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Requirements of a Federal Government Data Base on Telidon:

A British Columbia Perspective

by

Dr. David R. Williams

and

Derek R. Francis

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## EXECUTIVE OVERVIEW

The social and geographic character of British Columbia generates a set of expectations and needs for information which have significance for the development of a federal government on-line data base. These characteristics include both demographic factors and remoteness, social upheaval and change, and feelings of alienation.

The contents of the proposed data base may be viewed from three standpoints, that of the potential user, that of the government department which generates or collects the information, and that characterised by the type of data available. Each of these perspectives allows the definition of a different set of requirements and concerns, but through all three may be discerned some common threads, at least in the context of British Columbia.

Such common concerns include the need for information relating to the present - what, for example, are the requirements of Statistics Canada for small business reporting right now; probable future trends - e.g. what will be the demand in Washington and Oregon for natural gas between now and 1990; and retrospective data - e.g. what important civil legislation was passed in 1950.

Needs for many kinds of federal information were identified, to the point where it is clear that the real problem is not so much what to put in, but what should be left out. Frequently, the attraction lay in the potential up-to-dateness and quick access of the proposed data base. At the same time, a number of problems and concerns were expressed which must be considered in establishing and maintaining it.

The possibility of a computer-based information source capable of presenting information presently or potentially in the possession of the federal government was of interest to nearly all respondents, and generated excitement amongst some. A majority of those surveyed, however, were only vaguely aware of Telidon, and had become aware of it primarily in respect to its status as a sophisticated Canadian electronic development, and not as a medium for information exchange. The potential for rapid grasp of its possibilities exists, but not without further dissemination of information.

The study examines federal information from three points of view: the kinds of users of the information, the sources within the government, and the types of information available. Each of these led to the identification of numerous and recurrent topics which should be included in the data base. They included kinds of data already available in printed form, indexes to that material and additional matter not presently available.

Recommendations are included on WHAT should be in the data base, with some indication of priorities of loading, HOW the data base should be presented to the public, and NEXT STEPS.

## RECOMMENDATIONS

The following recommendations are grouped into two sections. The first deals with the substance of the data base when first established. The second is concerned with publicising and marketing the data base, with establishing procedures for its further development, and with proposed next steps.

### A. CONTENTS OF THE DATA BASE.

1. Government information aimed at business and industry should be implemented first.

Rationale: The majority of those commenting on the future of Telidon have indicated their belief that the system will have initial appeal to commercial users.

2. Details of all government contracts and current calls for tender should be included and up-dated frequently.

Rationale: Several members of the small business community as well as of major industrial segments identified this as one of the single most interesting potential applications. Such information is presently published, but is not necessarily easily available or up-to-date, across the country.

3. Forecast information, especially in the business, economy, and job requirements areas would be useful.

Rationale: Businessmen identify this kind of information as useful for planning market strategies, capital investment programmes and working with labour associations to minimise labour-management tensions. Educators would also find it helpful in curriculum planning and development, especially for vocational and career programme areas.

4. Details of paperwork requirements for business, whether originating from Statistics Canada, Revenue Canada, the Department of Industry, Trade and Commerce or elsewhere should be included and kept up-to-date.

Rationale: This would be of particular use to small businesses, who are sometimes overwhelmed by the volume of required paperwork and its complexity.

5. Special requests for information, received by any government department should be reviewed for addition to the data base.

Rationale: This constitutes a self-selecting priority mode. Such requests may define an area in which more widely-needed information is either presently unavailable, or is not easily located. In particular, information granted under any Freedom of Information legislation should be so reviewed.

6. Consideration should be given to the early inclusion in the data base of information about government benefits available to special groups such as veterans, the unemployed, the handicapped etc.

Rationale: A requirement for such information was identified both by citizens and by community agency officials. There is a peripheral use in the educational, media, information industry and research fields also.

7. Information concerning civil rights should be included.

Rationale: Both details of any specific applicable federal legislation, and more general information on this topic were identified as of interest to a wide selection of the population.

8. A "Forward File" of upcoming government business, Ministerial and senior civil servant public schedules, legislation schedules, etc should be maintained.

Rationale: The primary audience for this information are members of the media, and through them, the public at large.

9. Schedules of public hearings for various parliamentary committees and government agencies should be included.

Rationale: This is one of the most significant means of encouraging public participation in government, and providing feedback to the government.

10. Schedules of government conferences, etc. should be listed.

Rationale: Such information would be useful to the media, researchers and potential participants.

11. Press releases on important matters, major public statements and speeches of Ministers of the Crown, Opposition Leaders and senior civil servants should be included.

Rationale: These are mostly unavailable at present, except in abbreviated newspaper reports. Care must be taken to deal with allegations of propaganda, however.

12. Legislative agenda and proceedings should be included.

Rationale: This information would bring the real process of government much closer to people. It could be used to supplement cable coverage of debates. Committee Agendas, Order Papers, the Hansard (House of Commons) List of Bills and the stage reached in the parliamentary process should be part of this coverage.

13. A description of the structure of the government should be made available.

Rationale: This topic constitutes one of the most common questions asked at community centres by the average citizen. The description should include government abbreviations. There are increasingly more of these and they are mostly not in common currency.

14. A directory of elected officials and government employees should be included.

Rationale: Another common question asked at community agencies by the average citizen, is "Who is the person I should contact about this matter?". The existing printed lists are often incomplete, and out-of-date. Where they give names of department officials, they do not usually include details of specific responsibilities. An accurate, complete, up-to-date and thoroughly cross-indexed listing, would be invaluable, both within and without government.



15. Details of federal training courses and workshops should be made available.

Rationale: Such information would be of use to the unemployed, Manpower officials, educational counselors and social workers.

