STUDY OF ISSUES RELATED TO THE EXTENSION OF THE EXCLUSIVE MANDATE OF TELEGLOBE CANADA INC.

FINAL REPORT

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MANAGEMENT CONSULTANTS

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Disclaimer and Acknowledgements

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The work was conducted by Donald A. Ford, Managing Partner, and Donald J. Pickard, Senior Associate Consultant.

It should be noted that the findings and conclusions contained in this report have been developed by the consultants on the basis of their review and analysis, and are not necessarily shared by officials of the Department of Communications, Teleglobe Canada Inc., or any of the individuals interviewed during the conduct of this engagement.

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EXECUTIVE SUMMARY

INTRODUCTION

This report contains the results of a study conducted for the purpose of examining whether, and if so, on what terms, the exclusive mandate of Teleglobe Canada Inc. ("Teleglobe") should be extended beyond April 1, 1992.

In conducting this study, the starting point was the "Statement of Government Policy Respecting Teleglobe Canada" which was issued by the Department of Communications in November 1986 and which stated in part:

> "It is in Canada's national interest that telecommunications services between locations in Canada and from Canada to other locations shall, to the greatest extent feasible, be provided over Canadian-owned and controlled facilities. To enhance the new Teleglobe's ability to meet its mandate, the government will '... ensure that Teleglobe remains, for a period of at least five years, the sole authorized Canadian operator of facilities to provide Canada/overseas telecommunications services. ... the continuation of this policy will depend upon Teleglobe's performance in providing efficient, high-quality telecommunications services to Canadians."[1]

Other indications of the government's expectations were contained in a government statement containing the conditions and process of sale, and in an attachment to that statement entitled "Regulation of Profitability" (which subsequently resulted in a Direction to the CRTC), in a February 11, 1987 news release announcing the sale of Teleglobe Canada to Memotec Data Inc., and in the *Teleglobe Canada Reorganization and Divestiture Act* itself.

In carrying out this work, the consultants examined the performance of Teleglobe since privatization in terms of these government expectations or objectives, including those mentioned specifically in the Statement of Work. However, it became apparent during the study that the appropriateness of the exclusive mandate should also be examined in the light of the current competitive

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[1] Statement of Telecommunications Policy Respecting Teleglobe Canada, Department of Communications, Government of Canada, November 1986, page 2.

telecommunications environment in Canada and internationally. Comments and views were also solicited from users, resellers and carriers, and these were also taken into account in reaching the conclusions offered in this report.

TERMS OF REFERENCE

The Statement of Work for this study formed the basis for the terms of reference under which this work was conducted. The Statement of Work is reproduced in this report at Appendix A.

In brief, the Statement of Work calls for an analysis of the structure of the international carrier industry, including rates and services, an analysis of the current and future technological, economic, political and social factors affecting Teleglobe's performance and future prospects, an analysis of Teleglobe's economic and financial performance since privatization, and an analysis of the implications of alternative public policies with reference to the exclusive mandate.

THE OWNERSHIP OF TELEGLOBE CANADA INC.

The Statement of Work does not make any reference to the direct or indirect ownership of Teleglobe Canada Inc. Bell Canada has, however, in more than one recent forum, called on the government to reconsider and amend the ownership restrictions for telecommunications carriers contained in the *Teleglobe Canada Reorganization and Divestiture Act.* The matter of the ownership restrictions was also raised in almost every one of the discussions with user groups, resellers and carriers conducted during this study.

Because of the strong views expressed by those interviewed, the consultants were obliged to consider the most appropriate way in which the ownership issue should be dealt with in this study. It is the conclusion of the consultants that the issue of the exclusive mandate cannot be considered independently. Certain public policy alternatives with respect to Teleglobe's future mandate would have different implications for users, resellers and carriers if the ownership structure were changed. Similarly, if the ownership structure were changed, then the results of the analysis of the public policy alternatives would be different. Accordingly, the matter of ownership has been considered during the analysis of the public policy alternatives and the comments of those interviewed during the study have been taken into account during this analysis.

APPROACH AND METHODOLOGY

A rigorous analytical framework was established at the outset, beginning with the development of a set of comprehensive criteria to be used in conducting the analysis. To the extent possible, the analysis was planned to use data which is in the public domain. The complete public record of the CRTC Proceeding with respect to the regulation of Teleglobe in the post-transitional era[2] was examined, and additional information was obtained by sending a formal information request to Teleglobe.

Personal interviews were conducted with representatives of a number of user groups, carriers and resellers, including the Canadian Business Telecommunications Alliance (CBTA), the Communications Competition Coalition (CCC), Bell Canada, British Columbia Telephone Company (B.C. Tel), Telecom Canada, Unitel Communications Inc. (Unitel), fONOROLA, Cable and Wireless, and the Competitive Telecommunications Association (CTA). A telephone discussion was held with a representative of the Canadian Overseas Telecommunications Union. Meetings were also held with representatives of Teleglobe Canada Inc. and Teleglobe Inc.

Once all the necessary information was received, the analysis was conducted, and the results were compared with the criteria established in the first step of the study. A number of policy alternatives in regard to the future mandate were developed, and the implications of each alternative was evaluated. On the basis of the results of the analysis and the evaluation of the policy alternatives, the findings and conclusions of the study were developed.

MANDATE OPTIONS

In conducting this study, the consultants have assumed that the emphasis in the government's policy statement with respect to the use of Canadian facilities is still valid. Within this policy framework, the consultants then identified five possible options for the government with respect to the cancellation or extension of Teleglobe's exclusive mandate, and if extended, under what terms and conditions. Then each of these options was analyzed and evaluated with respect to its impact

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[2] This proceeding was initiated by CRTC Public Notice 1190-102, "Teleglobe Canada Inc. - Regulation after the Transitional Period", 20 December 1990.

on the ability of the telecommunications industry to meet the Government's policy objectives.

The five options are:

OPTION 1 - TAKE NO FURTHER ACTION

The Government would choose to leave the exclusive mandate intact and not specify any time limit to that mandate. This would in effect mean that Teleglobe would retain its exclusive mandate on a day to day basis.

OPTION 2 - RENEWAL FOR A FIXED PERIOD

The exclusive mandate would be renewed for an additional fixed period and the Government would undertake to conduct a performance review at the end of the period. Based on the results of that review, the exclusive mandate would be cancelled or again renewed subject to appropriate terms and conditions.

OPTION 3 - RENEWAL FOR A FIXED PERIOD WITH ESTABLISHED PERFORMANCE CRITERIA AND A GUARANTEED NOTICE PERIOD

In this option the Government would extend the exclusive mandate for a fixed period and require that Teleglobe meet certain performance criteria. If the criteria were not met at the end of the fixed period, the Government could choose to cancel the exclusive mandate at the end of a guaranteed notice period. Both the initial extension period and the notice period should be consistent with normal Teleglobe strategic and capital planning cycles. Thus if the renewal were for five years and the performance criteria were not met, the Government could announce that the exclusive mandate would end five years later. If the criteria were met, Teleglobe and the Government would determine whether the exclusive mandate were still required and if so for what additional period.

OPTION 4 - ANNOUNCE IMMEDIATE PHASE-OUT

If the Government concluded that the exclusive mandate were no longer required, it would announce that it would begin to consider applications from other carriers for cable landings and international satellite earth stations at a specific time in the future. This would probably be in three to five years.

OPTION 5 - IMMEDIATE CANCELLATION

The Government would announce that it would begin to consider applications from other carriers for cable landings and international satellite earth stations to be licensed after March 31, 1992.

FINDINGS OF THE STUDY

The findings of the study include the findings of the review of the historical performance of Teleglobe since privatization, and the results of the evaluation of the mandate options.

RESULTS OF THE PERFORMANCE REVIEW

The performance review consisted of an analysis of Teleglobe's activities and results over the period from 1987 to date as they pertain to the criteria established by the government prior to privatization.

Teleglobe lowered its rates soon after privatization, consistent with the Direction to the CRTC, and continued to lower its rates after that time while still generating the allowed rate of return. It should be noted that a cursory review of the annual results of Teleglobe will indicate that net income and the rate of return on equity have declined over time. However, these results must be considered in the context of Teleglobe's early high rates of profitability in 1987 and 1988, which then required significant rate reductions in the 1989 through 1990 period in order to bring the *average* rate of return for the four year period within the approved range.

With respect to quality of service, it has continued to make improvements in both the measurable, quantitative aspects of transmission quality, and in the ways in which it responds to customer problems.

With respect to innovation in services and technology, there is ample evidence that Teleglobe has been implementing new services and taking advantage of new technologies such as digital transmission, voice compression, satellite echo suppression and fibre optics.

Teleglobe has met all the undertakings given to the government at the time of privatization with respect to keeping the headquarters in Montreal, continuing existing collective agreements, and implementing pensions plans, benefit plans and employee share purchase plans.

In the area of Research and Development, Teleglobe has undertaken projects which have resulted in significant business opportunities for other Canadian firms, and has a Research and Development program in place which will see it continue to develop services and applications to serve Canadian users. It will also be a participant in the new Teleglobe Inc. Montreal-based R&D company to be in operation in late 1991. The nature of the projects is consistent with Teleglobe's role as a participant in international cable and satellite consortia and as a provider of international telecommunications services to Canadian users.

It is the consultants' finding that over the period 1987 to 1991, Teleglobe has met the expectations of the government with respect to the performance objectives stated in policy documents and legislation and has satisfied the undertakings given to the government by Teleglobe Canada's parent company.

If this were the only factor on which a decision regarding the extension of Teleglobe's exclusive mandate were to be made, then it would be a relatively simple matter to conclude that an extension of the mandate would be called for. However, other factors considered in this review including the relationship between Teleglobe and the other carriers with which it interconnects, the needs and views of users, the potential for the use of non-Canadian facilities, and the increasingly competitive nature of the international telecommunications industry indicate clearly that the extension of Teleglobe's exclusive mandate for an indeterminate period is not appropriate. At the same time, many industry participants proposed that any plan to eliminate the exclusive mandate should be accompanied by a phasing out schedule.

RESULTS OF THE EVALUATION OF MANDATE OPTIONS

The analysis and evaluation of the mandate options is described in more detail in the body of the report. The following table summarizes the results of the analysis and evaluation.

OPTION	RATES	SERVICES	FINANCIAL STABILITY
1-Take No Further Action	Slow rate of reduction	Slow rate of expansion	Poor
2-Renewal for Fixed Period	Moderate rate of reduction	Moderate rate of expansion	Good at start Poor at end
3-Renewal for Fixed Period with Established Performance Criteria and Guaranteed Notice Period	Greatest rate of reduction	Greatest rate of expansion	Most stable
4-Announce Immediate Phase-out	Little change	Some new services	Moderate at start Poor at end
5-Immediate Cancellation	No change	No change	Poor

CONCLUSIONS OF THE STUDY

The conclusions of this study are as follows:

- Teleglobe has met the expectations of the government with respect to Teleglobe's performance in providing efficient, high-quality telecommunications services to Canadians.

- Teleglobe has satisfied the requirements of the Governor in Council with respect to rate reductions and rate of return.

- Teleglobe has satisfied the undertakings given to the government with respect to pension, benefit and share purchase plans, has maintained the headquarters in Montreal, and has continued the collective agreements in place at the time of privatization.

- Teleglobe's R&D programs are consistent with its role as a member of international cable and satellite consortia and as a provider of international services to Canadian users. The level of expenditures as a function of operating revenues is in line with the practice of other Canadian telecommunications carriers.

- In the absence of other considerations, it would be appropriate for the government to grant Teleglobe an extension of its exclusive mandate.

- An extension of Teleglobe's exclusive mandate for an indeterminate period would be contrary to the current trends within the industry towards a more competitive telecommunications environment, and would not be in the best interests of users or carriers in the long term.

- At the same time, an immediate cancellation of Teleglobe's exclusive mandate would provide a business opportunity and a distinct advantage to some segments of the telecommunications industry while others, such as Unitel and Teleglobe, would be at a disadvantage.

- In the consultants' opinion, the interests of all parties will be served best by extending the exclusive mandate and by requiring Teleglobe to be competitive in rates and services with the U.S. within a specific time period.

- The length of time given to Teleglobe to achieve this should relate to the company's planning horizon.

- A similar period of time should then be specified as the notice period for phasing out the exclusive mandate should Teleglobe fail to achieve the required competitive position.

INTRODUCTION AND BACKGROUND

This report contains the results of a study conducted for the purpose of examining whether, and if so, on what terms, the exclusive mandate of Teleglobe Canada Inc. ("Teleglobe") should be extended beyond April 1, 1992.

In conducting this study, the starting point was the "Statement of Government Policy Respecting Teleglobe Canada" which was issued by the Department of Communications in November 1986, prior to the date of privatization. The stated purpose of the policy statement was to "... define and clarify the policy and regulatory environment that will apply to the company after privatization, and to outline the rights and obligations that will accrue to the company."[3]

The operative part of the policy statement in terms of this study is as follows:

> "It is in Canada's national interest that telecommunications services between locations in Canada and from Canada to other locations shall, to the greatest extent feasible, be provided over Canadian-owned and controlled facilities. To enhance the new Teleglobe's ability to meet its mandate, the government will exercise its existing powers under the *Radio Act* and *Telegraphs Act* to ensure that Teleglobe remains, for a period of at least five years, the sole authorized Canadian operator of facilities to provide Canada/overseas telecommunications services[4]. Given the rapidly changing economic and technological environment in telecommunications, the continuation of this policy will depend upon Teleglobe's performance in

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[3] Statement of Telecommunications Policy Respecting Teleglobe Canada, Department of Communications, Government of Canada, November 1986, page 1.

[4] In a later document entitled "Divestiture of Teleglobe Canada, Conditions of Process and Sale", Section 8 contained the following specific undertaking on the part of the government:

> "The government will continue its policy of restricting the issuance of cable landing and international earth station licences to Teleglobe for purposes of Canada-overseas telecommunications. The government undertakes to maintain such policies for at least five years from the time of divestiture."

providing efficient, high-quality telecommunications services to Canadians."[5]

A copy of the complete Statement of Government Policy Respecting Teleglobe Canada is appended to this report as Appendix A.

