	31.5%	12.2%	100.0%
Saskatchewan	-8.7%	33.0%	34.2%	28.2%	13.3%	100.0%
Alberta Gov't	-5.3%	8.4%	39.3%	45.0%	12.5%	100.0%
British Columbia	-35.9%	37.8%	24.4%	45.2%	28.5%	100.0%
Canada	0.2%	32.5%	14.6%	35.2%	17.5%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.33	3.58	(0.11)	(0.32)	8.62	(2.10)
Newfoundland	1.90	1.20	1.58	4.72	(0.42)	(1.30)	7.69	(4.12)
Island	1.22	1.39	2.27	7.54	0.02	1.39	13.83	2.19
Maritime	0.71	3.95	2.91	5.86	(0.02)	0.85	14.27	1.44
New Brunswick	1.02	5.67	5.74	2.59	0.14	(0.24)	14.93	(0.87)
Manitoba	(2.80)	4.63	4.35	3.46	0.01	1.72	11.37	(1.35)
Saskatchewan	(1.35)	5.10	5.29	4.37	0.02	(1.52)	11.91	(2.06)
Alberta Gov't	(0.62)	0.99	4.64	5.31	(0.08)	0.51	10.75	(1.47)
British Columbia	(4.00)	4.21	2.72	5.04	0.07	1.99	10.02	(3.18)
Canada	0.02	3.54	1.59	3.82	(0.06)	0.13	9.03	(1.91)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada/A.G.T.
Settlement Method: Uniform Access Charge (0.1620)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	3.1%	32.1%	18.5%	100.0%
Newfoundland	14.0%	8.9%	10.5%	34.9%	31.6%	100.0%
Island	11.9%	13.6%	20.0%	73.1%	-18.7%	100.0%
Maritime	5.9%	32.9%	21.9%	48.7%	-9.4%	100.0%
New Brunswick	6.4%	35.6%	35.2%	15.3%	7.5%	100.0%
Manitoba	-25.5%	42.1%	39.3%	29.6%	14.4%	100.0%
Saskatchewan	-8.7%	32.9%	32.9%	27.8%	15.1%	100.0%
Alberta Gov't	-5.3%	8.4%	36.7%	43.2%	17.0%	100.0%
British Columbia	-36.1%	38.0%	22.1%	44.1%	32.0%	100.0%
Canada	0.2%	32.6%	13.9%	34.7%	18.6%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.34	3.57	(0.07)	(0.32)	8.67	(2.06)
Newfoundland	1.90	1.20	1.43	4.73	(0.43)	(1.30)	7.53	(4.28)
Island	1.22	1.39	2.05	7.48	0.01	1.39	13.55	1.91
Maritime	0.71	3.95	2.63	5.86	(0.05)	0.85	13.96	1.13
New Brunswick	1.02	5.67	5.60	2.43	0.13	(0.24)	14.61	(1.19)
Manitoba	(2.80)	4.63	4.32	3.25	.00	1.72	11.13	(1.59)
Saskatchewan	(1.35)	5.10	5.10	4.31	(.00)	(1.52)	11.63	(2.34)
Alberta Gov't	(0.62)	0.99	4.30	5.07	(0.03)	0.51	10.22	(2.00)
British Columbia	(4.00)	4.21	2.45	4.89	0.12	1.99	9.65	(3.55)
Canada	0.02	3.54	1.50	3.76	(0.03)	0.13	8.92	(2.02)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: B.C. Tel/Bell Canada/A.G.T./N.B. Tel/M.T.T.
Settlement Method: Uniform Access Charge
(0.2016)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	3.3%	34.3%	16.3%	100.0%
Newfoundland	14.0%	8.9%	13.1%	39.3%	24.7%	100.0%
Island	11.9%	13.6%	24.9%	83.0%	-33.4%	100.0%
Maritime	5.9%	11.7%	27.3%	55.0%	.0%	100.0%
New Brunswick	6.4%	21.5%	40.6%	18.4%	13.1%	100.0%
Manitoba	-25.5%	42.2%	44.5%	35.5%	3.4%	100.0%
Saskatchewan	-8.7%	33.0%	38.5%	31.8%	5.5%	100.0%
Alberta Gov't	-5.3%	8.4%	38.5%	45.8%	12.5%	100.0%
British Columbia	-35.9%	37.7%	22.5%	46.9%	28.7%	100.0%