16. Details of course outlines of government courses, both existing and in preparation would be of use.

Rationale: The primary purpose for the inclusion of this data would be for the use of educational institutions in preparing their own course outlines, and in determining what resources existed in new and developing training areas.

17. Extended Canadian Dictionary of Careers and Occupations (including description of areas of demand)

Rationale: This information is heavily used in print format. Areas of demand change quickly, and types of jobs change, disappear and are created. Access to up to date information would benefit many in the educational and counseling sectors.

18. Phase in the entire current Statistics Canada data base, used for printed reports.

Rationale: This is probably the single most heavily used sector of government information. Much is already available in machine readable format, through CANSIM. Business oriented information should be included first. CANSIM is much more up to date than the printed version and permits a cross-indexed approach.

19. Include a comprehensive list of government publications.

Rationale: Much information will not initially be available on-line, but will continue to be available in other forms. There is at present no single comprehensive up-to-date list of government publications and other materials, such as departmental reports, etc. Such a feature would be a boon to the nation's educational, information and media sectors.

20. Include catalogues of the National library, Canada Institute for Scientific and Technical Information, and other governmental libraries.

Rationale: While it is true that these catalogues would constitute a forbidding amount of information in themselves, they are increasingly available in an on-line mode, as in the National Library's adoption of DOBIS. Present access is primarily to libraries, but loading on the national data base would make them useful throughout society.

21. Investigate National Film Board archives for possible inclusion.

Rationale: Although the National Film Board is primarily noted for motion pictures, it also possesses many still photos of national interest. The country's national photographic archives is stored in NFB quarters in Ottawa. This collection of some 250,000 photographs is largely inaccessible at present. At least an index to this material, and preferably the photos themselves, if the technology permits it, would prove an invaluable addition to the data base. They would be useful for educational, research, media and recreational functions.

22. Information on grants, loans, cost sharing programmes and other industry and research incentives should be listed.

Rationale: There is a wealth of such opportunities available through the federal system, but identifying them is far from easy, at present.

23. Details about federal paperwork requirements of the general public should be available.

Rationale: Applications for passports, citizenship cards, and the like are dealt with by most people relatively infrequently, and are difficult to understand. A simple listing of documents required, and where to get them would be useful.

24. Customs and excise information should be listed.

Rationale: Such information would be invaluable to importers and exporters. In addition, especially in British Columbia, where high prices generate interest in cross-border shopping, frequently updated information on duties and paperwork would be well used by the general public.

25. Meteorological information, maps and charts should be available.

Rationale: In general these would be useful to all travellers. In British Columbia, a coastal province with extensive marine and light aircraft traffic, both commercial and recreational, charts, maps, weather forecasts and meteorological information in general would have a high potential audience. Satellite transmissions would eventually make possible the display of charts, for example, on board ships at sea.

26. Extensive use could be made of practical agricultural information.

Rationale: The heavy reliance of British Columbia on its agricultural industries makes the inclusion of this data desirable. Identification of weeds, and methods for their treatment, as well as details of new seed varieties and agricultural research in general, would all prove attractive to farmers and researchers. Students and the general public would present a market for more general descriptive entries.

27. The federal data base should act as "host" to those who would like to make useful information available on a non-commercial basis.

Rationale: Many potential donors exist and possess information which could be of public benefit. Such donors could include universities and colleges, foundations, societies, etc.

28. The federal data base should be used, if possible, as a co-ordinating agency for the provision of at least some provincial government information.

Rationale: Perhaps the provincial governments will establish their own data bases within their own jurisdictions. However, it is necessary to ensure that such information is available across the country. Job opportunities, prices, travel information are only some of the examples.

29. New developments in government should be loaded and up-dated frequently.

Rationale: New matters pertaining to the federal government and its programmes and services are of interest to many in business, education, the media and elsewhere. The Canada Gazette in its entirety could well be included. New government bodies and appointments, policy proposals, etc. would all constitute useful information for the general public.

## PROCEDURAL RECOMMENDATIONS

1. Marketing of the data base should be established as a primary task.

Rationale: Customers must be satisfied and sold, right away. Initial turn-offs will be counter productive for a long time. To date, most emphasis seems to have been placed on the technology. This is impressive, but beyond the ken of many. The true potentialities have not yet been publicly established. Demonstrations at libraries and elsewhere, with emphasis on the information base could be used, as could short courses in community colleges and other institutions. Instruction in initial use should also be provided for, to avoid disappointments.

2. The graphics capability should be emphasized in marketing and publicity.

Rationale: In many instances, the graphics capability is precisely the advantage of Telidon over the printed mode. Clear presentation in graphic form of complex statistical data, is an example. For navigational charts and comparative weather charts it is obviously essential. This is a feature a wide age range of the public can understand, and which can draw them to investigate the system's other potentialities.

3. An examination should be undertaken of the patterns of use of government information on Prestel and other experimental videotex installations.

Rationale: There has been substantial disagreement expressed over the amount of actual look-ups of any purely information data base. There are presently nine national government agencies inputting data to Prestel, and an analysis of use would shed some light. The real demand of Canadian citizens can not be certainly known before the trial and error process of actual implementation, but uncertainty may be reduced by considering actual patterns of use in other jurisdictions.

4. A study should be carried out of the present use of the Statistics Canada on-line data base.

Rationale: This data base is a heavily used body of government information, accessible primarily to researchers, but potentially of interest to a wider audience.

5. A detailed survey of reference librarians, depository libraries and community information centres should be undertaken .

Rationale: These are the agencies primarily responsible at present for making government information available. An initial contact was made with some of these agencies for the present study, but this should be followed by a more comprehensive and rigorous investigation.

6. Local conferences and workshops should be convened across the province, to seek further information for the contents of a data base, and to publicise and explain its potential uses.