Accordingly, the historical review aspects of this study compared Teleglobe's performance in providing efficient, high-quality telecommunications services to Canadians during the period since privatization to the expectations of the government.

The News Release dated February 11, 1987 announcing the sale of Teleglobe Canada to Memotec Data Inc. also included a number of specific undertakings obtained by the government for the purpose of protecting the interests of Teleglobe employees. These undertaking included:

- Maintaining the headquarters of the Teleglobe in Montreal
- Continuing existing collective agreements
- Creating a pension plan comparable to the government plan
- Implementing a non-contributory defined benefit plan for new employees after privatization
- Offering the employees of Teleglobe the opportunity to purchase 5% of the equity (subsequently amended to conform to the wishes of employees to be equity in Memotec or Teleglobe Inc., not Teleglobe Canada)
- Making every effort to qualify employee share purchases under the Quebec Stock Savings Plan and similar plans implemented by other provinces

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5 Statement of Telecommunications Policy Respecting Teleglobe Canada, Department of Communications, Government of Canada, November 1986, page 2.

Some additional details with respect to the expectations of the government for Teleglobe's performance are found in Section 7.(1)(b) of the *Teleglobe Canada Reorganization and Divestiture Act*, which states:

> "[Teleglobe Canada Inc.] shall, so far as practicable and reasonable,
> (i) make use of developments in cable and radio transmission or reception for public telecommunications services between Canada and places outside Canada, and
> (ii) conduct research and development for the purpose of improving telecommunications services."

Lastly, Section 15 of the *Teleglobe Canada Reorganization and Divestiture Act* empowers the Governor in Council to issue policy directions to the Canadian Radio-television and Telecommunications Commission ("CRTC" or "the Commission"), in relation to Teleglobe Canada Inc., concerning any matter which is within the jurisdiction of the Commission. The Governor in Council did issue such a policy direction to the Commission with respect to the regulatory regime to be adopted by the CRTC for the regulation of Teleglobe during the four year transitional period beginning January 1, 1988. It was first released in the form of Attachment 2 to the Conditions and Process of Sale. Attachment 2, entitled "Regulation of Profitability", stated in part:

> "As part of the divestiture, the government has decided that Teleglobe's rates should be reduced. Accordingly, Teleglobe will be instructed to reduce the weighted average collection rates for overseas telephone calls by 13.5% and charges for telex services by 10% effective January 1, 1988. A detailed rate plan to achieve these reductions will be filed by Teleglobe. The savings will pass on fully to end users."

Attachment 2 also prescribed the average allowed rate of return range for Teleglobe over the 1988 to 1991 period. This range was defined as the operating revenue weighted average mid-point of the allowed rates of return on common equity of Bell and B.C. Tel as the minimum of the range, and that weighted average plus two percentage points as the maximum of the range. Attachment 2 was approved by the Governor in Council as a formal Direction to the CRTC[6]. A copy of P.C. 1987-705 is appended to this report as Appendix B.

In carrying out this work, the consultants examined the performance of Teleglobe since privatization in terms of these government expectations or objectives, including those mentioned specifically in the Statement of Work. However, it became apparent during the study that the appropriateness of the exclusive mandate should also be examined in the light of the current competitive telecommunications environment in Canada and internationally. Accordingly, such considerations, including the comments and views of users, resellers and carriers provided to the consultants during interviews conducted as a part of this work, were taken into account in reaching the conclusions offered in this report.

STRUCTURE OF THE REPORT

The report is structured in the following way. This chapter contains the introduction and background to the study as well as the terms of reference and a description of the approach and methodology used in the study.

The next chapter describes the international telecommunications industry of which Teleglobe is a part, including the structure of the industry, the economics of the industry, technology, regulation and institutional factors, and the relationships among Teleglobe, domestic carriers and foreign administrations.

Teleglobe's performance since privatization and its future prospects are reviewed and analyzed in the next chapter. This review includes its financial performance, rates, range of services, quality of service, and research and development accomplishments.

The following chapter develops and describes a number of policy alternatives available to the federal government, and evaluates those policy alternatives in terms

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[6] P.C. 1987-705, "DIRECTION TO THE CANADIAN RADIO-TELEVISION AND TELECOMMUNICATIONS COMMISSION RESPECTING THE APPROVAL OF THE TELEGRAPH TOLLS AND TELEPHONE TOLLS OF THE NEW CORPORATION IN FORCE FROM TIME TO TIME IN THE TRANSITIONAL PERIOD", 2 April, 1987.

of their implications for the continued attainment of government objectives for international telecommunications in general and Teleglobe in particular.

The final chapter contains the findings and conclusions of the study including the results of the interviews, the results of the performance analysis, and the results of the evaluation of policy alternatives. The report ends with the consultants' overall conclusions.

TERMS OF REFERENCE

The Statement of Work for this study formed the basis for the terms of reference under which this work was conducted. The Statement of Work is reproduced in this report as Appendix C.

In brief, the Statement of Work calls for an analysis of the structure of the international carrier industry, including rates and services, an analysis of the current and future technological, economic, political and social factors affecting Teleglobe's performance and future prospects, and an analysis of Teleglobe's economic and financial performance since privatization.

The Statement of Work also calls for an analysis of the implications of alternative public policies with reference to a number of indicators, including efficiency, quality of service, financial health of Teleglobe, the impact on Canada's telecommunications infrastructure and sovereignty, and Teleglobe's ability to compete indirectly with U.S. carriers.

THE OWNERSHIP OF TELEGLOBE CANADA INC.

It should be noted that the Statement of Work does not make any reference to the direct or indirect ownership of Teleglobe Canada Inc. However, it should also be noted that Bell Canada (Bell) has, in more than one forum, called on the government to reconsider and amend the ownership restrictions for telecommunications carriers contained in the *Teleglobe Canada Reorganization and Divestiture Act.* Bell has put forward a specific proposal for the joint ownership of Teleglobe Canada Inc. on the basis of the market share of the Canada-overseas telecommunications market held by each Canadian carrier and reseller. Because of these initiatives by Bell, the matter of the ownership restrictions was also raised in almost every one of the discussions with user groups, resellers and carriers conducted during this study.

It is true to say that Teleglobe Canada Inc., a wholly-owned subsidiary of Teleglobe Inc., is not for sale at the current time. It is also true that the matter of ownership is not, at this time, an issue which is formally before the government or the Department of Communications. However, because of the strong views expressed by those interviewed for this work, the consultants were obliged to consider the most appropriate way in which the ownership issue should be dealt with in this study.

It is the conclusion of the consultants that the issue of the ownership of Teleglobe cannot be considered independently of the exclusive mandate. Certain public policy alternatives with respect to Teleglobe's future mandate would have different implications for users, resellers and carriers if the ownership structure were changed. Similarly, if the ownership structure were changed, then the results of the analysis of the public policy alternatives would be different. Accordingly, the matter of ownership has been considered during the analysis of the public policy alternatives and the comments of those interviewed during the study have been taken into account during this analysis.

APPROACH AND METHODOLOGY

In conducting this study, a rigorous analytical framework was established at the outset. The first step was to develop a set of comprehensive criteria to be used in conducting the analysis necessary to satisfy the requirements of the Statement of Work. At this time, it was decided that, to the extent possible, the analysis would use data which is in the public domain in order that detailed results of the analyses could be included in this report. The second step, then, was to determine how much of the required data was already in the public domain. The complete public record of the CRTC Proceeding with respect to the regulation of Teleglobe in the post-transitional era[7] was therefore examined. Additional information was obtained by sending a formal information request to Teleglobe.

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[7] This proceeding was initiated by CRTC Public Notice 1190-102, "Teleglobe Canada Inc. - Regulation after the Transitional Period", 20 December 1990.

Personal interviews were conducted with representatives of a number of user groups, carriers and resellers, including the Canadian Business Telecommunications Alliance (CBTA), the Communications Competition Coalition (CCC), Bell, British Columbia Telephone Company (B.C. Tel), Telecom Canada, Unitel Communications Inc. (Unitel), fONOROLA, Cable and Wireless, and the Competitive Telecommunications Association (CTA). A telephone discussion was held with a representative of the Canadian Overseas Telecommunications Union. Meetings were also held with representatives of Teleglobe Canada Inc. and Teleglobe Inc.

Once all the necessary information was received, the analysis was conducted, and the results were compared with the criteria established in the first step of the study. Then a number of policy alternatives in regard to the exclusive mandate were developed. The implications of each policy alternative for users, other carriers, and Teleglobe were examined.

On the basis of the results of the analysis and the evaluation of the policy alternatives, the findings and conclusions of the study were developed.

BACKGROUND TO THE PRIVATIZATION OF TELEGLOBE

Teleglobe Canada Inc. was established in 1987 when Memotec Data Inc. (now Teleglobe Inc.) purchased the assets of the Crown corporation Teleglobe Canada. The latter was established in 1949 when the Parliament of Canada enacted Bill 12, an *Act to Establish the Canadian Overseas Telecommunications Corporation (COTC)*. Bill 12 enabled the new corporation to acquire the assets of two privately owned British firms which provided overseas services to and from Canada up until that time. The assets consisted of three HF radio telephone circuits of dubious quality and thirteen telegraph circuits provided by submarine cables based on pre-1900 technology.

The installation of the world's first trans-Atlantic telephone cable in 1956 and the advent of communications satellites in 1964 released a pent-up demand for reliable, international telecommunications services which continues to the present day. The COTC, renamed Teleglobe Canada in 1975, prospered greatly from these developments, and, in collaboration with other leading international carriers, established world wide networks which continue to expand to meet new demands.

In 1986, the Government of Canada decided that public ownership of the facilities operated by Teleglobe was no longer essential to the achievement of public policy objectives, hence the decision to privatize the corporation. Accordingly, and following a lengthy bidding process, the Parliament of Canada enacted Bill C-38, the *Teleglobe Canada Divestiture and Reorganization Act.* This legislation, while ostensibly intended to facilitate the sale, also reflected the governments continued concerns for the strategic importance of international communications by placing specific and continuing obligations on the new company.

During the bidding process, potential bidders were concerned about the regulatory regime that would be imposed on the corporation following privatization. To allay these concerns, and to maximize the value of the company for sale purposes, the government accordingly devised some regulatory guidelines to apply for a five year transitional period, with the clear understanding that the form of regulation applicable to the corporation beyond that time would be determined by the CRTC, subject to the pertinent legislation, including the aforementioned "Special Act".

Compared with Canada's major domestic carriers, Teleglobe is quite small. With 1989 regulated telecommunications revenues of some $223 million, it is roughly the same size in terms of revenues as Newfoundland Tel, but its plant investment is much higher than that of Newfoundland Tel. Teleglobe has also been more or less confined to a specific market segment. On the face of it, then, Teleglobe would appear to be operating in a stable environment. In practice, however, technological developments, and the decisions of several major countries to introduce competition in international communications, are combining to threaten the orderly and collaborative approach to the provision of international services, and may indeed eventually impair the ability of smaller nations to make sovereign decisions. The recent Notice of Proposed Rulemaking (NPRM) of the FCC regarding the international accounting rates charged by foreign administrations to terminate international traffic is another example of extra-territoriality at work.

While these developments and many others will probably eventually result in overall benefits, they would appear to herald a prolonged period of change and uncertainty for many of the smaller international carriers, at a time when the investments required to meet demand and remain competitive are ever increasing. Canadian carriers, both domestic and international, may become especially vulnerable to these pressures and business risks because of Canada's close proximity to the United States and because of the virtual integration of the domestic networks of the two countries.

At the time of privatization, the Government of Canada issued a Policy Statement which referred to the strategic importance of Teleglobe's role. The enabling legislation and the conditions of sale also made specific references to the corporation's continuing role as an instrument affecting foreign policy, national security and sovereignty.

THE INTERNATIONAL TELECOMMUNICATIONS INDUSTRY

This chapter describes the structure and operation of the international telecommunications industry. It begins with a description of the industry. It then discusses the economics of the industry, and provides a brief commentary on the matter of economies of scale in international telecommunications. It continues with a description of the technology, regulation and institutional factors. The chapter ends with a description of the relationships among Teleglobe, the domestic carriers and foreign telecommunications administrations.

THE STRUCTURE OF THE INDUSTRY

The international telecommunications industry is characterized by a mixture of small and large carriers, most of which interconnect their networks for the purposes of exchanging traffic, or carrying transit traffic, on the basis of bilateral agreements. Once the exclusive domain of the PTTs (Post, Telegraph and Telephone Departments of governments), there is an increasing trend towards privatization and competition in this sector of the telecommunications industry.

While the agreements for the interexchange of traffic or the carriage of traffic are bilateral, there are also many multilateral arrangements involved in the carriage of international traffic. Examples of such arrangements include the many submarine cable consortia as well as INTELSAT and INMARSAT.

Dealing specifically with Teleglobe, it should be noted that it is unique in that, while it is Canada's overseas telecommunications carrier, unlike most other international carriers it does not carry the largest single component of Canada's international traffic - traffic between Canada and the United States.

TELEGLOBE HAS MANY AGREEMENTS BUT FEW CUSTOMERS

Teleglobe Canada is also unique in that while it has bilateral agreements with the telecommunications administrations in some 220 countries, protectorates and regions throughout the world for the exchange of traffic, and direct connections to approximately 130 countries, it has few direct customers in Canada. That is, most of the international traffic originating in Canada is delivered to Teleglobe by the domestic carriers who provide the customer interface. Accordingly, until recently, Teleglobe has had limited opportunities to market its services in Canada directly.