Canada	0.2%	31.4%	15.2%	37.5%	15.8%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.37	3.83	(0.12)	(0.32)	8.91	(1.82)
Newfoundland	1.90	1.20	1.78	5.31	(0.42)	(1.30)	8.47	(3.34)
Island	1.22	1.39	2.55	8.48	0.02	1.39	15.06	3.42
Maritime	0.71	1.41	3.28	6.59	(0.02)	0.85	12.82	(.00)
New Brunswick	1.02	3.41	6.45	2.92	0.14	(0.24)	13.71	(2.09)
Manitoba	(2.80)	4.63	4.89	3.89	0.01	1.72	12.35	(0.37)
Saskatchewan	(1.35)	5.10	5.95	4.91	0.02	(1.52)	13.12	(0.85)
Alberta Gov't	(0.62)	0.99	4.56	5.42	(0.11)	0.51	10.74	(1.48)
British Columbia	(4.00)	4.21	2.51	5.24	0.05	1.99	9.99	(3.21)
Canada	0.02	3.42	1.65	4.08	(0.07)	0.13	9.22	(1.72)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada/A.G.T./N.B. Tel/M.T.T.
Settlement Method: Uniform Access Charge
(0.1725)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.9%	3.1%	31.1%	19.7%	100.0%
Newfoundland	14.0%	8.9%	11.2%	33.6%	32.2%	100.0%
Island	11.9%	13.6%	21.3%	71.0%	-17.8%	100.0%
Maritime	5.9%	11.8%	26.1%	55.0%	1.2%	100.0%
New Brunswick	6.4%	21.5%	41.8%	16.8%	13.5%	100.0%
Manitoba	-25.5%	42.2%	38.1%	30.3%	14.9%	100.0%
Saskatchewan	-8.7%	33.0%	32.9%	27.2%	15.7%	100.0%
Alberta Gov't	-5.3%	8.4%	37.9%	44.2%	14.8%	100.0%
British Columbia	-35.9%	37.8%	23.4%	44.1%	30.6%	100.0%
Canada	0.2%	31.4%	14.5%	34.4%	19.5%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.35	3.47	(0.11)	(0.32)	8.53	(2.19)
Newfoundland	1.90	1.20	1.52	4.55	(0.42)	(1.30)	7.45	(4.36)
Island	1.22	1.39	2.18	7.26	0.02	1.39	13.47	1.82
Maritime	0.71	1.41	3.11	6.56	0.03	0.85	12.68	(0.15)
New Brunswick	1.02	3.41	6.63	2.66	0.17	(0.24)	13.66	(2.14)
Manitoba	(2.80)	4.63	4.18	3.33	0.01	1.72	11.08	(1.64)
Saskatchewan	(1.35)	5.10	5.09	4.20	0.02	(1.52)	11.55	(2.42)
Alberta Gov't	(0.62)	0.99	4.46	5.21	(0.07)	0.51	10.48	(1.74)
British Columbia	(4.00)	4.21	2.61	4.91	0.07	1.99	9.78	(3.41)
Canada	0.02	3.42	1.57	3.74	(0.06)	0.13	8.82	(2.12)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada/A.G.T./N.B. Tel/M.T.T.
Settlement Method: Uniform Access Charge
(0.1577)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	3.1%	31.3%	19.3%	100.0%
Newfoundland	14.0%	8.9%	11.5%	34.0%	31.6%	100.0%
Island	11.9%	13.6%	20.7%	71.2%	-17.4%	100.0%
Maritime	5.9%	11.8%	24.8%	51.7%	5.7%	100.0%
New Brunswick	6.5%	21.6%	38.4%	16.1%	17.4%	100.0%
Manitoba	-25.5%	42.1%	38.2%	29.1%	16.0%	100.0%
Saskatchewan	-8.7%	32.9%	32.0%	27.2%	16.6%	100.0%
Alberta Gov't	-5.3%	8.4%	35.7%	42.3%	18.9%	100.0%
British Columbia	-36.1%	38.0%	21.5%	43.1%	33.5%	100.0%
Canada	0.2%	31.5%	13.8%	34.0%	20.4%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.34	3.48	(0.07)	(0.32)	8.58	(2.15)
Newfoundland	1.90	1.20	1.56	4.60	(0.43)	(1.30)	7.54	(4.27)
Island	1.22	1.39	2.12	7.28	0.01	1.39	13.43	1.79
Maritime	0.71	1.41	2.96	6.15	0.07	0.85	12.15	(0.68)