Rationale: Most respondents had heard about the technology, but had not devoted substantial attention to the data bases. All wanted time to consider the matter further, and an opportunity for further input.

7. The pricing policy should distinguish between access to the data base itself and cost of communications lines. If possible, the former should be free, and the latter subsidized, at least to some groups.

Rationale: Those most in need may not be able to afford it. Discussion of Telidon to date has mostly been in the abstract, but its success depends on how many people find it useful, and that partly depends on cost. It must be made convenient and cost effective for them when compared to present sources of information. The novelty of the approach will not sustain it indefinitely.

8. Mount a sample government data base on any of the existing experimental videotex installations in Canada.

Rationale: There are no sample federal data bases available on-line in Canada at present (unlike Prestel). Such a trial run could provide important feedback for the establishment of a permanent federal data base. It could be done via a study like Project IDA, of the Manitoba Telephone System, located in Headingley, Manitoba, or the just announced Telecable Videotron pilot system in Montreal.

9. Mount an experimental sample on one or more commercial data bases.

Rationale: The commercial data bases provide an existing base of users, many in business and industry, libraries and education, who are familiar with the concept of on-line searching, and whose use of a sample federal data base could be indicative. Infomart is a Canadian service agency which could be considered in British Columbia.

10. An inventory should be made of suitable government information presently available in machine readable format.

Rationale: It is difficult to make judgements as to the appropriateness for inclusion without awareness of the full range of information available.

11. The format of existing government machine readable bases should be standardized as far as possible.

Rationale: While we have no specific information on the format of present government data bases, we emphasize the importance of early standardization to ensure compatibility and ease of loading and use. This applies with particular force to computer-stored graphics.

12. Investigate sales possibilities of the federal data base, or reciprocal agreements with other countries.

Rationale: Commercial viability could be increased with revenue from sales abroad. Reciprocal agreements would increase the total range of information available to Canadian citizens.

13. The possibility of depository status for libraries could be increased.

Rationale: At present only a few libraries enjoy depository status for federal government publications. Many more are unable to obtain it because of the expense. However, the availability of government documentation for user reproduction, could permit libraries and other agencies to make permanent copies of all information of use to their clients, without additional expense to the federal government.

14. An input review structure should be established, consisting of representatives from citizen users, the information industry, business, and other users.

Rationale: The vast range of material contending for inclusion in a government data base ensures that a selection process must take place. Both for reasons of credibility and to ensure the value of the data base it is essential to have a proactive public input structure. That structure should have the power to ensure that important information is not only included, but is not delayed beyond its time of greatest value for discussion. The same agency might well review proposed withdrawals also.

15. Do not discontinue production of information in printed and other forms.

Rationale. These will continue to be in demand, at least for an indeterminate interim period. In addition the primary use of the Telidon data base, at least for some time, appears to be the display of graphic, easily viewed information which is difficult of comprehension in a print format. However this display of "massaged" data will not necessarily meet all the needs of researchers and others, who will continue to need access to other forms.



## DESCRIPTION OF THE STUDY

This report describes the results of a study carried out in January 1981. The study's purpose was to make an initial estimate of the requirements of various sectors of the British Columbia population for the contents of a Federal Government data base proposed to be mounted on the Telidon system. It was commissioned by the Federal Department of Communications, the agency charged with responsibility for the development of Telidon.

The study was concerned with three primary factors: the societal and geographical determinants operating in British Columbia, the nature of existing and potential information held by the Federal Government and the priorities which should apply in transferring information to a publicly-accessible on-line data base.

Information for this study was obtained through personal interviews with occupants of a number of pivotal positions, selected mail contacts, research and a public invitation for response, through the co-operation of a Vancouver newspaper columnist.

In the initial development and subsequent course of the study, it became apparent that the question could be viewed from three separate perspectives. They were:

1. Classes of Users
2. Federal Government Data Sources
3. Types of Data

Accordingly, discussions with respondents were so organized as to permit consideration of each. Respondents were selected from a wide variety of occupations, interests, and geographic locations. They are listed in Appendix A. Interviews were structured so as to ensure that Telidon and the proposed data base were discussed both as to information possibly available from existing government agencies, and also at the more abstract level of types of information.

The conclusions arrived at are reported in RECOMMENDATIONS. They include recommendations concerning content of the proposed data base, comments on ways of promoting and marketing it, and suggestions for next steps.

Appendix A describes the persons and organizations contacted in the course of the study. Appendix B presents some relevant demographic data describing British Columbia.

## NEEDS FOR FEDERAL GOVERNMENT INFORMATION

### IN BRITISH COLUMBIA

#### THE BRITISH COLUMBIA CHARACTER

The information needs of any group are greatly affected by the group's characteristics. In a federated nation, salient characteristics include those which have to do with the group's relations with other members of the federation, as well as with its geographical and social situation.

Canada's most westerly province is remote from the Federal Government both geographically and in spirit. Not only the Rocky Mountain barrier divides it from the rest of Canada. Political allegiances, economic disparities, real or imagined grievances, internal population distribution and history have all combined to create a region which feels, and in some respects is, cut off from the rest of Canada. At the same time, economic and social relationships exist which pull the province toward the countries of the Pacific Rim, and toward the United States. If Canada is a hewer of wood and drawer of water for the world, then B.C. feels itself to be so for Canada. Such constraints affect relations with the federal government in every respect, including that of the supply of information.

Within the province, population is unevenly distributed. While the lower mainland - from Hope to Vancouver, about 100 miles along the banks of the Fraser - together with southern Vancouver Island, are densely populated, the remainder of the province is sparsely settled, over long distances, separated by geographical and man-made barriers. Nearly all communications links must go through Vancouver. As a result, while those who live in the south west corner can communicate easily with one another, and relatively easily with the rest of Canada, it is quite a different matter for those who live elsewhere. This fact is one of the contributing factors in the recent satellite dish controversy.