For the most part, its traffic is originated by and billed by the Telecom Canada members (and Unitel for international telegraph and Telex, and for some data traffic), and these carriers charge the international user the tariffed "collection rate" for each call or packet. In the case of traffic originated by the Telecom Canada members and delivered to the gateway, Teleglobe pays Telecom Canada the agreed settlement rate for originated traffic, and the domestic carriers then settle this revenue through the Telecom Canada Revenue Settlement Plan (RSP), or through the competitive settlement in the case of packet switched traffic. Teleglobe settles directly with Unitel for the Unitel traffic which it delivers to the Teleglobe gateway. Teleglobe then delivers the traffic to its destination, and pays the terminating carrier the "accounting rate" specified in the bilateral agreement.

When Teleglobe is terminating traffic originating from an overseas destination, then Teleglobe receives the "accounting rate", and settles this with the Telecom Canada members (or Unitel in the case of international telegraph and Telex, and some data traffic) who carry the call from the Teleglobe gateway to its final destination.

Teleglobe also carries transiting traffic across Canada for the account of its international partners, and the rates for such transit traffic are also part of the bilateral agreements. Traffic between Europe and Asia/Pacific Rim often transits Canada. For this purpose, Teleglobe leases facilities between its gateways at tariffed rates.

A recent exception to the above with respect to traffic originating in Canada was the implementation of the Globedirect service. This service permits the direct interconnection of major users and resellers to the Teleglobe point of presence (POP) or gateway. Teleglobe has established and is continuing to establish points of presence at locations other than its international gateways at Scarborough, Montreal and Burnaby. For example, Teleglobe now has POPs in downtown Vancouver, downtown Toronto, Ottawa and Kanata. Teleglobe has established a separate tariff for this originating traffic service, and no domestic settlement is involved.

THE ECONOMICS OF THE INDUSTRY

This section describes the economic structure of the industry in terms of the joint ownership of facilities, and in terms of the types of domestic and international settlements which are used to divide the revenues among the various carriers involved in providing international telephone services. This section ends with a discussion of the significance of international exchange rates for Teleglobe.

Teleglobe Canada is Canada's seventh largest carrier in terms of plant investment, with year-end 1990 net fixed assets valued at $586 million[8]. Unlike most of the other regulated carriers in Canada, most of Teleglobe's investment is physically located outside Canada and consists of satellite and undersea cable facilities that are jointly owned with other major international carriers and governments. While it has major switching centres at its gateways in Toronto, Montreal and Vancouver (the first two also being satellite earth station locations), and while it has cable landing points and/or satellite earth stations at Beaver Harbour, Mill Village, Weir, Port Alberni and Lake Cowichan, it does not own and operate its own transmission facilities within Canada. Teleglobe leases capacity from Unitel and the Telecom Canada members for the carriage of traffic between its gateways, and from its gateways to the earth stations and submarine cable landing points.

THE JOINT OWNERSHIP OF FACILITIES

Most of Teleglobe's investment in transmission facilities is related to its part ownership of submarine cable facilities as well as its membership in INTELSAT and INMARSAT. The cable and satellite consortia of which Teleglobe is a member involve other international carriers with whom Teleglobe shares the ownership and operating expenses. For example, in terms of cable facilities, it is joint owner with firms and administrations like AT&T, British Telecom and Australia's OTC in undersea cables linking North America to Europe, Asia, Australia and New Zealand. Teleglobe is a partner in the TAT-8 trans-Atlantic fibre optic cable which is already in operation, and is a partner in the TAT-9 trans-Atlantic fibre optic cable which is currently under construction and which will have Pennant Point, Nova Scotia, as its Canadian landing point. The TAT-9 cable will have a capacity of 60,000 voice circuits if it is fully equipped with digital circuit multiplication equipment (DCME). Teleglobe is also a partner, along with 36 other carriers and administrations, in TPC-4, the first trans-Pacific fibre optic cable which will link Canada, the United States and Japan.

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[8] Teleglobe Canada Inc. 1990 Auditors' Report, Note 4 to the Financial Statements, Fixed Assets.

In the case of submarine cables, users other than the joint owners participate through the acquisition of Indefeasible Rights of Usage (IRUs). In the case of INTELSAT and INMARSAT, most users contribute capital in proportion to their usage.

The economic significance of these ownership schemes is that the economies of scale inherent in the submarine cable and international satellite facilities, to the extent that they exist, are available to all members of the consortia. This means that the cost structures for most international carriers are likely to be similar, since the major cost component of international telecommunications - the international facilities - is based largely on the sharing of costs through joint ownership. That the cost of facilities is a major component of Teleglobe's costs is illustrated by the fact that in 1990, some 41% of Teleglobe's operating revenues was used for capital-related costs (depreciation, share of Intelsat launch failure, financial charges, and return on equity).

Accordingly, the differences in rates among carriers for international telephone services are then most likely related to differences in domestic and international revenue settlements.

In the case of satellite costs through its joint ownership of INTELSAT, Teleglobe's costs should be even lower than those of AT&T and the other U.S.-based international carriers since Teleglobe is the Canadian signatory to INTELSAT and therefore participates in the ownership of INTELSAT directly. In the U.S., Comsat General is the signatory to INTELSAT and U.S.-based international carriers requiring capacity on INTELSAT must purchase this capacity from Comsat General and pay a rate to Comsat General which presumable includes the costs of operation of Comsat General as well as the direct INTELSAT costs.

REVENUE SETTLEMENTS

Since Canadian originating and terminating international telephone service is the major revenue source for Teleglobe, accounting for approximately 80% of its settled revenues (net operating revenues), the domestic and foreign ITS settlements are discussed here in detail.

DOMESTIC SETTLEMENTS

The most financially significant agreement for Teleglobe is its agreement with Telecom Canada for originating and terminating international telephone (ITS) traffic. The routing, billing and revenue settlements process on the originating end works as follows.

For originating ITS traffic under the agreement currently in effect, the Telecom Canada members:

- Route the calls through the Canadian network to the Teleglobe international gateway;
- Bill their customers for "sent paid" telephone messages at the collection rate specified in the Teleglobe tariff;
- Retain an average of approximately $0.53 per minute (peak and off-peak settlements are different) which is then treated as Telecom Canada revenue subject to settlement; and
- Remit (through Telecom Canada) the difference to Teleglobe.

Teleglobe then carries the traffic from the gateway to the cable landing site or satellite earth station on facilities it leases from the domestic carriers, and onto its international facilities.

For terminating traffic under the agreement currently in effect:

- Teleglobe carries the traffic from the cable landing site or earth station to its international gateway on facilities it leases from the domestic carriers, and hand the traffic to the Telecom Canada member;
- Out of the accounting rate Teleglobe receives from the originating foreign administration, Teleglobe pays Telecom Canada an average $0.48 per minute (based on the current mix of peak and off-peak traffic) (the domestic settlement rate is lower for terminations because no billing is involved) which the members of Telecom Canada treat as revenue subject to settlement; and

- The Telecom Canada members carry the traffic from the Teleglobe gateway through the Canadian network to its final destination in Canada.

In addition to the ITS agreement described above, Teleglobe has additional agreements with Telecom Canada governing the carriage and revenue settlement of services other than international telephone service.

Teleglobe has an agreement with Unitel for the carriage of traffic from and the lease of facilities for packet, fax, some voice and private line services, and this agreement also covers the settlement of revenues from these services.

As mentioned earlier, Teleglobe also provides the Globedirect service under which Teleglobe carries ITS traffic from its POP to the international destination. Globedirect does not involve a domestic settlement, but does involve an international settlement.

INTERNATIONAL SETTLEMENTS

The process of international settlements is somewhat more complex and time-consuming given that Teleglobe must deal with some 220 foreign administrations. Individual accounting rates are negotiated with each foreign administration. However, rather than paying for each minute sent to the foreign administration, the settlement is on a net basis, with the accounting rate applied to the difference between the originating and terminating minutes. Therefore, each administration must make a determination of the originated and terminated minutes for each of the foreign administrations with which it exchanges traffic, and once the numbers are agreed on, then a settlement is made. The settlements process therefore often takes many months to complete.

Canada originates approximately 50% more international telephone traffic than it terminates. This means that Teleglobe pays out to foreign administrations the accounting rate settlement on 50% more minutes of ITS traffic than it receives from foreign administrations. Accordingly, the magnitude of the accounting rates is of major significance to Teleglobe in that it represents a real cost to Teleglobe. In 1991, for example, Teleglobe forecasts that it will pay out $559 million in foreign settlements, while foreign settlements to Teleglobe are forecast to be only $346 million. The result will then be a net foreign settlement imbalance of $213 million.

This is not the case for many administrations which have balanced inward/outward traffic patterns, or are net terminators of traffic. However, for this same reason, Teleglobe benefits from delays in the settlements process from a cash flow perspective. This benefit has an offsetting risk, however, since Teleglobe also therefore has a foreign exchange exposure in that its exact liabilities with respect to foreign settlements are subject to fluctuation.

INTERNATIONAL EXCHANGE RATES

The matter of foreign exchange is an important one for Teleglobe Canada. As explained above, Teleglobe originates more traffic than it terminates, making it a net originator of traffic. Teleglobe pays settlements to other foreign administrations once the amounts of the settlements have been worked out and agreed to.

While Teleglobe's domestic originated revenues are collected in Canadian funds, its settlements with foreign administrations are paid in foreign currencies. In fact, approximately 87% of its accounting rate settlements, are settled in SDRs (Special Drawing Rights), the value of which is pegged to the values of the U.S. dollar, the British pound, the French franc, the Japanese yen and the German mark. The impact of foreign exchange fluctuations is greater for Teleglobe than for U.S.-based international carriers since many of their settlements are in U.S. dollars, and the U.S. dollar is one of the five currencies against which the SDR is pegged in any case.

ITU regulations require that accounting rates be denominated in SDRs unless special arrangements are made. The remaining 13% of Teleglobe's agreements are in this category and are settled in U.S. dollars.

The collection and domestic settlement rates are not tied to a foreign exchange rate, and cannot be readily changed to take into account foreign exchange fluctuations. However, as noted above, all of Teleglobe's accounting rate settlements are paid in foreign currencies. This means that, in the absence of mechanisms to smooth out foreign currency fluctuations, Teleglobe could experience a significant windfall in one period, and significant financial problems in the next period, with changes in currency exchange rates as the only variable. Teleglobe Canada is experienced in foreign exchange operations, and does purchase future delivery or forward exchange contracts in order to ensure that rapid fluctuations are minimized. However, in turbulent times, even that is not enough to ensure that a carrier which is regulated on a rate base/rate of return basis does not exceed prescribed limits for reasons which are completely beyond its control. Moreover, Teleglobe is required by generally accepted accounting principles to revalue its unsettled accounts each month, which means that traffic originated in any given month may itself be subject to considerable fluctuation in value before settlement is finally made many months later.

For this reason, Teleglobe proposed, and the Commission approved in Telecom Decision CRTC 89-1, the establishment of a Rate Stabilization Account (RSA). This account is used as a source of or sponge for differences in revenue due to differences between the actual exchange rate used in settlements and the forecast of the exchange rate used for purposes of determining the revenue requirement. By subjecting each entry in the account to a three year amortization period, the amortized amounts in each month, positive or negative, are taken into or subtracted from revenue and are therefore subject to regulation over the medium term.

THE NET RESULT OF THE SETTLEMENTS FOR TELEGLOBE

Teleglobe expects to carry approximately 1 billion minutes of ITS Canadian originating and terminating traffic in 1991, which is expected to generate approximately $1.3 billion in gross operating revenues before settlement. Of this, approximately 630 million minutes and $913 million are expected to result from outward traffic, and approximately 407 million minutes and $346 million are expected to be from inward traffic.

From the forecast 1991 originating traffic revenues of $913 million, Teleglobe expects to pay out $304 million in domestic settlements to the Telecom Canada members, and $559 million in accounting rate settlements to foreign administrations, leaving net originated operating revenues of $51 million for Teleglobe.

From the forecast 1991 terminating revenues of $346 million, Teleglobe expects to pay out $190 million in domestic settlements, leaving net terminating operating revenues of $156 million.

Teleglobe forecasts that 1991 net operating revenues from all other services (including packet switched services, private line services and transit traffic) will be $58 million.

This distribution and retention of revenues is summarized in the following table:

Table 1: Forecast Distribution/Retention of Revenues - 1991

	$MM	%
TOTAL ORIGINATING AND TERMINATING REVENUES	$1,317	100%
TELECOM CANADA SETTLEMENTS	494	38%
FOREIGN SETTLEMENTS	559	42%
TELEGLOBE NET ITS REVENUES	207	16%
OTHER OPERATING REVENUES	58	4%

TECHNOLOGY AND REGULATORY FACTORS

This part of the report discusses changes occurring in the technological and regulatory environments within which Teleglobe Canada operates.

TECHNOLOGY FACTORS

It is important for Teleglobe to stay at the forefront of telecommunications technology in its operations for a number of reasons. It is important for efficiency reasons. It is important in that it must use technologies which are compatible with those of the countries and administrations with which it exchanges traffic. It is also important because it opens up new business opportunities for the company. This section describes Teleglobe's activities in this area in the 1987 to 1990 period as well as its plans for technologies and projects which will be implemented in the near future.

As a partner or consortium member in various submarine cables, Teleglobe has been involved in the planning, design, engineering, construction and commissioning of state-of-the-art submarine cables. These include:

- TAT-8, the first Transatlantic fibre optic submarine cable, put into service in 1988.

- TAT-9, and the underwater branching multiplexer developed by MPB Technologies of Montreal which provides for a Canadian landing of TAT-9, which will permit direct 45 Mbps connections among Canada and the U.K., France and Spain in early 1992, and TPC-4, which is based on a similar design and technology, which will permit high capacity connections among Canada, the U.S. and Japan in late 1992.

- CANTAT-3, a broadband fibre optic cable operating at 2.4 Gbps which is currently in the early planning stage for completion in 1994/1995 and which will provide low cost, high capacity connections between Canada and Europe.