New Brunswick	1.02	3.41	6.06	2.55	0.25	(0.24)	13.05	(2.75)
Manitoba	(2.80)	4.63	4.21	3.20	(.00)	1.72	10.96	(1.76)
Saskatchewan	(1.35)	5.10	4.96	4.21	(.00)	(1.52)	11.40	(2.57)
Alberta Gov't	(0.62)	0.99	4.19	4.97	(0.03)	0.51	10.00	(2.22)
British Columbia	(4.00)	4.21	2.39	4.78	0.12	1.99	9.48	(3.72)
Canada	0.02	3.42	1.50	3.69	(0.03)	0.13	8.72	(2.21)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: All Companies
Settlement Method: Uniform Access Charge (0.2016)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	3.3%	34.3%	16.3%	100.0%
Newfoundland	14.0%	-9.2%	13.1%	39.3%	42.8%	100.0%
Island	11.9%	1.9%	24.9%	83.0%	-21.7%	100.0%
Maritime	5.9%	11.7%	27.3%	55.0%	.0%	100.0%
New Brunswick	6.4%	21.5%	40.6%	18.4%	13.1%	100.0%
Manitoba	-25.5%	19.1%	44.5%	35.5%	26.4%	100.0%
Saskatchewan	-8.7%	14.9%	38.5%	31.8%	23.6%	100.0%
Alberta Gov't	-5.3%	8.4%	38.5%	45.8%	12.5%	100.0%
British Columbia	-35.9%	37.7%	22.5%	46.9%	28.7%	100.0%
Canada	0.2%	29.2%	15.2%	37.5%	17.9%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.37	3.83	(0.12)	(0.32)	8.91	(1.82)
Newfoundland	1.90	(1.24)	1.78	5.31	(0.42)	(1.30)	6.03	(5.78)
Island	1.22	0.20	2.55	8.48	0.02	1.39	13.86	2.22
Maritime	0.71	1.41	3.28	6.59	(0.02)	0.85	12.82	(.00)
New Brunswick	1.02	3.41	6.45	2.92	0.14	(0.24)	13.71	(2.09)
Manitoba	(2.80)	2.10	4.89	3.89	0.01	1.72	9.82	(2.90)
Saskatchewan	(1.35)	2.30	5.95	4.91	0.02	(1.52)	10.32	(3.65)
Alberta Gov't	(0.62)	0.99	4.56	5.42	(0.11)	0.51	10.74	(1.48)
British Columbia	(4.00)	4.21	2.51	5.24	0.05	1.99	9.99	(3.21)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: All Companies
Settlement Method: Uniform Access Charge (0.1500)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	3.1%	29.9%	20.7%	100.0%
Newfoundland	14.0%	-9.2%	12.0%	35.7%	47.5%	100.0%
Island	12.0%	1.9%	22.1%	73.8%	-9.8%	100.0%
Maritime	5.9%	11.8%	24.5%	49.7%	8.0%	100.0%
New Brunswick	6.5%	21.6%	36.5%	15.5%	19.8%	100.0%
Manitoba	-25.7%	19.3%	41.2%	31.2%	34.0%	100.0%
Saskatchewan	-8.8%	15.0%	34.7%	28.4%	30.7%	100.0%
Alberta Gov't	-5.3%	8.4%	34.9%	40.6%	21.3%	100.0%
British Columbia	-36.1%	38.0%	20.5%	41.4%	36.2%	100.0%
Canada	0.2%	29.4%	13.8%	32.9%	23.7%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.34	3.33	(0.07)	(0.32)	8.42	(2.30)
Newfoundland	1.90	(1.24)	1.63	4.85	(0.46)	(1.30)	5.37	(6.44)
Island	1.22	0.20	2.25	7.53	0.05	1.39	12.64	1.00
Maritime	0.71	1.41	2.92	5.92	0.07	0.85	11.87	(0.95)
New Brunswick	1.02	3.41	5.77	2.45	0.25	(0.24)	12.67	(3.13)
Manitoba	(2.80)	2.10	4.49	3.40	0.10	1.72	9.01	(3.71)
Saskatchewan	(1.35)	2.30	5.33	4.37	0.12	(1.52)	9.25	(4.72)
Alberta Gov't	(0.62)	0.99	4.10	4.77	(0.03)	0.51	9.72	(2.50)
British Columbia	(4.00)	4.21	2.27	4.60	0.12	1.99	9.18	(4.02)