British Columbia lives by three great resource industries - forests, fish and mining. Tourism forms a fourth major segment of the provincial economy. It has relatively little secondary industry. Needs for government information naturally would reflect these conditions, yet the provincial government aims at the development of a high technology industry akin to that of

California, and this too must be considered in the establishment of a data base.

Social problems in the province are many, and are exacerbated by a high level of immigration both from other provinces and from outside Canada. In crime, suicide and drug use British Columbia has the greatest problems of any area of the country. A highly mobile population, with many transients and a relatively unrestricted port operation magnify the problem.

Political tensions exist also. Internally the province is strongly polarised between left and right, and has a generally poor labour relations climate. Externally, the population displays an ambivalent attitude toward Confederation, feelings of profound loyalty to Canada co-existing with varying degrees of alienation.

The province has a developing library and information distribution system. The province as a whole has the highest rate of library use in the country and contains the country's most well-supported (on a per capita basis) public library. Side by side with the public library system exists a widespread college and university library network, and both are rapidly moving into the machine age of information delivery.

Electronic communications are a matter of great importance to the province, and ironically are possibly amongst the worst in North America. Much of the province has no access either to Dataroute or to Datapak, the alternative data transmission services, and those areas which do, find much room for improvement. As a contrast Vancouver has the greatest per capita number of cable TV subscribers in North America. Pay TV seems just around the corner, and satellite dishes have already made their appearance, including on the grounds of the Legislature.

British Columbia is a coastal province, and has great expanses of difficult mountainous territory. Weather systems are unstable and change rapidly. Because so much of its trade and industry involves the sea, forestry, mines and communication across difficult country, it has special needs for meteorological information, maps and charts, frequently revised.

In general British Columbia has extensive needs for information, some common to other areas, some specific to the Province. It seems probable that quick access to up-to-date federal data banks will be well-used and received by citizens.

## FUTURE DEVELOPMENT OF BRITISH COLUMBIA

It is probable that the province will intensify its activity in the basic resource areas. A recent multi-year coal sales agreement with Japan, oil and gas exploration developments, and natural gas and electricity sales plans, all indicate that provincial needs for information to plan and develop in these areas will continue. At the same time, the government's expressed intention to foster the growth of high technology secondary industry in the province will expand and diversify business requirements. The research requirements of universities and the recently established Discovery Parks can only add to this.

In the educational field, the Knowledge Network of the West is now rapidly identifying its place. Already programming throughout the week is available across British Columbia, and the intricate relationships between this telecommunications system, universities and colleges, libraries and the public must rely heavily on information resources in the lower mainland. Availability on Telidon can obviously have a strong impact here.

The burgeoning B.C. Library Network is planned to utilize an in-province computer utility to support cataloguing, circulation, acquisitions, serials, management and public services applications in libraries of all types. Clearly the development of such a service will be influenced by the concomitant availability of a full-text on-line federal data base.

The province is already heavily committed to cable and satellite services. The introduction of Pay-TV seems very close, as does the need for final decisions on the use of personal and group satellite dishes. Video recorders have started to become widespread. The next ten years will surely see B.C. become increasingly dependent on telecommunications and computer-based systems. Whether this is to be entirely commercial, or at least partly public, whether it is to develop haphazardly or in an integrated way, depends partly on how the federal government develops its own plans.

Despite the present economic climate, the trend toward increased availability of leisure time does not appear to be abating in British Columbia. Demands for recreational and life-long educational opportunities appear likely to increase and to diversify. To the extent the government data base provides entertainment and educational modes, beyond the level of simple electronic games, which quickly lose their appeal, it is likely to find ready acceptance.

Social pressures in the province are expected to increase. Immigration is accelerating, as is urban density, the crime rate, polarisation of opinion, inflation, etc. The community bodies and agencies which are charged with the tasks of responding to these conditions need all the help they can get. For all of them one invaluable aid is a source of up-to-date, reliable, quick information.

## CLASSES OF USERS

What types of users will access Telidon? Of those groups, which will be likely to use the government data base? What specific requirements will they have? Potential users can be classified into several groups. Major ones include: Business, Citizens, Community Agencies, New Canadians, Education, the Media, Information Industry, Research and Scholarship, Special Interest Groups.

### BUSINESS USERS

Because of the vast and swiftly increasing need of the business community for quick access to information, the group will probably be the first intensive user of the Telidon system. This is true both for small business and for the major trade and industrial sector. Any government data base should be developed with this in mind. The British experience is indicative. In the first year or two of operation in the United Kingdom, Prestel has been used mainly by the business community for up to the minute financial information.

FINTEL, a joint service of the Financial Times and of the exchange telegraph, was one of the first organizations set up to provide information to Prestel. It makes available stock prices for companies on the London stock exchange. It also provides summaries of economic conditions in various countries, summaries of brokerage house reports on specific stocks and other business statistics. The Central Office of Information provides large amounts of government data. Responses from the business community in British Columbia lead us to conclude that demands in the province would largely recapitulate the British experience. It is certainly to be recommended that an examination be made of user statistics and requirements from Prestel in this area. In addition to the Central Office of Information other government agencies supplying information to Prestel are:

British Library

British Tourist Authority

Central Statistical Office

Department of the Environment

Department of Industry

Department of Prices and Consumer Protection

Department of Trade

English Tourist Board

Office of Fair Trading

Post Office Tele-communications

Transport and Road Research Laboratory

Meteorological Office

A case can be demonstrated in British Columbia for extensive information from the Canadian equivalent of each of these and more.