Teleglobe and many of the administrations with which it exchanges traffic have been deploying digital circuit multiplication equipment (DCME) since 1988 on both digital submarine cables and satellite circuits. State-of-the-art DCME equipment provides up to 5:1 voice circuit multiplication, depending on the amount of facsimile and data traffic in the stream. Since the equipment commonly in use is proprietary, administrations on both end of the circuit must agree on the type of equipment to be used.

Teleglobe has been implementing other new transmission, switching and network technologies as they become available. Some examples, implemented and planned, include the following:

- A Supernode DMS 300 switch in Montreal in 1990, to be followed by similar installations in Toronto and Vancouver in 1991 and 1992.

- Common Channel Signalling No. 7 (CCS7) will be implemented in Montreal in 1992, followed by Vancouver and Toronto in 1992/1993. This will provide for signalling compatibility with domestic carriers and provide a base for a fully digital network leading to ISDN as well as improving network efficiency and quality. The implementation of CCS7 (and CCITT#7 in Teleglobe's international switches) will be followed by the full implementation of the intelligent network concept incorporating new architecture features such as signal transfer points (STPs) and signal control points (SCPs).

- Teleglobe has developed an international network management system for submarine cable systems which will be utilized jointly by all the partners in TAT-9, scheduled for implementation in 1992.

Teleglobe has also implemented a number of new international services. Those which are designed for general use by customers in the domestic market are described in the next chapter. Those which involve new technologies and which are intended for a special application or user group include:

- A global aeronautical service providing ground to air and air to ground public switched access for voice and data, developed jointly with SITA, OTC (Australia) and France Telecom, scheduled for implementation in 1991.

- A fully digital access to the marine mobile service for communication with shipping at sea, scheduled for implementation in 1993.

Other technological innovations implemented or planned by Teleglobe include:

- A special mobile satellite service for remote areas using a very small terminal (briefcase terminal), in conjunction with Ontario Air Ambulance.

- To satisfy Gulf War military communications requirements, Teleglobe put into service a special VSAT terminal on a rush basis in late 1990.

- Teleglobe is involved in a number of discussions with potential partners regarding joint projects in support of the Vision 2000 Universal Personal Network.

REGULATORY FACTORS

As a result of the provisions of the *Teleglobe Canada Reorganization and Divestiture Act*, Teleglobe was placed under the regulatory jurisdiction of the CRTC.

The courts have ruled that the *Railway Act*, which provides the regulatory regime for telecommunications carriers under the jurisdiction of the CRTC, does not itself provide the Commission with the power to forbear from the regulation.

However, the *Teleglobe Canada Reorganization and Divestiture Act* does permit the CRTC to forbear from regulation of a Teleglobe service when the Commission determines, as a question of fact, that the activity is

> "... subject to a degree of competition that is sufficient to ensure just and reasonable tolls, rates of charges and ensure against unjust discrimination or undue or unreasonable preference, advantage, prejudice or disadvantage ..."[9]

The Commission has not yet used these specific powers to forbear from regulation of any of Teleglobe's services. The *Teleglobe Canada Reorganization and Divestiture Act* also provides that while the Commission may require that contracts, agreements and arrangements between Teleglobe and foreign administrations be filed with it, such contracts, agreements and arrangements are not subject to the Commission's approval[10]. Accounting rates and transit traffic rates are in this latter category, as are matters involving INTELSAT, INMARSAT and Teleglobe's memberships in the various submarine cable consortia.

A Direction to the CRTC in the form of Order in Council P.C. 1987-705 provided for the regulation of Teleglobe's rate of return during the period from January 1, 1988 to December 31, 1991. The Direction also ordered the immediate implementation of rate reductions.

The Commission has regulated Teleglobe according to the appropriate provisions of the *Teleglobe Canada Reorganization and Divestiture Act*, the *Railway Act* and Order in Council P.C. 1987-705 during the period from January 1, 1988 to date. In fact, Teleglobe has generally been regulated in a manner similar to that applied to the other carriers under the Commission's jurisdiction except for the differences noted above - the rate of return for the period was specified in a Direction to the CRTC, and the Commission does not approve its contracts and agreements with foreign administrations.

In late 1990, with the transition period about to enter its last year, the CRTC issued Public Notice 1990-102, "Teleglobe Canada Inc. - Regulation after the Transition Period." This public notice initiated a public process which culminated

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9 Section 16.

10 Section 17.

in a public hearing before the Commission in late August, 1991. A broad range of issues was canvassed by the Commission during this proceeding. The Commission's decision in this matter is pending.

RELATIONSHIPS WITH DOMESTIC AND FOREIGN CARRIERS

It is apparent from the description of domestic and international settlements provided earlier in this chapter that settlements result in Teleglobe paying out some 80% of its gross operating revenues to the domestic carriers and to foreign administrations. Accordingly, Teleglobe's negotiations with the domestic and foreign carriers with which it interconnects are extremely important for Teleglobe, particularly when it is under pressure to reduce its rates in line with recent domestic message toll rate reductions, or to bring its international rates to the level of those available from U.S.-based international carriers. As discussed below, neither the domestic nor foreign settlements are based on costs, and both settlements yield revenues for the recipients which are well in excess of the costs incurred in providing the service for which Teleglobe is compensating these carriers and administrations.

DOMESTIC SETTLEMENTS

While Canadian domestic and Canada-U.S. message toll rates have declined, on average, by almost 50% during the last five years, and in spite of ITS collection rate reductions implemented by Teleglobe which totalled some 35% over the 1988 to 1990 period, no change was made in the Teleglobe-Telecom Canada settlement during this period. For the last 15 years, Telecom Canada has retained a settlement which, based on the current mix of inward and outward, peak and off-peak traffic, results in an average rate of approximately $0.50 per minute for ITS traffic. A recently negotiated amendment to this agreement will reduce the rate by $0.045 in each direction. This amendment is awaiting regulatory approval.

The current settlement rates in effect between Teleglobe and Telecom Canada of $0.55 per minute for peak minutes and $0.36 per minute for off-peak minutes are much higher than the rates which Telecom Canada and AT&T have negotiated for terminating U.S.-originating traffic in Canada and vice-versa of US$0.14 per minute for peak minutes and US$0.12 per minute for off-peak minutes, or the rate paid by AT&T to U.S. domestic carriers for originating or terminating traffic of approximately US$0.09 per minute. It is estimated by Telecom Canada members that of the average $0.50 per minute settlement, the cost to Telecom Canada members is about $0.07 per minute, and the other $0.43 per minute is considered to be contribution towards the cost of the local network.

Part of the reason for the reluctance on the part of the Telecom Canada members to renegotiate the domestic settlement arrangement with Teleglobe is likely due to the fact that the domestic settlement with Teleglobe provides a significant flow of revenue - forecast by Teleglobe to be $494 million in 1991 - for settlement among the Telecom Canada members under the provisions of the RSP. Not all Telecom Canada members contribute to and benefit from the RSP on the same basis - some companies are net contributors to the plan and others are net beneficiaries under the plan to one degree or another. It would not therefore be surprising if one or more of the net beneficiaries were opposed to any lowering of the domestic settlement rate, and since each member of Telecom Canada has a veto, the negotiation of changes to the domestic settlement rate would be slow.

If Teleglobe were not the exclusive overseas carrier, Teleglobe's apparently limited ability to renegotiate the domestic settlement would be reduced even further, since the Telecom Canada members would be able to sell their outward traffic to the highest bidder. It is highly likely that one or more of the Telecom Canada members would be one of the other bidders. Canadian users would not likely benefit from such a situation.

Part of the amendment to the agreement recently negotiated among Teleglobe and the Telecom Canada members included a provision for the establishment of a "gateway tariff". Teleglobe's concept of the "gateway tariff" is essentially an unbundling of the domestic and international portions of services. Under this proposal, the Telecom Canada members would pay the Teleglobe tariff on outward traffic. Similarly, the Telecom Canada members would establish a termination tariff which Teleglobe would pay to Telecom Canada to terminate inward traffic.

Teleglobe has also recently implemented the Globedirect service. This service provides a tariff for the overseas carriage of traffic delivered to a Teleglobe POP or gateway. Since this service requires a dedicated access line between the customer premises and the Teleglobe POP or gateway, only major users of international services and resellers are likely to use the Globedirect service. Resellers also pay a

$200 per circuit per month contribution[11] on access lines to Globedirect. Teleglobe does not pay a domestic settlement on outward traffic carried as Globedirect traffic, but collects the contribution and remits it to the domestic carriers.

FOREIGN SETTLEMENTS

It is generally acknowledged that accounting rates have not been reduced to keep pace with the reductions in costs which have been brought about by changes in technology, increases in traffic volumes, and other efficiency improvements implemented by domestic and international carriers worldwide. There has been a tendency for the larger foreign administrations to reduce their accounting rates somewhat in recent years.

Both the U.S.-based international carriers and Teleglobe suffer from the same traffic imbalance (more originating traffic than terminating traffic), and all benefit from reductions in accounting rates since they are net payers of international settlements. For this reason, they have been exerting pressure on foreign administrations to reduce accounting rates.

Since privatization, Teleglobe has been able to negotiate reductions of up to 73% in the accounting rates it pays to foreign administrations. For its 15 major traffic streams, the average reduction in accounting rates weighted on the basis of 1991 traffic volumes is 31%, with the highest individual reduction among those 15 countries at 58%. For all Teleglobe destinations, the average reduction weighted on the basis of traffic volumes is 25%.

AT&T and MCI have filed proposals to lower their accounting rates to the U.K. by 62% by 1993. Teleglobe is actively negotiating with the U.K. carriers and expects to reach an agreement shortly.

At the same time, those countries which terminate more traffic than they originate, and which are therefore net receivers of accounting rate settlements, often depend on these payments as an important source of foreign exchange. As the accounting rates are negotiated in hard currencies such as U.S. dollars or SDRs, they can be used for other purposes than for supporting the cost of the national

[11] As ordered by the CRTC in Telecom Decision 90-3 for domestic resale of private lines for joint use in the territories of Bell and B.C. Tel.

telecommunications system. Unfortunately, this dependence on accounting rates for foreign exchange and for the support of other national priorities is most prevalent among the lesser developed countries, and has led to a "have" versus "have not" situation.

Teleglobe is now able to negotiate accounting rates with each foreign administration on the basis of delivering to it all the Canadian traffic. While Teleglobe does not make its accounting rates public, U.S. carriers are required by the FCC to file them publicly. Teleglobe states that its accounting rate with each foreign administration is comparable to that negotiated by the U.S.-based international carriers, with some rates being slightly lower, some slightly higher, and most rates being identical to those negotiated by the U.S. carriers.

If the routing of Canadian traffic were split among several Canadian-based international carriers, then the foreign administrations of the top few Canadian traffic destinations would be dealing with two or more Canadian carriers, each having the ability to deliver only a portion of the Canadian traffic. As it is, the volume of international ITS traffic originating in Canada is not large compared to other international carriers like AT&T. It is important to negotiate accounting rates with foreign administrations from a position of strength. It is also important for Canada to be in a position to negotiate direct connections with those foreign administrations where it is economically viable, and to negotiate transit arrangements and rates where direct connections are not economically viable. If Canadian originated ITS traffic were divided among two or more international carriers, the bargaining power of each such Canadian carrier would be reduced, and Canadian users would likely end up paying higher rates due to the less attractive routings and higher accounting rates.

OTHER ASPECTS OF THE RELATIONSHIPS WITH FOREIGN ADMINISTRATIONS

Teleglobe's negotiations with foreign administrations involve more than just the negotiation of accounting rates and routings. It also involves the negotiation of circuit allocations and the implementation of new service offerings.

Teleglobe is now able to negotiate with foreign administrations on the basis of delivering to them all the Canadian traffic. Circuit allocations are then agreed to by Teleglobe and the foreign carrier or administration on the basis of traffic projections and quality of service criteria. If the relatively small volume of Canadian-originated ITS traffic were divided among two or more Canadian-based international carriers, then the ability of any one of those carriers to negotiate the allocation of circuits with each of the foreign administrations with which Canada interconnects would be reduced. Quality of service would be impaired if the required number of circuits is not agreed to by the foreign administration.

Similar to the situation of accounting rate negotiations, if the routing of Canadian traffic were split among several international carriers, then the bargaining power of each Canadian carrier would be less. The major impact could be increased difficulty in the negotiation of direct Canadian connections to submarine cables. Not all submarine cables in which Teleglobe is a joint owner have Canadian landing points, but a Canadian landing point is preferable, as explained below. Teleglobe has been able to negotiate Canadian landing points for TAT-9 and for the new Transpacific fibre optic submarine cable TPC-4. The reason Teleglobe has been able to convince the other members of the two consortia that Canadian landing points for the TAT-9 and TPC-4 cables are warranted is that Teleglobe carries all the Canadian-originated ITS traffic. If the members of the consortium had not agreed to a Canadian landing point for these cables, then Teleglobe would have to route the traffic to the cable via the U.S., thereby adding an additional quality variable (the U.S. carrier between the international border and the U.S. cable landing point) over which Teleglobe has no control.

A similar situation exists with respect to the implementation of new services. Being a smaller market than the U.S., new services are sometimes implemented between foreign administrations and Canada somewhat later than is the case with U.S.-based international carriers, but Canada is usually close behind. If the Canadian market were fragmented, then Canada might receive a lower priority in implementing new international services.

While the foregoing have an impact on the ability of Teleglobe to successfully conduct business, there are also Canadian sovereignty issues at play.

Canadian sovereignty is best maintained if Canadian overseas traffic is carried on Canadian owned facilities and is originated and terminated on Canadian soil. In the past, Teleglobe has actively sought Canadian cable landing sites and has used Canadian earth stations almost exclusively for communications with the INTELSAT and INMARSAT satellite networks.

If Teleglobe did not have an exclusive mandate to originate and terminate overseas traffic the overseas market would become fragmented. Moreover, there would be an economic incentive to land cable traffic on the U.S. Atlantic or Pacific seaboards. The undersea cable cost, for example, would be essentially the same for landing the traffic in Nova Scotia or New Jersey, but the transit cost of delivering this traffic to Montreal or Toronto from the latter would be considerably less. Thus a Canadian carrier could presumably purchase the necessary IRUs and make the necessary transit arrangements at a cost lower than Teleglobe. The end result would be a significant reduction in the use of Canadian facilities and a loss of control due to the involvement of a non-Canadian carrier.