Scenario 1988

Toll Reduction (%): 40%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Uniform Access Charge (0.1868)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	11.9%	3.1%	33.6%	41.2%	100.0%
Newfoundland	14.0%	8.9%	12.2%	36.4%	28.5%	100.0%
Island	11.9%	13.6%	23.1%	76.9%	-25.5%	100.0%
Maritime	5.9%	33.0%	25.3%	51.0%	-15.1%	100.0%
New Brunswick	6.4%	35.7%	37.6%	17.0%	3.3%	100.0%
Manitoba	-25.5%	42.2%	41.2%	32.8%	9.2%	100.0%
Saskatchewan	-8.7%	33.0%	35.7%	29.4%	10.7%	100.0%
Alberta Gov't	-5.3%	27.9%	35.7%	42.5%	-0.8%	100.0%
British Columbia	-36.0%	7.2%	20.9%	51.8%	56.0%	100.0%
Canada	0.2%	16.6%	14.1%	36.8%	32.3%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	1.33	0.35	3.74	(0.11)	(0.32)	6.13	(4.60)
Newfoundland	1.90	1.20	1.65	4.92	(0.42)	(1.30)	7.95	(3.86)
Island	1.22	1.39	2.36	7.86	0.02	1.39	14.25	2.61
Maritime	0.71	3.95	3.03	6.11	(0.02)	0.85	14.64	1.81
New Brunswick	1.02	5.67	5.98	2.70	0.14	(0.24)	15.28	(0.52)
Manitoba	(2.80)	4.63	4.53	3.61	0.01	1.72	11.71	(1.01)
Saskatchewan	(1.35)	5.10	5.52	4.55	0.02	(1.52)	12.32	(1.65)
Alberta Gov't	(0.62)	3.30	4.22	5.02	(0.11)	0.51	12.32	0.10
British Columbia	(4.00)	0.81	2.33	5.77	0.09	1.99	6.97	(6.23)
Canada	0.02	1.81	1.53	4.00	(0.06)	0.13	7.43	(3.51)

Scenario 1988

Toll Reduction (%): 40%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Uniform Access Charge (0.1304)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	12.0%	2.9%	30.0%	44.8%	100.0%
Newfoundland	14.0%	8.9%	8.5%	30.3%	38.3%	100.0%
Island	11.9%	13.6%	16.1%	64.1%	-5.7%	100.0%
Maritime	5.9%	32.8%	17.6%	42.1%	1.6%	100.0%
New Brunswick	6.4%	35.6%	28.3%	12.3%	17.3%	100.0%
Manitoba	-25.5%	42.1%	35.3%	24.0%	24.1%	100.0%
Saskatchewan	-8.7%	32.8%	24.8%	24.6%	26.4%	100.0%
Alberta Gov't	-5.3%	27.8%	29.6%	33.9%	13.9%	100.0%
British Columbia	-36.4%	7.3%	19.0%	41.9%	68.2%	100.0%
Canada	0.2%	16.8%	11.7%	31.4%	40.0%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	1.33	0.32	3.32	.00	(0.32)	5.78	(4.94)
Newfoundland	1.90	1.20	1.15	4.10	(0.43)	(1.30)	6.62	(5.19)
Island	1.22	1.39	1.65	6.56	0.01	1.39	12.22	0.58
Maritime	0.71	3.95	2.12	5.07	(0.07)	0.85	12.64	(0.19)
New Brunswick	1.02	5.67	4.51	1.96	0.13	(0.24)	13.05	(2.75)
Manitoba	(2.80)	4.63	3.88	2.63	(.00)	1.72	10.07	(2.65)
Saskatchewan	(1.35)	5.10	3.85	3.82	(0.03)	(1.52)	9.87	(4.10)
Alberta Gov't	(0.62)	3.30	3.51	4.01	(0.14)	0.51	10.57	(1.65)
British Columbia	(4.00)	0.81	2.09	4.61	0.20	1.99	5.69	(7.51)
Canada	0.02	1.81	1.26	3.39	.00	0.13	6.61	(4.32)