Statistics Canada. The information collected and distributed by this department is of concern to the whole business community, and forms probably the single most critical body of data available for the system. Interest was expressed by business people in having access to the whole range of statistics presently collected by Statistics Canada. This statistical information is already available to users in a variety of publications, computer print-outs, in microform and computer tapes. Data also is available on-line through the Canadian Socio-Economic Information Management System (CANSIM), the agency's machine-readable data base. CANSIM comprises two modules, the CANSIM time series module, containing current and historical information from a broad range of inter-related socio-economic fields, and the cross classified module, which addresses the demand for multi-dimensional data, mostly expressed by scholars and practitioners in the fields of demography, education, health and justice.

Time series module. This module comprises major groups of data from the following subject matter areas:

System of national accounts

Prices and price indices

Labour

Manufacturing in primary industries (including fuel, power and mining)



Capital and finance

Construction

Merchandising services

External trade

Transportation

Agriculture and Food

Population estimates and projections

Health and Welfare

It also contains data from numerous tables in the Canadian Statistical Review, the Bank of Canada Review (including selected U.S. statistics) and the Quebec Statistical Review. The content is constantly growing as new sets of data are added. Currently some 250 publications are represented in part or full in the CANSIM time series module. The module is offered to users in two formats: the main base and the mini base. The former currently contains some 290,000 time series and is updated on a daily basis, usually at the same time the data is officially released. It is located on on-line disk packs at the host service bureau. The mini base is a standard sub set of data which originates from the main base. It currently contains approximately 24,000 of the most widely-used time series. The mini base is updated daily, within the next working day of the series being released from the main base. The mini base is offered by a number of secondary contributors. The data available in this module are of great significance for the federal on-line data base.

Cross classified module. Recognition of the increasing use of multi dimensional information in machine-readable form has led to the development of the cross classified module. The approach has been to adapt machine processing techniques to current uses of multi dimensional statistical aggregation. Major data sources for the cross classified module currently are: the Health, Justice and Education, Science and Culture divisions of Statistics Canada as well as the Census of Population data base, from which larger geographical aggregations are currently being added.

The cross classified module is of particular interest to analysts and researchers specializing in social studies and societal evolution and problems. It meets their needs for cross tabulation and analysis of data on social conditions (family structure, occupation, income and others) available from the Census data base with data on the social phenomena in the fields

of health, welfare, justice and others. At the present time the cross classified module is available at the host service bureau. The CANSIM host service bureau is Datacrown Inc. in Ottawa. Like the time series module, this information store has great potential for the proposed data base.

It is obvious that a very large proportion of vitally important Statistics Canada information is now available in machine readable format. We recommend strongly that this data base be a prime candidate for early inclusion in any federal data base available via Telidon.

Other Government Information Sources. There are many other categories of information of interest to the business community. They include details of government contracts available, listings and explanations of incentives offered by the Federal Government to Canadian industry and research organizations in the form of loans, grants and cost-sharing arrangements, market opportunities abroad, economic forecasts and reporting requirements of government departments. Many business people expressed a strong interest in having access to this type of information. Such access is often particularly important to citizens contemplating the establishment of a new small business.

It has been indicated that developers, small builders and citizens would benefit from the inclusion of information relating to the Canada Mortgage and Housing Corporation and the National Building Code. Under the housing label could also be included information on such government programmes as the present one designed to assist homeowners seeking to upgrade home insulation standards.

## CITIZENS

It has been estimated that almost 46% of our gross national product is the result of production, processing, storing and distributing information. In British Columbia, that percentage is being compounded by provincial policies emphasising distance education, new educational modes and high technology research and development. Present day and foreseeable developments will draw the consumer more and more deeply into the information market place. Videotex is going to be added to a home information centre which presently consists of a television set, coaxial cable, videogames, videocassette recorder, home computer and assorted sound equipment (now also including digital reproduction). Most if not all of these, as they have been added to the family options, have become more heavily used than predicted. It is worth noting that Vancouver is reputed to have more cable connections than any comparable city on the continent.

There are some who question whether the average home consumer will have much use for pure information carried on Telidon (as opposed to recreational or educational information), and who believe that if it is required it will be economically sensible to get it from some other source. Estimates of the amount of time spent accessing such information each week might be as low as ten minutes per citizen. Against this view may be posed the observation that there is no such person as the average citizen. We are all employees, managers, consultants, teachers, students, fathers, mothers, etc. at the same time. The reported success of The Source, an on-line, full text, general data base for example, seems to suggest that this view is unduly pessimistic.

Community Agencies. The community information centres and public libraries contacted are proof of the fact that British Columbians depend greatly and increasingly on access to information in the course of their daily lives. It is worth noting that the province has the highest readership and displays the most intense library use of any area of Canada. These facts suggest that use of pure information would be higher than some estimates. However, if average use for every citizen of British Columbia were ten minutes per week, that would amount to roughly four hundred thousand connect hours per week, or nearly sixty thousand per day. If the system were up twenty hours per day, this would require a minimum capability for three thousand simultaneous connections at all times.

All of the information providers responding stressed that government information was the most often asked for, as well as the most difficult to obtain. Much of the statistical and business information cited in the preceding sections would be of use to this group of users. And what users are we talking of? They come from all walks of life: older persons seeking information on pension benefits, those interested in employment possibilities (all over the country, not just within the province), citizens interested in starting small businesses, those interested in building their own home, those interested in nutritional information, consumer activists, new immigrants, and many more. The list is almost endless.

At the very top of the list, these information providers at the community level insisted that any government data base should carry basic information on the form, structure and personalities of the Federal Government. It was stated most strongly that there is an alarming lack of information on our federal system and how it operates. The requirements for this type of information are outlined in more detail in the section entitled Federal Government Data Sources.

Potential users in this group expressed some social concerns. One of them was that the people most in need of information may well be the least likely to have in-home access to a Telidon terminal, and that they are also less likely to be willing to approach an institution with one. It was also thought likely that older persons, again a group who use federal government information heavily, would have difficulty approaching this new technology.