TELEGLOBE CANADA'S RECENT PERFORMANCE AND FUTURE PROSPECTS

This chapter of the report contains the results of the review of Teleglobe's performance during the period since privatization in terms of its economic and financial performance, its implementation of new service offerings, the quality of its services, and the nature and level of the research and development it has undertaken.

TELEGLOBE'S ECONOMIC AND FINANCIAL PERFORMANCE SINCE PRIVATIZATION

The first aspect of the review consisted of an examination of Teleglobe's economic and financial results since privatization.

As Table 2 on the following page indicates, Teleglobe has experienced continued growth in volumes of traffic based on its annual minutes of ITS traffic carried. Due to the rate reductions which are discussed later in this chapter, Teleglobe's revenues have not grown as quickly as traffic volumes. Some of the rate reductions have been possible because of reductions in accounting rates paid to foreign administrations. As discussed earlier, these reductions have averaged 31% since 1987 on a traffic weighted basis. Since there has been little change in domestic settlements, most of the decreases in revenues not accounted for in accounting rate reductions have resulted in reductions in Teleglobe's net income.

It should be noted that with the exception of the first rate reduction which was put into effect on January 1, 1988, and which was essentially a condition of sale, subsequent rate reductions have been initiated by Teleglobe and approved by the CRTC. Moreover, Teleglobe has implemented these reductions with no change in domestic settlements, which means that Teleglobe has absorbed the entire reduction in revenue resulting from these reductions. At the same time, it should also be noted that without these rate reductions, Teleglobe would have exceeded its allowed rate of return.

Table 2: Trends in Traffic Volumes, Revenues and Income

	1987*	1988	1989	1990
Annual ITS Volumes (MM Min)	370	602	776	918
Annual Gross Revenues ($MM)	734	1,018	1,130	1,232
Net Operating Revenues ($MM)	244	245	224	234
Net Income ($MM)	68	41	34	21

*Reflects 9 month fiscal period

Sources:
Financial data: Teleglobe Annual Reports
Volume data: Teleglobe(CRTC)26Feb91-502, amended May 27, 1991

RATE OF RETURN

As illustrated in Table 3 on the following page, in spite of the international telephone service (ITS) rate reductions of 13.5%, 12% and 5% implemented by Teleglobe in 1988 and a further 7.5% in 1989, Teleglobe exceeded its allowed rate of return in 1988 and 1989, and has had to reduce its rates further in order to bring its rate of return within the allowed range on a four year average basis.

It is important to emphasize that Teleglobe's apparently deteriorating financial performance in 1989, and in 1990 in particular, was due to the implementation of rate reductions by Teleglobe in order that Teleglobe would not exceed the rate of return limit prescribed by the Governor in Council in Order in Council P.C. 1987-705.

In comparison to the rates of return earned by Bell and B.C. Tel during this same period, Teleglobe's rate of return was higher than that of each of Bell and B.C. Tel in 1988 and 1989, and lower than both in 1990. However, Teleglobe expects to earn, on average over the four years, the rate of return it is allowed to earn as prescribed by Order in Council P.C. 1987-705. By definition, then, if this turns out to be the case, Teleglobe will have earned approximately two percentage points

Table 3: Historical Rate of Return on Common Equity

	1988	1989	1990	Forecast 1991
		(All $ figures in thousands)		
Maximum Allowable Earnings	$36,108	$38,438	$41,581	$49,840
Actual Regulated Earnings	$45,944[1]	$40,990[1,2]	$30,417[1]	$44,984[1]
Excess Earnings	$9,836	$2,552	$(11,164)	$(4,856)
Cumulative Excess Earnings	$9,836	$12,388	$1,224	0
Maximum Allowable ROE	14.84%	14.89%	14.89%	14.90%
Actual ROE	18.88%	15.88%	10.89%	13.44%

Notes:
[1] Includes imputed interest income on advances to Memotec
[2] Includes revenues due to correction for incorrectly billed traffic in prior years

Source:
Exhibit TCI 91-1D1 (amended 17 July 1991)

more than the weighted average mid-point of the rates of return approved by the Commission for Bell and B.C. Tel., or about one percentage point more than the weighted average of the actual rates earned by Bell and B.C. Tel.

RATE REDUCTIONS

The ITS rate reductions which Teleglobe has implemented during the last four years are summarized in Table 4 on the following page.

It is noted that domestic rate reductions implemented by Bell and B.C. Tel since 1985 have been greater than those implemented by Teleglobe. However, in making such comparisons, it must be kept in mind that there has been no change to the domestic settlements during this period, which means that the entire reduction has been absorbed by Teleglobe in the form of reduced net revenues and by the foreign administrations in the form of lower accounting rates.

Table 4: ITS Rate Reductions Implemented by Teleglobe, 1988-1991

Date of Implementation	Weighted Average Reduction
January 1, 1988	13.5%
June 1, 1988	12.0%
September 1, 1988	5.0%
July 1, 1989	7.5%
October 2, 1989	0.2%
January 1, 1990	1.8%

Teleglobe's current ITS rates are slightly higher than the rates charged by AT&T and MCI to the same destinations. Table 5 on page 32 provides a weighted average peak and off-peak comparison among Teleglobe, AT&T and MCI for Teleglobe's top 15 traffic streams which together account for some 62% of Teleglobe's outward ITS minutes.

Table 5: Teleglobe, AT&T and MCI Collection Rates

	Rate for a 7 Minute DDD Call		
	Regular Rate	Super Saver Rate	Weighted Average
Teleglobe	$10.50	$7.44	$9.08
AT&T	$10.22	$6.37	$8.43
MCI	$10.39	$6.28	$8.48

Source: Teleglobe Canada
Currency conversion based on Royal Bank Rate July 1991
Traffic volumes weighted on basis of Teleglobe 1991 Marketing Traffic Plan

The higher domestic settlement rates paid by Teleglobe compared to those paid by AT&T and MCI should be taken into account in comparing these collection rates. If the domestic settlement rate paid by Teleglobe (which averages approximately $0.50 per minute) were to be reduced to the rate paid by U.S.-based international carriers (which is approximately US$0.09 per minute), and if Teleglobe's collection rates were reduced by the same amount, then Teleglobe's regular rate would be lower than either of AT&T or MCI, and the Super Saver Rate would be much closer to the rates charged by AT&T and MCI.

It is difficult to make comparisons of Teleglobe's Globedirect rates, which do not involve a domestic settlement, with similar services offered by U.S.-based international carriers, since the U.S. carriers offer volume discounts, and offer even greater unpublished, negotiated discounts for high volume users and resellers.

Teleglobe's rates to the U.K. are compared with the rates charged by Mercury and British Telecom (BT) on calls to Canada in Table 6 on the following page.

Table 6: Teleglobe, BT and Mercury Collection Rates

	Rate for a 7 Minute DDD Call to/from U.K.		
	Regular Rate	Super Saver Rate	Weighted Average
Teleglobe	$9.15	$6.38	$7.76
BT	$7.41	$6.27	$6.83
Mercury	$7.19	$5.02	$6.10

Source: Teleglobe Canada
Currency conversion based on Royal Bank Rate July 1991
Peak/off-peak weighted on basis of Teleglobe 1991 Marketing Traffic Plan

It can be seen that the Teleglobe collection rate is on average some 14% higher than the rate charged by BT, and 27% higher than the rate charged by Mercury.

A similar comparison is made in Table 7 for calls to and from Japan.

Table 7: Teleglobe and KDD Collection Rates

	Rate for a 7 Minute DDD Call to/from Japan		
	Regular Rate	Super Saver Rate	Weighted Average
Teleglobe	$12.38	$8.70	$11.06
KDD	$14.26	$8.47	$12.18

Source: Teleglobe Canada
Currency conversion based on Royal Bank Rate July 1991
Peak/off-peak weighted on basis of Teleglobe 1991 Marketing Traffic Plan

In this case, the Teleglobe collection rate is on average some 10% lower than the rate charged by KDD.

Debt:Equity Ratios and Interest Coverage Ratios

Other important indicators of financial performance are the debt:equity ratio and the interest coverage ratio. The historical figures for these measures are provided in Table 8 below.

Table 8: Debt:Equity Ratio and Interest Coverage

	1987	1988	1989	1990
Debt:Equity Ratio[1]	45:55	43:57	41:59	43:57
Interest Coverage Ratio[2]	N/A	4.2	3.1	2.1

Sources:
[1] Exhibit TCI 91-700, Memorandum on the Financial Position of Teleglobe Canada, page 10 (revised May 27, 1991).
[2] Exhibit TCI 91-700, Memorandum on the Financial Position of Teleglobe Canada, page 11 (revised May 27, 1991).

In considering the interest coverage ratio, it should be kept in mind that the rate reductions implemented by Teleglobe and which slowed the revenue growth had an even greater impact on Teleglobe's earnings before interest and taxes (EBIT), which is the denominator in the interest coverage formula.

Capital Expenditures and the Internal Generation of Funds

The extent to which capital expenditures can be financed from internally generated funds is also an important indicator of financial performance in a capital-intensive industry. The historical and forecast data for Teleglobe is presented in Table 9 on the following page.

Table 9: Capital Expenditures and Internally Generated Funds

(in $ millions)

	1988	1989	1990	May 1991 1991	Forecast 1992
Gross Capital Expenditures	73.1	103.1	165.9	196.0	186.2
Internally Generated Funds	95.1	81.7	85.0	152.4	118.1
Percentage Generated Internally	100.0%	79.2%	51.2%	77.8%	63.4%

Source: Rows 1 and 2, Exhibit TCI 91-701, revised May 27, 1991.

In considering these results, two factors should be kept in mind. One is that the trend in the level of capital expenditures has been increasing. The second is that the rate reductions implemented in the 1988 to 1991 period have had a very significant impact on Teleglobe's earnings. Both of these factors have caused the percentage of capital expenditures which can be financed internally to decline rapidly over the period. However, this decline is not indicative of deteriorating financial performance on the part of Teleglobe so much as a requirement to bring its rate of return on equity within the allowed range on a four year average basis.

EFFICIENCY OF TELEGLOBE'S OPERATIONS

Teleglobe has provided data on Total Factor Productivity (TFP) in which it projects a five year average TFP gain of 8.8% over the 1989 to 1994 period[12]. However, the lack of historical data over the entire period since privatization with respect to this measure makes it a less than satisfactory measure for determining efficiency gains.

Another measure of efficiency is the change is network costs and selling and administration costs as a percentage of gross revenues. Over the period 1987 to

[12] Submission of Teleglobe Canada Inc. to the CRTC pursuant to CRTC Telecom Public Notice 1988-50, Construction Program Review, page 1, amended April 28, 1989.

1990, network costs as a percentage of gross revenues have increased from 9.6% to 10.0%. Over the same period, selling and administration costs as a percentage of gross revenues have declined from 5.6% to 5.4%. ITS collection rates have been reduced by almost 35% during this period. These results would indicate improvements in efficiency over this period.

The only other efficiency data which is readily available is the volume of ITS traffic carried per employee. Data on this measure is provided in Table 10.

Table 10: Ratio of Paid Minutes of ITS Traffic to Number of Employees

Year	Minutes of ITS Traffic (Million of Minutes)	No. of Employees (at year end)	Ratio
1988	602	1,051	0.57
1989	776	1,066	0.73
1990	918	1,052[1]	0.87

[1] 1990 Budget

Sources:
Traffic Volumes: Teleglobe(CRTC)26Feb91-502, amended May 27, 1991
Number of Employees: Teleglobe(CRTC)26Feb91-620, amended May 27, 1991

TELEGLOBE'S SERVICES

Teleglobe has introduced a number of new services since privatization. These include:

- Canada Direct Service, which allows Canadians travelling abroad to access a Canadian operator by dialling a local number. This service is currently available in 39 countries.

- Globefax, a replacement for the former INTELPOST service, which provides customers with a store-and-forward facsimile service. This allows customers to send overseas facsimile messages at times of the day when rates are most advantageous.

- Globedirect, which provides for the direct connection of private lines to Teleglobe's points of presence. The lower rates offered with this service make it of interest to large customers and resellers.

- Globestream, a fully digital international fibre optic private leased service which enables the establishment of global digital private networks.

- Satellite Aircom, which is a joint offering, with France Telecom, OTC Limited and SITA, provides in-flight telephone and data services on a global basis

- Transportable Land Mobile service is a service which allows users equipped with transportable "briefcase" terminals to access the INMARSAT satellite to communicate globally.

- Mobile Satellite Data service provides Telesat Mobile Inc. (TMI) with a full time leased channel on INMARSAT which allows Telesat to move ahead with its MSAT service.

- The Emergency Medical Aviation Service utilizes INMARSAT satellite facilities to allow Ontario Air Ambulance to operate its emergency medical service in Northern Ontario.

- Points of Presence (POPs) were introduced in Vancouver, Toronto, Ottawa and Kanata to facilitate customer access to the Globedirect service.

During the interviews, Teleglobe was criticized by some users for not implementing a global virtual private network (GVPN) service. Teleglobe's response is that Telecom Canada was unwilling to proceed with the implementation of a GVPN service. Teleglobe plans to initiate a GVPN service in 1992 with other partners. In the meantime, it will be implementing switched 56 and 64 Kbps services in 1991 to provide end-to-end full digital high speed data or voice services.

QUALITY OF SERVICE

Teleglobe monitors a number of quality of service indicators. It has also embarked on several initiatives to improve its responsiveness to quality problems. While Teleglobe is directly responsible only for its own operations - switching and transmission - it does work with foreign administrations to make them aware of and to press for the resolution of problems which occur at the remote end of the circuit.

Teleglobe's performance in terms of measures of service quality and other programs it has undertaken to further improve service quality are described in the following two sections.