Scenario 1988

Toll Reduction (%): 40%
Services Affected: All Toll to All Companies
Companies Affected: All Companies
Settlement Method: Uniform Access Charge (0.0911)

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	12.0%	2.3%	21.6%	53.8%	100.0%
Newfoundland	13.9%	-33.8%	8.8%	26.6%	84.5%	100.0%
Island	12.0%	-12.9%	16.2%	54.6%	30.1%	100.0%
Maritime	6.0%	-16.5%	18.0%	36.8%	55.7%	100.0%
New Brunswick	6.5%	3.8%	26.9%	10.7%	52.1%	100.0%
Manitoba	-26.0%	-7.9%	31.4%	22.5%	79.9%	100.0%
Saskatchewan	-8.9%	-8.3%	25.5%	20.9%	70.7%	100.0%
Alberta Gov't	-5.4%	-18.2%	25.9%	29.5%	68.1%	100.0%
British Columbia	-36.4%	7.3%	15.2%	30.1%	83.7%	100.0%
Canada	0.2%	4.3%	10.2%	23.8%	61.4%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TranaCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	1.33	0.26	2.39	(.00)	(0.32)	4.78	(5.94)
Newfoundland	1.90	(4.60)	1.19	3.62	(0.51)	(1.30)	0.29	(11.52)
Island	1.22	(1.31)	1.65	5.55	0.08	1.39	8.58	(3.06)
Maritime	0.71	(1.95)	2.13	4.34	0.18	0.85	6.26	(6.57)
New Brunswick	1.02	0.60	4.21	1.68	0.38	(0.24)	7.64	(8.16)
Manitoba	(2.80)	(0.85)	3.39	2.43	0.21	1.72	4.10	(8.62)
Saskatchewan	(1.35)	(1.26)	3.90	3.18	0.23	(1.52)	3.18	(10.80)
Alberta Gov't	(0.62)	(2.11)	3.02	3.44	0.06	0.51	4.29	(7.93)
British Columbia	(4.00)	0.81	1.68	3.31	0.20	1.99	3.98	(9.22)
Canada	0.02	0.46	1.10	2.57	0.05	0.13	4.33	(6.61)

APPENDIX D

MODIFIED ACCESS CHARGES

Scenario 1988

Toll Reduction (%): 20%
Services Affected: Intra
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Modified Access Charge

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.8%	3.3%	34.1%	16.5%	100.0%
Newfoundland	14.0%	8.9%	19.3%	57.7%	0.1%	100.0%
Island	11.9%	13.6%	17.3%	57.4%	-0.3%	100.0%
Maritime	5.9%	33.0%	20.3%	40.9%	-0.1%	100.0%
New Brunswick	6.4%	35.7%	39.8%	18.0%	0.1%	100.0%
Manitoba	-25.5%	42.2%	46.5%	37.0%	-0.2%	100.0%
Saskatchewan	-8.7%	33.0%	41.5%	34.3%	.0%	100.0%
Alberta Gov't	-5.3%	27.9%	35.4%	42.0%	.0%	100.0%
British Columbia	-35.9%	37.7%	24.7%	51.5%	21.9%	100.0%
Canada	0.2%	34.7%	15.1%	37.5%	12.5%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.37	3.81	(0.12)	(0.32)	8.88	(1.84)
Newfoundland	1.90	1.20	2.61	7.80	(0.42)	(1.30)	11.79	(0.02)
Island	1.22	1.39	1.77	5.87	0.02	1.39	11.67	0.03
Maritime	0.71	3.95	2.44	4.91	(0.02)	0.85	12.84	0.01
New Brunswick	1.02	5.67	6.33	2.86	0.14	(0.24)	15.78	(0.02)
Manitoba	(2.80)	4.63	5.11	4.07	0.01	1.72	12.74	0.02
Saskatchewan	(1.35)	5.10	6.42	5.30	0.02	(1.52)	13.97	(.00)
Alberta Gov't	(0.62)	3.30	4.18	4.97	(0.11)	0.51	12.23	0.01
British Columbia	(4.00)	4.21	2.76	5.75	0.05	1.99	10.75	(2.45)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Modified Access Charge