All commented that information produced by the provincial governments was of importance, and fugitive. It was suggested that the Federal Government might undertake to gather appropriate provincial government data as well, and distribute it on a national basis through the federal data base. To the suggestions that this might raise provincial hackles, the response can be made that the provincial governments may well make a data base available to their own citizens, though probably not at first, but that such data should be available to citizens of all provinces, and perhaps only the federal system could ensure this.

## NEW CANADIANS

One of the most information deprived groups in our society is constituted by recent immigrants. It includes users who need information which may seem trivial or obvious to many, yet who have the most need and the most difficulty in getting it. They are interested in such matters as getting citizenship information, finding out how to obtain passports and details of immunization regulations, listings of courses to learn English, or particular job skills, and government programmes designed to assist them in doing so, etc. In general, most kinds of information requested by community agencies will apply with particular urgency here.

It also seems desirable that some information aimed at these groups should be in languages other than the two official ones - at least index information or listings of whom to ask for help and advice. The question of price policy ought to be closely examined in this connection. Such information should perhaps be supplied free, or subsidized.

## EDUCATORS

There are several different sub-groups of users in this category, including administrators, teachers, students, support service staff, counsellors etc. Each can be identified at levels from elementary to post-graduate levels. Their needs range from details of course outlines for government training courses, to listings of job opportunities and skill requirements, to research information. Much of the information required by these groups is the same as that requested by others. Some is specific to the field. As Telidon terminals become available in schools, colleges and universities it is easy to predict an explosion of student interest in all subject areas. For these users, even very basic information will not be redundant. Encyclopedia Canadiana, for example, is no longer available. What would be its utility to students if it could be loaded on-line?

## MEDIA

In this category we include: Print, Radio, Television, Cable, Common Carriers, etc. Much of the information requirements of this sector are for current research data, short-term "forward files", government statements and press releases. There is a secondary requirement, especially in the telecommunications sector, for data on work in high technology areas. A third category of requirement is that for accurate, up-to-date information on government regulations, notification of impending changes, public hearings, etc. In general, although many of the information requirements of the group are for popular, soon dated material, the quantity and range of requirements are vast.

## INFORMATION INDUSTRY

Here we identify libraries, archives, commercial data bases, networks etc. A primary need here is for research information, including most or all of Statistics Canada's output, as well as that from other government agencies and departments. But by definition the group's potential needs include access to every element of government data, for supply to all other users. Nothing can definitely be excluded as of little interest. Priority is the problem. The requirements of this sector may be the most extensive of all.

## OTHER GROUPS

Many other groups of potential users can be identified in British Columbia. They include research workers and scholars, provincial agencies and a very wide range of special interest groups - senior citizens, environmental activists, veterans, unions, etc. Each has its own requirements for specific information, much having to do with government action and programmes. Most of these groups' members are not well trained in information retrieval. For them too, the data base could prove a valuable resource.

## FEDERAL GOVERNMENT DATA SOURCES

As Bernard Ostry said at the Inside Videotex Seminar in early 1980 "It is the information carried by Telidon which will render it a commercial success or failure...It will be the information it supplies rather than the hardware which earns most of the money. And, if it fails, we may find that the existing media in Canada are facing serious challenges from foreign information providers using foreign videotex systems." One of the great pluses for Telidon will be its ability to carry a federal government data base. This is a benefit which will presumably be denied to other competitive systems. And it might well be the presence of such a data base on Telidon that could seal its success. All who were contacted had no difficulty in seeing the great desirability of general citizen access to such a data base.

Broadly speaking, current federal government information can be described in two categories. A third category is concerned with new developments.

### INFORMATION ABOUT GOVERNMENT

It is safe to say that most persons and groups insisted on the importance of general and wide access to information on the federal structure and government itself. Community information officers, persons dealing with new Canadians, teachers and librarians all expressed concern over a widespread ignorance of the form of our government. Canada's constitution, the distribution of federal and provincial powers, the right to vote, the rights and the role of a Member of Parliament, the allotment of House of Commons and Senate seats, the role of the official Opposition were all seen as only a few examples of items requiring explanation. This information is all available in print, but judging from the comments of respondents it is insufficiently current, hard to follow, inconsistently produced and not well distributed.

As well as creating other lamentable problems, citizen ignorance of these matters leads in turn to a lack of understanding of how and where to approach all levels of government for specific information when it is required. The display of information such as that contained in the Organization of the Government of Canada was seen as satisfying this requirement. Of course, it is necessary that new programmes and services, and personnel or organizational changes be promptly added to the data base. As an aside, it was also mentioned that a

glossary of government abbreviations should be included to allow citizens to find a way through the maze.

The following sections review various segments of the federal government and types of information required about it.

### Parliament.

1. The Constitution of Canada, and an outline of the process by which laws are made.
2. An outline and summary of Canada's printed parliamentary papers. Particular interest was expressed in the Order Paper and Notices (House of Commons) and Hansard (House of Commons).
3. An outline of the various Parliamentary committees and their areas of competence.
4. A list of the Ministries since Confederation, their duration and membership.
5. The Office, duties and responsibilities of the Governor General.
6. The Senate: appointment and qualifications, composition of membership, legislative functions, members, officers and committees.
7. House of Commons: rights, duties and responsibilities, membership, election and representation, committees and membership.
8. Official Opposition and other Parties: description of the role, names and caucus assignments.
9. Offices falling directly under the authority of Parliament. E.g. Library of Parliament, Chief Electoral Officer.

### The Executive.

A listing of the officers, organization charts, duties and responsibilities, committees etc. for the Prime Minister's Office, the Cabinet, and the Privy Council.