MEASURES OF SERVICE QUALITY

Grade of Service (GOS) and Answer Seizure Ratio (ASR) are the two main quantitative measures of service quality used by Teleglobe.

GOS is the probability of blockage on the international portion of the call (the probability that a call reaching Teleglobe's gateway in Canada will not obtain an appropriate international circuit). Teleglobe's objective for most routes is the CCITT recommended maximum value of 1% on weekdays. However, because some routes have high demand on Sundays, a Sunday GOS of 10% is used in these cases.

Teleglobe monitors GOS on a continuous basis, and the results are used to negotiate circuit additions with foreign administrations.

Table 11 on the following page provides an indication of the changes in service quality over time for Teleglobe's major routes by showing the number of months in the year for which the GOS objective of 1% for weekdays or 10% for Sundays was met or exceeded.

Table 11: Grade of Service 1987 - 1990

	Number of Months in Year when GOS Objective Achieved			
	1987	1988	1989	1990
Australia	3	11	7	10
France	5	10	12	11
W. Germany	7	2	4	12
Greece	9	11	12	12
Hong Kong	5	12	7	12
Israel	4	3	10	8
Italy	12	10	9	5
Jamaica	2	0	11	8
Japan	6	3	3	12
Netherlands	8	6	4	9
Switzerland	3	1	0	12
Trinidad	2	1	11	9
U.K.	11	12	12	11
TOTAL	77	82	102	131

ASR is the percentage of Teleglobe-originated calls to a particular country which are answered at the destination. Unlike the GOS, the ASR objective is not entirely within Teleglobe's control. Countries with good levels of telephone development have ASRs in the 60-70% range. In the long term, Teleglobe expects all countries to approach the 70% level, although this will require some period of time for countries with low levels of telephone development.

Unlike the GOS, the absolute number for the ASR is meaningful for determining quality of service changes. The average annual ASRs achieved by Teleglobe for its major traffic destinations is provided in Table 12 on the next page.

Table 12: Answer Seizure Ratios 1987 - 1990

	Actual Answer Seizure Ratios Achieved (Annual Average)			
	1987	1988	1989	1990
Australia	52	56	57	57
France	54	59	59	60
W. Germany	53	54	56	55
Greece	35	34	34	36
Hong Kong	62	64	62	61
Israel	37	40	39	43
Italy	46	47	49	50
Jamaica	46	36	40	45
Japan	72	71	70	68
Netherlands	54	56	58	59
Switzerland	56	58	56	56
Trinidad	54	49	59	53
U.K.	56	58	59	59
AVERAGE	51.9	52.5	53.6	53.8

Other Programs to Improve Service Quality

Qualitative indicators of service quality on which Teleglobe relies are primarily customer perceptions of transmission quality. Satellite delay, echo and clipping are the most frequent customer complaints. There is nothing Teleglobe can do about satellite delay except to ensure that the first choice routing is cable, and that double satellite hops are avoided to the maximum extent possible. With respect to echo and clipping, Teleglobe has converted the Toronto and Vancouver gateways to full echo canceller operation, and the Montreal gateway is scheduled to be completed by the end of 1991.

Teleglobe is also installing a number of network monitoring and supervisory systems including:

- Automatic Transmission and Measuring Equipment (ATME) to conduct a number of transmission and network diagnostic tests

- Monitoring, Control and Supervisory Systems (MCS) for facility monitoring, systems integration, terminal emulation and records automation

- Computerized Fault Reporting System (CFRS) to aid in the identification and diagnostic analysis of problem areas

Teleglobe is also converting much of its network to digital operation. Its switches are all digital. New submarine cables will be digital. Satellite routes are being converted to digital through the use of intermediate data rate (IDR) digital technology wherever possible. Leased facilities in Canada are also being converted to digital. The last step, described earlier under the heading "Technology Factors", is the conversion of the network to digital, of which the adoption of CCS7 is an important step.

As part of its "Customer Care Program", line operational personnel have been attending workshops on customer care, and Teleglobe is opening an International Customer Service Centre (ICSC) which will be staffed around the clock, seven days per week.

RESEARCH AND DEVELOPMENT

Teleglobe provided the recent CRTC proceeding with an overview of its actual and estimated research and development expenditures, by project and year, for each of the years 1988 to 1992. This response is reproduced in Table 13 on the following page.

Table 13: Research and Development Expenditures 1988 - 1992

	($000)				
	Actual 1988	Actual 1989	Actual 1990	View 1991	Forecast 1992
Intelligent and Adaptive Networking	902	4,677	2,673	5,203	7,497
Network Management Systems Technology	0	224	696	1,929	4,780
Open Systems Interconnection Technology	656	359	92	642	1,435
Satellite Communications	0	0	0	0	627
Management Information Technology	0	0	0	200	350
R&D Component of DEMAND category projects	1,604	2,502	1,106	20	513
R&D TOTAL	3,162	7,762	4,567	7,994	15,202

Source: Teleglobe(CRTC)26Feb91-618.

Teleglobe provided to the consultants a detailed description and expenditure history and projection for the sub-projects making up each of the categories in Table 13. The details reconcile with the overview provided to the Commission in every respect.

A useful comparison of expenditure levels can be made by comparing the actual and forecast levels in Table 13 as a percentage of operating revenues with comparable data for Bell. Bell provided this data in response to interrogatories in the recent CRTC proceeding to consider the applications of Unitel and BCRL to provide a competitive message toll service. This comparison is provided in Table 14.

Table 14: Comparison of R&D Expenditures of Teleglobe and Bell

	Actual 1988	Actual 1989	Actual 1990	View 1991	Forecast 1992
Teleglobe R&D $(000)	3,162	7,762	4,567	7,994	15,202
Teleglobe Operating Revenues $(000)	245,406	223,537	226,378	282,638	342,579
Teleglobe R&D as % of Operating Revenues	1.3%	3.5%	2.0%	2.8%	4.4%
Bell R&D as % of Operating Revenues	2.0%	2.0%	1.5%	1.8%	2.0%

Sources:
Teleglobe R&D: Teleglobe(CRTC)26Feb91-618
Teleglobe Operating Revenues: Financial statements, Exhibit TCI 91-101
Bell R&D Percentage: Bell(BCRL)28Dec90-101 IC2 and Bell(BCRL)28Dec90-110 IC2

Another R&D issue is the extent to which Teleglobe Canada is carrying out R&D at its own expense, but which is really for the benefit of its parent company, or other subsidiaries of the parent company. The consultants reviewed the information provided by Teleglobe with this issue in mind. In every case, the consultants were satisfied that the projects as described were consistent with the role of Teleglobe as a member of international cable and satellite consortia, as a provider of international services to Canadian users. The R&D plans include the development of services and applications which are planned by the company for future implementation.

Moreover, it should be noted that the Commission is often faced with this issue during regulatory proceedings involving Bell and B.C. Tel., and it is expected that the Commission will also consider this issue in respect of Teleglobe.

MANDATE OPTIONS

In November 1986 the Department of Communications issued a "STATEMENT OF TELECOMMUNICATIONS POLICY RESPECTING TELEGLOBE CANADA". The section "Policy Objectives" included the following statement.

> "It is in Canada's national interest that telecommunications services between locations in Canada and from Canada to other locations shall, **to the greatest extent feasible, be provided over Canadian-owned and controlled facilities**. To enhance the new Teleglobe's ability to meet its mandate, the government will exercise its existing powers under the Radio Act and Telegraphs Act to ensure that Teleglobe remains, for a period of at least five years, the sole authorized Canadian operator of facilities to provide Canada/overseas telecommunications services. Given the rapidly changing economic and technological environment in telecommunications, the continuation of this policy will depend upon Teleglobe's performance in providing **efficient, high-quality telecommunications services to Canadians.**" (emphasis added)

In conducting this study, the consultants have assumed that the foregoing policy statement is still valid, particularly with regard to the highlighted portions.

Previous sections of this report have confirmed that since privatization Teleglobe has provided "efficient, high-quality telecommunications services to Canadians" and that "to the greatest extent feasible [these have been] ... provided over Canadian-owned and controlled facilities". The next step is to look to the future and determine how to best continue to meet Government policy thrusts.

In this section five possible mandate scenarios are identified and described. In the next section each of these are analyzed and evaluated as to their impact on the ability of the telecommunications industry to meet the Government's policy objectives.

The five options are described below.

OPTION 1 - TAKE NO FURTHER ACTION

The Government would choose to leave the exclusive mandate intact and not specify any time limit to that mandate. This would in effect mean that Teleglobe would retain its exclusive mandate on a day to day basis.

OPTION 2 - RENEWAL FOR A FIXED PERIOD

The exclusive mandate would be renewed for an additional fixed period and the Government would undertake to conduct a performance review at the end of the period. Based on the results of that review, the exclusive mandate would be cancelled or again renewed subject to appropriate terms and conditions.

OPTION 3 - RENEWAL FOR A FIXED PERIOD WITH ESTABLISHED PERFORMANCE CRITERIA AND A GUARANTEED NOTICE PERIOD

In this option the Government would extend the exclusive mandate for a fixed period and require that Teleglobe meet certain performance criteria. If the criteria were not met at the end of the fixed period, the Government could choose to cancel the exclusive mandate at the end of a guaranteed notice period. Both the initial extension period and the notice period should be consistent with normal Teleglobe strategic and capital planning cycles. Thus if the renewal were for five years and the performance criteria were not met, the Government could announce that the exclusive mandate would end five years later. If the criteria were met, Teleglobe and the Government would determine whether the exclusive mandate were still required and if so for what additional period.

OPTION 4 - ANNOUNCE IMMEDIATE PHASE-OUT

If the Government concluded that the exclusive mandate was no longer required, it would announce that it would begin to consider applications from other carriers for cable landings and international satellite earth stations at a specific time in the future. This would probably be in three to five years.

OPTION 5 - IMMEDIATE CANCELLATION

The Government would announce that it would begin to consider applications from other carriers for cable landings and international satellite earth stations to be licensed March 31, 1992.

ANALYSIS OF MANDATE OPTIONS

GENERAL

The previous section described five options which the Government might consider in its review of Teleglobe's exclusive mandate for the provision of overseas telecommunications services. This section considers each option and analyses the impact that each would have on the users of Teleglobe services and on the financial health of the company. At the end of the analysis of each option a summary is provided which details the impacts on:

- Rates;
- Range of services; and
- Financial stability.

It has also been recognized that there are a number of "non-mandate" factors which will affect these indicators. These factors are analyzed for each of the mandate options and are described below.

TELECOM CANADA

The vast majority of overseas traffic is delivered to Teleglobe by Telecom Canada. At present the settlement rate for this traffic is non-tariffed and is considerably above cost. Currently the only way to reduce the settlement rate is through bilateral negotiations between Teleglobe and Telecom Canada. Various members of Telecom Canada are also interested in purchasing Teleglobe. Consequently, the nature of the mandate granted to Teleglobe will influence the actions of Telecom Canada. Probable Telecom actions are detailed for each mandate option.

ACCOUNTING RATES

Teleglobe's exclusive mandate provides that they are the sole Canadian entity allowed to negotiate accounting rates with foreign administrations. Changes to the mandate would affect Teleglobe's leverage in the negotiation of accounting rates. Probable impacts on this leverage are discussed for each mandate option.

SHARING AND RESALE

An effective method to increase competition in overseas telecommunications is to increase the ability of resellers to market overseas services by leasing private lines from Teleglobe in order to provide ITS to their customers. Using Globedirect, the resellers resell ITS, not international private lines. The resale of Teleglobe's private lines to provide ITS is not currently permitted.

The incentive for Teleglobe to facilitate this activity varies according to the mandate option that is selected. The probable sharing and resale scenarios are discussed for each mandate option. In all cases it is assumed that sharing and resale of private lines would be permitted only if bilateral agreements were in place between the countries involved and if those agreements stated that "off-ending" was prohibited (off-ending is the practice of routing traffic through countries which permit resale and arranging for transit from those countries to additional destinations which do not allow resale).

Prohibitions on off-ending are necessary if Teleglobe is to remain a viable organization. If they were not in place, hubbing and bypass would increase rapidly. The consequence of this would be significant reductions in terminating traffic and underutilization of cable facilities owned in part by Teleglobe. As a consequence, Teleglobe would need to increase rates which would make them even more vulnerable. In addition, the preservation of Canadian sovereignty is best achieved if scenarios can be developed which encourage the use of the Canadian cable landing sites and satellite earth stations now owned by Teleglobe.

OWNERSHIP

Under this heading the stability of Teleglobe ownership is analyzed for each mandate option. The possible implications for ownership changes are also discussed.

Summary

As was discussed earlier, the purpose of analyzing various mandate options was to ascertain their impact on Teleglobe's customers and on Teleglobe itself. In this section the impacts of each mandate option are discussed in terms of changes in rates, the expansion of the range of services offered and the financial stability of Teleglobe.

Option 1 - Take No Further Action

With this option the Government would leave the Teleglobe mandate as is and would not specify any time limit to that mandate.

The day to day nature of this option would probably reduce any leverage currently held by Teleglobe in trying to reduce settlement rates with Telecom Canada due to the level of uncertainty concerning Teleglobe's future. Telecom Canada might well be tempted to enter into direct negotiations with foreign administrations as this option would send the message that the Government is uncertain as to whether the current mandate should be extended.

In addition, the uncertainty generated by this option would reduce Teleglobe's leverage in negotiating accounting rate reductions with foreign administrations as they would be uncertain as to who might be delivering Canadian traffic in the future. As a consequence, there would likely then be little progress in the reduction of accounting rates.

The consultants were told that there would be continued pressure from resellers to resell private line voice services. This would put additional pressure on Teleglobe to negotiate lower accounting and settlement rates as the pricing of the resale of private lines would not be influenced by current accounting rates and Telecom Canada settlement charges. As discussed earlier, this option would restrict Teleglobe's leverage in these accounting rate negotiations.