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	35.9%	3.2%	33.1%	17.6%	100.0%
Newfoundland	14.0%	8.9%	19.3%	57.7%	0.1%	100.0%
Island	11.9%	13.6%	17.3%	57.4%	-0.3%	100.0%
Maritime	5.9%	33.0%	20.3%	40.9%	-0.1%	100.0%
New Brunswick	6.4%	35.7%	39.8%	18.0%	0.1%	100.0%
Manitoba	-25.5%	42.2%	46.5%	37.0%	-0.2%	100.0%
Saskatchewan	-8.7%	33.0%	41.5%	34.3%	.0%	100.0%
Alberta Gov't	-5.3%	27.9%	35.4%	42.0%	.0%	100.0%
British Columbia	-35.9%	37.8%	23.5%	53.0%	21.6%	100.0%
Canada	0.2%	34.7%	14.9%	37.1%	13.1%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.35	3.70	(0.11)	(0.32)	8.76	(1.97)
Newfoundland	1.90	1.20	2.61	7.80	(0.42)	(1.30)	11.79	(0.02)
Island	1.22	1.39	1.77	5.87	0.02	1.39	11.67	0.03
Maritime	0.71	3.95	2.44	4.91	(0.02)	0.85	12.84	0.01
New Brunswick	1.02	5.67	6.33	2.86	0.14	(0.24)	15.78	(0.02)
Manitoba	(2.80)	4.63	5.11	4.07	0.01	1.72	12.74	0.02
Saskatchewan	(1.35)	5.10	6.42	5.30	0.02	(1.52)	13.97	(.00)
Alberta Gov't	(0.62)	3.30	4.18	4.97	(0.11)	0.51	12.23	0.01
British Columbia	(4.00)	4.21	2.62	5.91	0.07	1.99	10.79	(2.41)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Modified Access Charge

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	2.9%	29.8%	21.1%	100.0%
Newfoundland	14.0%	8.9%	19.3%	62.6%	-4.8%	100.0%
Island	11.9%	13.6%	17.3%	61.6%	-4.4%	100.0%
Maritime	5.9%	32.9%	20.3%	44.2%	-3.3%	100.0%
New Brunswick	6.4%	35.7%	42.9%	18.4%	-3.5%	100.0%
Manitoba	-25.5%	42.2%	51.1%	37.7%	-5.5%	100.0%
Saskatchewan	-8.7%	32.9%	41.4%	37.3%	-3.0%	100.0%
Alberta Gov't	-5.3%	27.9%	38.3%	44.7%	-5.6%	100.0%
British Columbia	-36.1%	38.0%	21.2%	45.5%	31.4%	100.0%
Canada	0.2%	34.8%	15.1%	34.9%	15.1%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.32	3.31	(0.07)	(0.32)	8.39	(2.34)
Newfoundland	1.90	1.20	2.61	8.47	(0.43)	(1.30)	12.46	0.65
Island	1.22	1.39	1.77	6.31	0.02	1.39	12.09	0.45
Maritime	0.71	3.95	2.44	5.31	(0.04)	0.85	13.22	0.40
New Brunswick	1.02	5.67	6.83	2.93	0.14	(0.24)	16.35	0.55
Manitoba	(2.80)	4.63	5.62	4.14	0.01	1.72	13.32	0.60
Saskatchewan	(1.35)	5.10	6.42	5.79	(.00)	(1.52)	14.43	0.46
Alberta Gov't	(0.62)	3.30	4.54	5.29	(0.12)	0.51	12.89	0.67
British Columbia	(4.00)	4.21	2.35	5.05	0.12	1.99	9.72	(3.48)

Scenario 1988

Toll Reduction (%): 20%
Services Affected: All Toll
Companies Affected: All Canada
Settlement Method: Modified Access Charge