### The Judiciary.

General information on the federal judiciary system and its relation to the provincial judiciary systems. Specific information



on the Supreme Court, the Federal Court of Canada and the Citizenship Appeal Court.

#### Departments.

As the principal vehicle for the delivery of government services and programmes, complete information on all twenty nine existing government departments is mandatory in any government data base. This information should include an outline of the functions and responsibilities of each department, departmental organization charts, listings of chief officers, listings of acts, services and programmes administered by the departments, and statistical data concerning revenue and expenditure of each.

#### Crown Corporations.

The public enterprise entity for the administration of government commercial or quasi-commercial activity, the Crown Corporations from the Agricultural Stabilization Board to VIA Rail exercise an increasing involvement in the day to day life of citizens. As such the government data base should contain as detailed information on the Crown Corporations as on the departments of government themselves.

#### Commissions, Boards, Councils.

As of October 1980, nineteen Commissions, twenty seven Boards, twenty Councils and twenty five other agencies were in existence to administer specific Acts, such as the Canada Grain Act. They are largely independent of government departments and report to Parliament through various Ministers. Information concerning their current and future activities is considered important.

#### Industrial Assistance Programmes.

The federal government offers incentives to industry and research organizations in the form of loans, grants and cost sharing arrangements through over twenty programmes. Information on these incentives is vital in any government data base.

### INFORMATION PRODUCED BY GOVERNMENT

The diffuse nature of federal government information and data production has rendered it difficult to locate, obtain and

eventually use the information generated by and for public authorities. The gathering of this vast amount of information into a cohesive central data base would have the effect of making democratic government more meaningful and the policy definition process more effective. It would make academic study and business investigation more fully reflect the mass of data which has been produced at public expense. It could go a long way to solving the problem created by the excessive diffusion of federal government structures for processing and distributing information. These agencies are so many and so varied that they often defy identification by interested outsiders.

#### Parliament.

1. Full text of Hansard (House of Commons) cross-indexed by member and topic.
2. Selected Acts from the Revised Statutes of Canada, together with a complete Table of Contents and Index.
3. Schedule of the Public Hearings of Parliamentary Committees both in Ottawa and out and about this vast country of ours.
4. A list of Bills at various stages of progress.

#### The Executive.

1. Historical record and archival material.

#### The Judiciary.

1. Important decisions.
2. Court calendars for federal courts.
3. Supreme Court reports

#### Departments, Crown Corporations, Commissions, Boards and Councils.

The latest annual reports of all federal government departments, and other agencies could well be included. Crown Assets Disposal Corporation notices would find an audience.

Statistics Canada. As a source of information this is the most critical government department. Canada's central statistical agency's output covers almost every aspect of social and economic life in the country. This output has extensive uses in the private

sector and is a prime candidate for inclusion. In printed form it is usually somewhat out of date as soon as it is available, and the on-line mode could remedy this.

The Statistics Canada catalogue lists 1400 publications and is an important source of information itself. The catalogue should be contained in the data base, especially if only a selective entry of the statistics themselves is initially included.

Census data, collected since 1871, every ten years, and every five years in a simpler version should be included, at least the last two productions.

Canada Employment and Immigration Commission. This department is another source of widely required information. Detailed regional and local job vacancy listings, as well as summaries for out-of-province locations would be useful. Listings of courses and training opportunities are a second possibility.

Other Materials. Although no overall list of government publications and printed output is available, the wide array of such catalogues should be included, as well as listings of otherwise unrecorded material. Catalogues of the National Library, Canadian Institute for Scientific and Technical Information and other governmental libraries, should be listed if possible. Such catalogue listings could be tied in with an order system through Supply and Services, so that citizens could order copies, if without access to a printer on the system. Special agencies like the National Film Board may provide useful content. This institution is presently preparing a PRECIS index to its materials, as well as an index to all Canadian motion pictures. Both of these would be of use, as would a listing of National Film Board showings and events.

Text of some popular government publications could also be attractive if included. E.g. 100 Ways to Save Money and Energy in the Home; The Garbage Book.

#### NEW DEVELOPMENTS IN GOVERNMENT

New matters pertaining to the federal government and its programmes and services should be carefully detailed in a separate service of the government data base. The Canada Gazette might well be carried in its entirety here. New government bodies and appointments would be outlined, policy proposals detailed and the travel schedules and public appearances of Ministers of the Crown, Opposition figures and senior civil servants could be listed.

On-line versions of all government press releases and major public statements and speeches of Ministers of the Crown and Opposition figures would be used by the media. At present only selected portions are available in newspaper reports. It is not clear to what extent the general public or others would use such content, but some potential audience exists.

## TYPES OF DATA

The loading of federal government information into an on-line data base breaks it loose from its generating agency, and makes feasible the conceptual analysis of the information in different ways than those of the formal organizational structures of government, or the demands of users. Information is information, no matter who puts it in or who takes it out. Analysis of the potential inputs of the data base permits inferences regarding the content of the data base, and the priorities of loading.

Three such possible analyses are considered here. They are:

Possible Components of the Data Base

Time-referenced Analysis

Use Orientation

### POSSIBLE COMPONENTS OF THE DATA BASE.

This breakdown considers the status of information with regard to its relative availability.

1. Information presently held by the federal government, and available in print or other format. E.g. Statistics Canada reports, Royal Commission reports, etc.

2. Information presently held by the federal government, but available only upon request. There are three major categories - information which is confidential, that which is only desired by relatively few persons, and which it would therefore be uneconomic to print in large quantities, and information on matters which changes very rapidly. Examples of the first kind might include details of one's federal annuity payments, of the second, many variant analyses of Statistics Canada, such as the CANSIM cross classified module. The third category could include a myriad details regarding federal regulations, customs rates, and the like.