The day to day nature of this option would probably facilitate a change of ownership as the duration of the current mandate would be unknown and the ability of Teleglobe to obtain long term financing would be restricted. It could then be an attractive purchase for a company or group of companies who had the ability to readily secure the required financing. An example could be one or more members of Telecom Canada. It is believed that if some members of Telecom Canada were to gain ownership of Teleglobe, it would probably become a "carriers' carrier". As such there would be little incentive for Teleglobe to reduce rates or to introduce new services as they would be guaranteed the vast majority of Canadian overseas traffic.

SUMMARY

- Rates would be reduced, but the rate of reduction would be modest.
- The range of services would show a slow expansion and for the most part would be driven by resellers.
- Financial stability would be poor. It would be very difficult to obtain financing for capital expansion given the level of uncertainty created by this option. Uncertainty in capital markets could lead to ownership changes.

OPTION 2 - RENEWAL FOR A FIXED PERIOD

In this option the mandate would be renewed for an additional fixed period and the Government would undertake to conduct a performance review at the end of the period.

This option would put Teleglobe in a position similar to its current situation. Negotiations to reduce settlement rates could be difficult as foreign administrations might have some concerns as to the future sources of Canadian traffic. However, there would be a fixed period of stability, and some progress in the reduction of accounting rates would probably be made. In addition, because of the additional period of stability, Telecom Canada would probably not approach foreign administrations to negotiate direct interconnection. Given a fixed additional period of exclusive mandate, Teleglobe would probably continue to press for the approval of the "gateway" tariff. This would separate the Telecom Canada settlement rate from the Teleglobe tariff and lead to the development of a regulated Telecom Canada overseas access tariff.

Teleglobe would continue to have the same leverage it now has in the negotiation of accounting rate reductions. Since privatization, Teleglobe has negotiated significant reductions in accounting rates. Under this option, these reductions would probably continue.

As in Option 1, there would be continued pressure from resellers to resell private line voice services.

The ownership would be more stable under this option than under Option 1 because of the guaranteed period of the continued mandate. Some members of Telecom Canada might continue to attempt to gain ownership, and if they were successful, Teleglobe would probably become a "carriers' carrier". As described in Option 1, there would then be little incentive to reduce rates or introduce new services.

SUMMARY

- Rates would be reduced at a pace somewhat quicker than in Option 1.
- The range of services would expand at a rate somewhat quicker than in Option 1.
- Financial stability would be variable. At the start of the fixed term it would be good, but it would deteriorate as the fixed term ran out.

OPTION 3 - RENEWAL FOR A FIXED PERIOD WITH ESTABLISHED PERFORMANCE CRITERIA AND A GUARANTEED NOTICE PERIOD

Under this option, the Government would extend the mandate for a fixed period on the understanding that Teleglobe would meet certain established performance criteria.

In this option Teleglobe would be under increased pressure to further improve their financial performance. It would have a strong incentive to reduce settlement rates with Telecom Canada as these charges account for more a third of the cost of an average long distance call. Teleglobe would be expected to continue to pursue actively the concept of a "gateway tariff" so that Teleglobe would have increased control over its financial performance.

The performance criteria would create increased pressure for Teleglobe to negotiate reductions to accounting rates so that financial performance could be enhanced. The increased stability of this option would create the most leverage for Teleglobe in negotiations with foreign administrations. This stability would come not only from the fixed time periods but also from the fact that foreign administrations would be able to monitor the performance of Teleglobe vis-a-vis its performance requirements.

There would be an incentive to create pricing structures that would be attractive to resellers who would hopefully be creating additional demand for overseas traffic. This increased traffic flowing through Teleglobe facilities would help lower their unit costs of transmission.

This option provides the most stability for the current ownership structure as the financial community would be aware of the fixed time periods and would also be able to monitor the performance of the company against its performance objectives.

SUMMARY

- Rates would be reduced most quickly with this option.

- The range of services would be expanded. The performance incentives and increased competition from resellers would lead to an increased variety and quality of services.

- Financial Stability would be the highest with this option. Potential investors and lenders could review performance on a regular basis and from that be able to draw conclusions as to the future of the company. They would also know that, if the exclusive mandate were to be cancelled, it would be done over a reasonable period of time.

OPTION 4 - ANNOUNCE IMMEDIATE PHASE-OUT

In this option the Government would conclude that the exclusive mandate is no longer required and would announce that it would begin to consider applications from other carriers for cable landings and international satellite earth stations at a specific time in the future.

Teleglobe's leverage in the negotiation of reduced settlement rates with this option would be reduced as Telecom Canada would know that at a specific time in the future there could be a range of transmission options available. Telecom Canada might approach foreign administrations directly and attempt to negotiate direct interconnection or other forms of alliances.

There would be some confusion in Teleglobe's dealings with foreign administrations since they would be uncertain as to the future sources of Canadian traffic. They would also be uncertain as to who they should be negotiating with and, as a consequence, there would probably be little movement in the reduction of accounting rates.

Resellers would probably want to get into the market quickly to establish themselves before the conclusion of the exclusive mandate. Because of the lack of change in accounting rates, there would be strong incentives to consider U.S. bypass. The emphasis would be on the high volume routes.

The value of the company would diminish as the end of the phase-out period approached. If current ownership restrictions were not lifted, there would be a limited number of potential buyers. As a consequence, if the current owners wanted to sell, their options would be limited at the time of announcement and would diminish as time progressed.

SUMMARY

- Rate reductions would be difficult to implement because of problems in negotiating lower accounting and domestic settlement rates.

- There would be little incentive for Teleglobe to provide new services, while resellers would probably introduce new offerings to position themselves for the post exclusive mandate era.

- Financial stability would be reduced. Access to capital would be diminished but would probably not be required as facilities requirements would probably reduce once the exclusive mandate expired. This would also depend on whether Telecom Canada members became the owners of Teleglobe.

OPTION 5 - IMMEDIATE CANCELLATION

If this option were selected the Government would announce that it would begin to consider applications from other carriers for cable landings and international satellite earth stations to be licensed after March 31, 1992.

The impacts of this option would be very similar to Option 4 - Announce Immediate Phase-out - but they would occur more rapidly.

The Telecom Canada members would be probably want to decide immediately whether to attempt to purchase Teleglobe or to enter into direct negotiations with foreign administrations for the establishment of direct interconnection.

Negotiations related to accounting rates would probably cease until future directions became clear to the foreign administrations.

Resellers might well view the confused situation as an opportunity to gain increased market share. There would likely be an immediate increase in sales activity, but with the probable inactivity in the areas of domestic settlements and accounting rates, there would be a strong incentive to utilize U.S. bypass.

Teleglobe would lose a significant amount of asset value and ownership would be vulnerable because of the uncertain future.

SUMMARY

- Rates would be in limbo until the future shape of the industry became clear.
- The range of services offered by Teleglobe would remain constant, with resellers presenting new offerings to establish market position.
- Financial stability would be poor.

The results of this analysis are summarized in a tabular format in the next chapter.

FINDINGS AND CONCLUSIONS OF THE STUDY

INTRODUCTION

This final chapter of the report provides the findings and conclusions of the study. It begins with a report of the comments provided to the consultants by those interviewed for the study, including representatives of users, domestic carriers, and resellers. It continues with a discussion of the results of the performance analysis. Then the results of the evaluation of mandate options are discussed. The reports ends with the consultants' conclusions.

RESULTS OF THE INTERVIEWS

As part of this assignment, the consultants conducted a number of interviews with organizations who have either direct or indirect dealings with Teleglobe. Many of the comments received were given in confidence and thus for analytical purposes the interviewees have been consolidated into three groups. These are carriers, users and resellers. For the most part each of these groups had similar views and experiences with Teleglobe and these are detailed below. Interviews were held with the following:

- Carriers
  - Telecom Canada
  - Unitel
  - Bell Canada
  - B.C. Tel

- Users
  - Communications Competition Coalition
  - Canadian Business Telecommunications Alliance
    Represented by IBM, STM, Ontario Hydro and Nova Scotia Power

- Resellers
  - fONOROLA
  - Cable and Wireless
  - Cancom
  - Competitive Telecommunications Association

Each group was asked to describe the nature of their relationship with Teleglobe and how that relationship had changed since privatization. They were asked to comment on changes in the type and quality of services provided by Teleglobe over the last five years and finally they were asked for opinions on the type of mandate that would be appropriate for Teleglobe in the future. While the subject of ownership was not on the agenda, most of those interviewed had opinions on the subject which they shared with the consultants.

The comments received are grouped under major categories and reported in the following sub-sections.

CARRIERS

The consultants conducted interviews with Telecom Canada, Unitel, Bell Canada and B.C. Tel.

There was broad concern over the entrance of Teleglobe into the retail market. Most of those interviewed felt that Teleglobe should be a "carriers' carrier" and should simply provide transmission capacity to the domestic carriers. Examples were given of situations where sales staff of both Teleglobe and a carrier were approaching a customer with a proposal to solve a particular problem. The carriers felt this created confusion in the mind of the customer. It was also believed that Teleglobe did not have a well thought out channels marketing strategy and this created conflict between Teleglobe as a direct seller, the facilities based carriers and the resellers.

In a similar vein, most carriers talked of the concept of "one stop shopping". This referred to the desire of international customers to purchase a complete international service from one source. The carriers felt that they were best equipped to provide these integrated solutions and that Teleglobe should just provide the overseas link.

It was also pointed out that an increasing amount of international business was being conducted by consortia which included carriers from a number of countries. It was suggested that Canada did not fit well in these consortia because the North American traffic and the overseas traffic is handled by different companies. Many of the carriers large customers are multinationals who look to the carriers to provide all of their international telecommunications solutions. Some of the carriers stated it was difficult to service these large customers because Teleglobe was an independently owned company with a different corporate culture.

The carriers agreed that Teleglobe had introduced some new services since privatization and that ITS rates had declined significantly. In addition, some of the carriers admitted that the introduction of the Globedirect service had encouraged them to introduce discount schemes for overseas calling. It was agreed that the Canadian settlement rate did not reflect the cost of service provided. Various reasons were provided to support the current settlement rate including the requirement to subsidize local basic service rates to the necessity of subsidizing the smaller Canadian telecommunications carriers.

It was generally agreed that the quality of service provided by Teleglobe had increased since privatization. Examples were given of how Teleglobe had become more customer oriented and how they were more willing to work with the carriers to improve service levels.

There was a wide range of opinion as to the preferred ownership structure of Teleglobe. Some felt that it should be owned by the carriers and resellers in proportion to the volume of traffic that each delivered to Teleglobe. Others felt that this would result in a defacto Bell monopoly on overseas traffic and as a consequence both non-discriminatory access and competition would be restricted, rates would not decline as rapidly as they could and there would be delays in the introduction of new services.

USERS

Interviews were conducted with the Communications Competition Coalition and the Canadian Business Telecommunications Alliance. The meeting with the CBTA included discussions with members of their Policy Advisory Group which included representatives of IBM, STM, Ontario Hydro and Nova Scotia Power.

Traditionally users have had little contact with Teleglobe. This has changed recently with the introduction of the Globedirect service. While Globedirect was welcomed as a service, since it provides users with direct access to Teleglobe, there were a number of comments relating to the difficulty of getting it installed and putting local loops in place.

It was felt that increased competition was necessary to ensure continued rate reductions and the introduction of new services. As an example, it was pointed out that it is impossible to obtain a Virtual Private Network (VPN) in Canada, but that one could be obtained from Sprint or MCI in the U.S. The users believe that there is little to lose by opening overseas traffic to competition. The greatest risk would be the demise of Teleglobe, and it was felt that this would be an acceptable risk.

Major users also supported full resale and sharing of Teleglobe's services, and stated that the restrictions proposed by Teleglobe were not acceptable.

At the same time it was stated that the Government of Canada should adopt a strong policy stance focused on users rather than service providers. This policy should support full competition at all levels of the telecommunications industry. It was also suggested that the Government should adopt the policy that Canada should become a world leader in the provision of telecommunications services and the Government should establish the investment and regulatory environment to achieve this goal.

It was also suggested that Teleglobe's role as negotiator of international telecommunications agreements on behalf of Canada gives it a significant advantage over other possible competitors. It was proposed that the negotiation of such agreements should be a DOC role.

With respect to changes in the restrictions on the ownership of Teleglobe, it was recommended that such changes only be made once full competition in international services is allowed.

RESELLERS

Discussions were held with fONOROLA, Cable and Wireless, Cancom and the Competitive Telecommunications Association.

The general view is that there should be at least two suppliers of overseas services, but that non-discriminatory access is an acceptable alternative in the short term.

Generally it was felt that in the last two years Teleglobe is acting more like a private sector company. It is now more approachable and more willing to look at innovative solutions to customer problems. There is, however, a considerable way to go.

As with the carriers, the resellers are concerned about Teleglobe acting as both a wholesaler and a retailer. Teleglobe sells directly to large customers who are also the target group of many of the resellers. In these instances Teleglobe can offer lower prices as resellers are required to pay contribution for each circuit while a directly connected customer does not.

Resellers are also frustrated by the Teleglobe pricing policy with respect to Globedirect. No volume discounts are offered by Teleglobe, whereas in the U.S. it is possible to negotiate discounts in the 25 to 30 percent range. This means that while Teleglobe accounting rates may compare favourably to U.S. accounting rates, the actual cost of providing large volume services can be significantly less in the U.S. The experience of Canadian resellers has been that, through Globedirect, Teleglobe offers rates which are better than those offered by AT&T, MCI or Sprint to only 5 destinations out of the 220 served. A viable resale market depends on the reseller's ability to buy in bulk at discounted prices, add value, and resell to specific customers. In the view of the resellers interviewed, it is not possible to achieve this with the current Globedirect pricing policies.

Resellers are currently prohibited from reselling private lines. All agreed that this restriction should be removed.

All agreed that the worst ownership scenario would be a Bell/Telecom Canada ownership of Teleglobe. It was felt that this would slow down the introduction of new services and would not encourage the reduction of accounting rates. It was also felt that there would be little encouragement for the expansion of the resale market.