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	36.0%	3.1%	29.8%	20.9%	100.0%
Newfoundland	14.0%	-9.2%	17.6%	52.4%	25.2%	100.0%
Island	12.0%	1.9%	15.5%	51.1%	19.5%	100.0%
Maritime	5.9%	11.8%	18.2%	37.0%	27.0%	100.0%
New Brunswick	6.5%	21.6%	35.8%	15.2%	20.9%	100.0%
Manitoba	-25.7%	19.3%	43.1%	32.6%	30.8%	100.0%
Saskatchewan	-8.8%	15.0%	37.4%	30.7%	25.7%	100.0%
Alberta Gov't	-5.3%	8.4%	32.1%	37.2%	27.6%	100.0%
British Columbia	-36.1%	38.0%	22.4%	45.5%	30.2%	100.0%
Canada	0.2%	29.4%	13.8%	32.9%	23.7%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	4.00	0.34	3.31	(0.07)	(0.32)	8.40	(2.33)
Newfoundland	1.90	(1.24)	2.39	7.11	(0.46)	(1.30)	8.40	(3.41)
Island	1.22	0.20	1.58	5.22	0.05	1.39	9.66	(1.99)
Maritime	0.71	1.41	2.17	4.40	0.07	0.85	9.61	(3.22)
New Brunswick	1.02	3.41	5.66	2.40	0.25	(0.24)	12.50	(3.29)
Manitoba	(2.80)	2.10	4.69	3.55	0.10	1.72	9.36	(3.36)
Saskatchewan	(1.35)	2.30	5.75	4.72	0.12	(1.52)	10.01	(3.96)
Alberta Gov't	(0.62)	0.99	3.77	4.37	(0.03)	0.51	8.98	(3.24)
British Columbia	(4.00)	4.21	2.49	5.04	0.12	1.99	9.84	(3.35)

Scenario 1988

Toll Reduction (%): 40%
Services Affected: All Toll to Participants Only
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Modified Access Charge

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.2%	11.9%	2.9%	31.6%	43.3%	100.0%
Newfoundland	14.0%	8.9%	19.3%	57.7%	0.1%	100.0%
Island	11.9%	13.6%	17.3%	57.4%	-0.3%	100.0%
Maritime	5.9%	33.0%	20.3%	40.9%	-0.1%	100.0%
New Brunswick	6.4%	35.7%	39.8%	18.0%	0.1%	100.0%
Manitoba	-25.5%	42.2%	46.5%	37.0%	-0.2%	100.0%
Saskatchewan	-8.7%	33.0%	41.5%	34.3%	.0%	100.0%
Alberta Gov't	-5.3%	27.9%	35.4%	42.0%	.0%	100.0%
British Columbia	-36.0%	7.2%	21.8%	53.9%	53.0%	100.0%
Canada	0.2%	16.6%	14.5%	36.3%	32.3%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	1.33	0.33	3.53	(0.11)	(0.32)	5.89	(4.83)
Newfoundland	1.90	1.20	2.61	7.80	(0.42)	(1.30)	11.79	(0.02)
Island	1.22	1.39	1.77	5.87	0.02	1.39	11.67	0.03
Maritime	0.71	3.95	2.44	4.91	(0.02)	0.85	12.84	0.01
New Brunswick	1.02	5.67	6.33	2.86	0.14	(0.24)	15.78	(0.02)
Manitoba	(2.80)	4.63	5.11	4.07	0.01	1.72	12.74	0.02
Saskatchewan	(1.35)	5.10	6.42	5.30	0.02	(1.52)	13.97	(.00)
Alberta Gov't	(0.62)	3.30	4.18	4.97	(0.11)	0.51	12.23	0.01
British Columbia	(4.00)	0.81	2.42	6.00	0.09	1.99	7.30	(5.90)
Canada	0.02	1.81	1.58	3.95	(0.06)	0.13	7.43	(3.51)

Scenario 1988

Toll Reduction (%): 40%
Services Affected: All Toll to All Companies
Companies Affected: B.C. Tel/Bell Canada
Settlement Method: Modified Access Charge

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	12.0%	2.0%	20.4%	55.3%	100.0%
Newfoundland	14.0%	8.9%	19.3%	68.8%	-10.9%	100.0%
Island	11.9%	13.6%	17.2%	68.6%	-11.3%	100.0%
Maritime	5.9%	32.8%	20.2%	48.4%	-7.4%	100.0%
New Brunswick	6.4%	35.6%	47.1%	18.7%	-7.8%	100.0%
Manitoba	-25.5%	42.1%	57.0%	38.7%	-12.4%	100.0%
Saskatchewan	-8.7%	32.8%	41.4%	41.1%	-6.6%	100.0%
Alberta Gov't	-5.3%	27.8%	42.0%	48.0%	-12.6%	100.0%
British Columbia	-36.4%	7.3%	14.3%	31.5%	83.4%	100.0%
Canada	0.2%	16.8%	14.5%	28.5%	40.1%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	1.33	0.22	2.26	.00	(0.32)	4.62	(6.11)
Newfoundland	1.90	1.20	2.61	9.31	(0.43)	(1.30)	13.29	1.48
Island	1.22	1.39	1.77	7.02	0.01	1.39	12.80	1.16
Maritime	0.71	3.95	2.44	5.83	(0.07)	0.85	13.71	0.89
New Brunswick	1.02	5.67	7.49	2.97	0.13	(0.24)	17.04	1.24
Manitoba	(2.80)	4.63	6.27	4.25	(.00)	1.72	14.08	1.36
Saskatchewan	(1.35)	5.10	6.42	6.38	(0.03)	(1.52)	14.99	1.02
Alberta Gov't	(0.62)	3.30	4.98	5.69	(0.14)	0.51	13.72	1.50
British Columbia	(4.00)	0.81	1.57	3.46	0.20	1.99	4.02	(9.18)
Canada	0.02	1.81	1.56	3.08	.00	0.13	6.60	(4.33)

Scenario 1988

Toll Reduction (%): 40%
Services Affected: All Toll
Companies Affected: All Canada
Settlement Method: Modified Access Charge

SUMMARY OF MODEL OUTPUT

A. Percentage Contribution to Common - 1988 (%)

Telco

	Local	Intra	Adjacent	TransCan	Unassigned	Total
Bell Canada	10.3%	12.0%	2.3%	21.5%	53.9%	100.0%
Newfoundland	13.9%	-33.8%	12.9%	39.0%	68.0%	100.0%
Island	12.0%	-12.9%	11.2%	37.8%	51.9%	100.0%
Maritime	6.0%	-16.5%	13.4%	27.4%	69.7%	100.0%
New Brunswick	6.5%	3.8%	26.3%	10.5%	52.8%	100.0%
Manitoba	-26.0%	-7.9%	32.8%	23.6%	77.5%	100.0%
Saskatchewan	-8.9%	-8.3%	27.5%	22.5%	67.1%	100.0%
Alberta Gov't	-5.4%	-18.2%	23.8%	27.1%	72.6%	100.0%
British Columbia	-36.4%	7.3%	16.7%	33.0%	79.3%	100.0%
Canada	0.2%	4.3%	10.2%	23.9%	61.4%	100.0%

B. Dollar per Average Residential Line - 1988 ($)

Telco

	Local	Intra	Adjacent	TransCan	TransCan Comp.	Other	Total	Change
Bell Canada	1.14	1.33	0.25	2.37	(.00)	(0.32)	4.77	(5.96)
Newfoundland	1.90	(4.60)	1.75	5.31	(0.51)	(1.30)	2.55	(9.26)
Island	1.22	(1.31)	1.14	3.85	0.08	1.39	6.37	(5.27)
Maritime	0.71	(1.95)	1.58	3.23	0.18	0.85	4.60	(8.22)
New Brunswick	1.02	0.60	4.13	1.64	0.38	(0.24)	7.53	(8.27)
Manitoba	(2.80)	(0.85)	3.54	2.54	0.21	1.72	4.37	(8.35)
Saskatchewan	(1.35)	(1.26)	4.20	3.44	0.23	(1.52)	3.74	(10.24)
Alberta Gov't	(0.62)	(2.11)	2.77	3.16	0.06	0.51	3.76	(8.46)
British Columbia	(4.00)	0.81	1.84	3.64	0.20	1.99	4.46	(8.73)
Canada	0.02	0.46	1.10	2.57	0.05	0.13	4.33	(6.60)

THE INTERJURISDICTIONAL IMPACTS OF CHANGES IN TELEPHONE RATE STRUCTURES : FINAL REPORT.