RESULTS OF THE PERFORMANCE REVIEW

The performance review consisted of an analysis of Teleglobe's activities and results over the 1987 to 1991 period as they pertain to the criteria established by the government prior to privatization.

Teleglobe lowered its rates soon after privatization, consistent with the Direction to the CRTC, and continued to lower its rates after that time while continuing to generate the allowed rate of return. It should be noted that a cursory review of the annual results of Teleglobe will indicate that net income and the rate of return on equity have declined over time. However, these results must be considered in the context of Teleglobe's early high rates of profitability in 1987 and 1988, which then required significant rate reductions in the 1989 through 1990 period in order to bring the *average* rate of return for the four year period within the approved range.

With respect to quality of service, it has continued to make improvements in both the measurable, quantitative aspects of transmission quality, and in the ways in which it responds to customer problems.

With respect to innovation in services and technology, there is ample evidence that Teleglobe has been implementing new services and taking advantage of new technologies such as digital transmission, voice compression, satellite echo suppression and fibre optics.

Teleglobe has met all the undertakings given to the government at the time of privatization with respect to keeping the headquarters in Montreal, continuing existing collective agreements, and implementing pensions plans, benefit plans and employee share purchase plans.

In the area of Research and Development, Teleglobe has undertaken projects which have resulted in significant business opportunities for other Canadian firms, and has a Research and Development program in place which will see it continue to develop services and applications to serve Canadian users. It will also be a participant in the new Teleglobe Inc. Montreal-based R&D company to be in operation in late 1991.

It is the consultants' finding that over the period 1987 to 1991, Teleglobe has met the expectations of the government with respect to Teleglobe's performance in providing efficient, high-quality telecommunications services to Canadians.

If this were the only factor on which a decision regarding the extension of Teleglobe's exclusive mandate were to be made, then it would be a relatively simple matter to conclude that an extension of the mandate would be called for. However, other factors considered in this review including the relationship between Teleglobe and the other carriers with which it interconnects, the needs and views of users, the potential for the use of non-Canadian facilities, and the increasingly competitive nature of the international telecommunications industry indicate clearly that the extension of Teleglobe's exclusive mandate for an indeterminate period is not appropriate. At the same time, many industry participants proposed that any plan to eliminate the exclusive mandate should be accompanied by a phasing out schedule.

RESULTS OF THE EVALUATION OF MANDATE OPTIONS

At the beginning of the analysis section, it was stated that the objective of the analyses of the five mandate options was to measure the impact of each on the users of Teleglobe services and on the financial stability of Teleglobe. The impact on users is measured by assessing the potential for rate reductions under each option and the potential for increases in the range of services available to the user under each mandate option. The results of the detailed analysis were presented in the previous chapter. A summary of findings is presented in tabular format below.

OPTION	RATES	SERVICES	FINANCIAL STABILITY
1-Take No Further Action	Slow rate of reduction	Slow rate of expansion	Poor
2-Renewal for Fixed Period	Moderate rate of reduction	Moderate rate of expansion	Good at start Poor at end
3-Renewal for Fixed Period with Established Performance Criteria and Guaranteed Notice Period	Greatest rate of reduction	Greatest rate of expansion	Most stable
4-Announce Immediate Phase-out	Little change	Some new services	Moderate at start Poor at end
5-Immediate Cancellation	No change	No change	Poor

CONCLUSIONS

The conclusions of this study are as follows:

- Teleglobe has met the expectations of the government with respect to Teleglobe's performance in providing efficient, high-quality telecommunications services to Canadians.

- Teleglobe has satisfied the requirements of the Governor in Council with respect to rate reductions and rate of return.

- Teleglobe has satisfied the undertakings given to the government with respect to pension, benefit and share purchase plans, has maintained the headquarters in Montreal, and has continued the collective agreements in place at the time of privatization.

- Teleglobe's R&D programs are consistent with its role as a member of international cable and satellite consortia and as a provider of international services to Canadian users, and the level of expenditures as a function of operating revenues is in line with the practice of other Canadian telecommunications carriers.

- In the absence of other considerations, it would be appropriate for the government to grant Teleglobe an extension of its exclusive mandate.

- An extension of Teleglobe's exclusive mandate for an indeterminate period would be contrary to the current trends within the industry towards a more competitive telecommunications environment, and would not be in the best interests of users or carriers in the long term.

- At the same time, an immediate cancellation of Teleglobe's exclusive mandate would provide a business opportunity and a distinct advantage to some segments of the telecommunications industry while others, such as Unitel and Teleglobe, would be at a disadvantage.

- In the consultants' opinion, the interests of all parties will be served best by extending the exclusive mandate and by requiring Teleglobe to be competitive in rates and services with the U.S. within a specific time period.

- The length of time given to Teleglobe to achieve this should relate to the company's planning horizon.

- A similar period of time should then be specified as the notice period for phasing out the exclusive mandate should Teleglobe fail to achieve the required competitive position.

APPENDIX A

STATEMENT OF GOVERNMENT POLICY RESPECTING TELEGLOBE CANADA

STATEMENT OF TELECOMMUNICATIONS POLICY RESPECTING TELEGLOBE CANADA

Introduction

The Government of Canada has prepared this statement of telecommunications policy for the guidance of potential purchasers of Teleglobe. It is intended to define and clarify the policy and regulatory environment that will apply to the company after privatization, and to outline the rights and obligations that will accrue to the company. Bidders are advised that their submissions must be fully responsive to this policy statement in order to receive further consideration.

Teleglobe occupies a position of strategic importance within the Canadian telecommunications industry, providing our principal communications links with the world outside North America. The services provided by Teleglobe are essential and increasing in economic importance as Canada's dependence on foreign trade continues to grow. Moreover, by providing the people of Canada with communications links to the rest of the world Teleglobe also performs an important social function. In recognition of this strategic role, the Government of Canada will utilize legislation, policy statements, regulatory powers and other mechanisms to ensure the continuation of Teleglobe's primary mission as the provider of efficient overseas telecommunications services for Canadians.

Legislation

The Government of Canada will introduce legislation to allow the divestiture of Teleglobe and to establish objectives and powers which will enable the company:

1) to establish, maintain and operate in Canada and elsewhere external telecommunications services for the conduct of public communications;

2) to carry on the business of public communications by cable, radiotelegraph, radiotelephone or any other means of telecommunications between Canada and any other place;

3) to make use of all developments in cable and radio transmission or reception for external telecommunication purposes as related to public communication services;

4) to conduct investigations and research with the objective of improving the efficiency of telecommunications services generally; and

5) to coordinate Canada's external telecommunications services with the telecommunications services of other nations.

.../2

In addition, the Corporation shall be empowered to exercise the powers of a natural person pursuant to the Canada Business Corporations Act.

In view of Teleglobe's international responsibilities, the enabling legislation will empower the Minister of Communications to request information from Teleglobe concerning its negotiations and arrangements with foreign administrations. It will also authorize the Governor in Council to issue policy directives to Teleglobe regarding a narrow range related to national security, foreign relations, and international telecommunications policy matters.

Teleglobe will continue to act as signatory to INTELSAT, INMARSAT, and the Commonwealth Telecommunications Council. The Government of Canada will retain its responsibilities and obligations as a party to these agreements.

The legislation shall also designate Teleglobe as a work for the general advantage of Canada and thus subject to federal regulatory authority.

Policy Objectives

It is in Canada's national interest that telecommunications services between locations in Canada and from Canada to other locations shall, to the greatest extent feasible, be provided over Canadian-owned and controlled facilities. To enhance the new Teleglobe's ability to meet its mandate, the government will exercise its existing powers under the Radio Act and Telegraphs Act to ensure that Teleglobe remains, for a period of at least five years, the sole authorized Canadian operator of facilities to provide Canada/overseas telecommunications services. Given the rapidly changing economic and technological environment in telecommunications, the continuation of this policy will depend upon Teleglobe's performance in providing efficient, high-quality telecommunications services to Canadians.

The legislation enabling the sale of Teleglobe will designate it as a "company" within the meaning of the Railway Act and National Transportation Act, and thus subject to regulation by the Canadian Radio-television and Telecommunications Commission (CRTC) from the closing date of the sale, according to the transition arrangements outlined in the Conditions and Process of Sale.

The government will rely on conventional regulatory mechanisms, specifically the CRTC's authority to approve carrier connecting agreements, to ensure that, consistent with the government's long standing policy favouring the carriage of Canadian domestic and international telecommunications traffic on Canadian facilities, overseas services originating or terminating in Canada are routed via Teleglobe facilities and that established international service arrangements and practices are maintained following the divestiture.

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Other Mechanisms

Bidders are reminded that the Government of Canada intends to provide the Governor in Council with statutory authority to give policy direction to the CRTC. The attention of bidders is also drawn to Section 64.1 of the National Transportation Act, which gives the Governor in Council the power to vary or rescind any order or decision of the CRTC. These powers will be used to ensure that regulatory decisions affecting the mandate or responsibilities of the company are consistent with government policy.

Department of Communications
November 1986

APPENDIX B

ORDER IN COUNCIL P.C. 1987-705

P.C. 1987-705
2 April, 1987

Privy Council

1987-263

DIRECTION TO THE CANADIAN RADIO-TELEVISION AND TELECOMMUNICATIONS COMMISSION RESPECTING THE APPROVAL OF THE TELEGRAPH TOLLS AND TELEPHONE TOLLS OF THE NEW CORPORATION IN FORCE FROM TIME TO TIME IN THE TRANSITIONAL PERIOD

Short Title

1. This Direction may be cited as the Direction to the CRTC on the Regulation of the New Corporation Resulting from the Reorganization of Teleglobe.

Definitions

(a) For the purposes of this Direction,

"Act" means the Teleglobe Canada Reorganization and Divestiture Act;

"collection rates", in respect of telephone and teleprinter services, means charges or tolls paid by a customer in Canada for the provision of those services between a point in Canada and a point outside Canada.

Direction

2. This Direction shall limit the exercise of the statutory powers, duties and functions of the Commission in relation to the new corporation only to the extent specified herein.

3. Subject to subsection 321(2) of the Railway Act, the Commission shall approve tolls of the new corporation that reduce, effective January 1, 1988, the weighted average collection rates for telephone services by 13.5 per cent and the weighted average collection rates for the class of telegraph services known as teleprinter services by 10 per cent from the rates in effect immediately prior to the coming into force of the Act.

(1) In approving tolls of the new corporation the Commission shall

(a) accept as the allowed rate of return on common equity, on average over the transitional period, a return that is within the range defined by the weighted average mid-point of the return allowed by the Commission on common equity of Bell Canada and British Columbia Telephone Company, and that mid-point plus 2 per cent; and

(b) accept, at the time this Direction comes into force, for the purpose of calculating the revenue requirement of the new corporation,

(i) a new balance sheet in which the net fixed assets are 140 per cent of net historical book value as reflected in the balance sheet of Teleglobe, including any changes occurring in the ordinary course of business before the commencement of the transitional period, and a corresponding opening capital structure, and

(ii) a ratio of long-term debt to equity of 45/55.

(2) For the purposes of this section, the weighted average mid-point is calculated on the basis of the operating revenues from telecommunication services, on a non-consolidated basis as reported to the Commission, of Bell Canada and British Columbia Telephone Company, respectively.

4. Where the Commission determines that the tolls of the new corporation result in a rate of return that is outside the range described in paragraph 5(1)(a), or that the new corporation has not made an application for approval of the reductions described in section 4, the Commission shall make one or more orders pursuant to the powers, duties and functions within the Commission's jurisdiction to achieve the rate of return and the reductions.

(a) This Direction shall have force and effect during the transitional period.

APPENDIX C

STATEMENT OF WORK FOR THE STUDY

36100-1-1756

PREAMBLE

When Teleglobe Canada was privatized in November 1986, the government issued a policy statement pertaining to the mandate and status of the company. In recognition of Teleglobe's strategic importance within the Canadian telecommunications industry and its important social function, the government stated its intention of ensuring the continuation of Teleglobe's primary mission, namely that Teleglobe remain, for at leat five years, the sole authorized Canadian operator of facilities for providing Canada/overseas telecommunications services. The Government indicated that the renewal of this policy would be subject to Teleglobe's performance in providing efficient, high-quality telecommunications services to Canadians.

WORK TO BE DONE

The consultant will undertake the following tasks:

1. Analysis of structure of the international carrier industry with particular reference to the nature of services provided, the presence of economies of scale factors, the role of technology, regulations and other (domestic and international) institutional factors such as rate structures and the relationship with both domestic and foreign carriers;

2. Analysis of current and future developments that affect Teleglobe's performance and future prospects (including technological, economic, political and social factors).

3. Analysis of Teleglobe's economic and financial performance since privatization.

4. Analysis of the implications of alternative public policies relating to Teleglobe's status as Canada's international carrier on the Company's performance, with particular reference on the following performance indicators:

    1. The efficiency of Teleglobe's operations since privatization i.e. tariff reduction and whether these services are globally competitive;

    2. The quality of Teleglobe's services provided to Canadians and Canada industry as measured by international standards in comparison with other major international carriers;

    3. The financial health of Teleglobe Canada, measured in terms of its ability to generate sufficient levels of profits to finance a) capital investments, and b) research and development, to provide Canadians with high quality services, to innovate in the provision of new services, and ensure its ongoing level of international performance;

    4. The impact on Canada's telecommunications infrastructure (in terms of maximizing the usage of Canadian facilities), Canadian sovereignty, and its ability to provide social, economic and other benefits to Canadians;

    5. Teleglobe's ability to compete indirectly with US and other international carriers (through bypass) in terms of its size and the size of its market;

36100-1-1756

Consultants shall consult with industry, users and interested parties. The work is expected to begin no later than August 12, 1991 and to be completed by October 15, 1991. An interim report will be submitted by the consultant on September 30, 1991.

All analyses and collected material will be submitted in a final detailed report to the government no later than October 15, 1991. It is important to note that the report will be made public