3. Information presently held by the federal government but which is not available to the general public. Two categories can be identified. The first includes data which is very difficult to identify, release or interpret, and might refer to Statistics Canada's raw data, or any of the information used to prepare annual reports for government departments. The possibility certainly exists of the development of intelligent Telidon terminals which would permit the manipulation of this data by the user.

The second category consists of information which is considered to be confidential or secret. Presumably this will not be a candidate for inclusion at this time.

4. Information which is not presently collected by the federal government, but which could and should be. Here the federal government could play a co-ordinating role - in the provision of comparative provincial or of international data, for example.

5. Other information generated elsewhere, but made available through the federal data base as a public service. E.g. Details of curricula at educational institutions, library catalogues, etc.

Information which is presently held and available. The great advantage of an on-line data base is speed, both of in-put and of delivery. Printed material is slow to produce, and cumbersome to update. This situation is compounded in B.C., which is at the end of a long information delivery chain, both geographic and organizational. The demise of Information Canada, and the disappearance of the federal government bookshops have combined to make access to federal government data more difficult even than it was. Commercial bookstores have not been a satisfactory replacement. The relatively few number of depository libraries adds to this problem. Yet an on-line data base could make every library a depository one, for the cost of their own printing.

Information which is available on request. The telidon system offers the possibility of making this kind of data more widely available than has been the case, at minimum cost. Whenever a non-confidential request is satisfied, perhaps it should be put on Telidon routinely. Requests made under any Freedom of Information legislation, e.g. to journalists, should also be considered. Some of this information may require extensive review for potential effects. A national directory of names, addresses and phone numbers, for example, would have many pros and cons. A directory of government employees would perhaps be less controversial. Rules and regulations, paperwork, civil rights, pensions, etc. constitute a recurrent refrain from respondents, and much of this could probably be made available routinely. Much of this

information at the moment comes from costly and circuitous telephone calls.

Information which is presently held, but not available. Confidential information poses a problem. Some obviously cannot be included, but there will undoubtedly be debate as to what falls into this category. The probable social consequences of Telidon in reducing privacy and confidentiality have yet to be widely discussed, but we may be sure they will be widespread. The degree of privacy we accept today is less than we did in the fifties. The trend seems to be continuing. The implementation of Telidon should perhaps be accompanied by a government programme to monitor, or even control this?

Some information of this type could be included, however, where it is not confidential. The CBC coverage of the recent constitutional talks, for example, exists but cannot be obtained by the public. What would we give for extensive photographic records of the original fathers of Confederation? How much would they be used in schools today?

Information which is not presently collected. A clearing house function for some provincial government information would be a useful function of the data base, so as to ensure national availability. In addition, international information could be loaded on the system. This would be similar to the federal government's present distribution of United Nations' documents. Certain kinds of job listings might also be included, beyond those presently recorded in Canada Employment and Immigration Commission Offices.

Data from other Sources. There are many non-governmental sources of information in the country which might like to make their data available on a non-commercial basis. Universities, colleges, foundations, community groups are only some. The federal government might well solicit input from such other sources, with due regard to problems such as guarantees of accuracy, civil liability, and currency.

#### TIME-REFERENCE ANALYSIS.

A second analysis is concerned with the time-reference of the data itself. Three categories can be distinguished.

1. Information which is current. E.g. The present Members of Parliament, the current bank rate.

2. Information which is of retrospective relevance. E.g. Census figures for 1921. Precise wording of superceded Acts of historical relevance.

3. Predictive, or future oriented information. E.g. Probable markets for Canadian exports in the 1980's, economic forecasts, regional demands for skilled trades, etc.

The first and third categories include data which are of only temporary value. These categories will therefore have to be purged from time to time, some material being reclassified to group two. This group contains data which can be expected to be of more long lasting interest, and which should be retained on the base for long or indefinite periods of time. The process of selection and of purging will be one of delicate judgement and should be done with input from users.

#### USE ORIENTATION

A third obvious classification would divide the data into categories of educational, informational and recreational material. Each of these three classifications can be crossed with each other, thus producing, for example, future-oriented, educational information presently published by the government, or retrospective, informational data now available on request only. It seems to us probable that future analyses of the data base use will be able to draw conclusions from such breakdowns. At present it seems clear that all three kinds of information seem likely to draw their own clientele, and provision should be made for each in the early stages of construction of the service.



## PROBLEMS AND CONCERNS

The proposal for a federal government data base on line entails many problems. Sheer size is one. How can the enormous volume of information held by the government possibly be stored on-line? Clearly priorities must be exercised, and this leads to the next questions. Who will select what should be included, and who will be responsible for purging and up-dating? What processes and guarantees of public input will be used? A related question concerns access and organization. With such a mass of data available, how can it be organized so that it is accessible and understandable to users, without human assistance like ref librarians in a library?

Who will be able to afford to use it? Many of its potential clients will be the poor and disadvantaged, and underfunded community agencies. Perhaps differential pricing policies should be adopted to ensure equal availability. Should it be absolutely free? The Ministry has indicated that as soon as Telidon becomes commercially viable it wishes to drop control. Does this mean the data base also, and if so, who will run it?

Another problem concerns the present printing programme of the government. Certainly it is possible to envisage that some could be discontinued, but it seems important to insist that such a data base would not supercede print in any major way for a long time.

All who commented on the possibility of a federal data base on Telidon were able to see its utility. Concerns were expressed, however. They were:

1. The question of who selects information, or categories of information for inclusion. All respondents suggested that the power of selection and conversely the power of prohibition, gave rise to disquiet in their minds. It is obvious that the power to mold the data base would generate controversy amongst the general populace, and among activist groups. The non-inclusion of data in the base would almost, in the minds of some, render it non-existent. Users, particularly home users would be likely to assume that the data base was a complete record of all government information, and therefore be unlikely to pursue an information search any further. At the same time, inclusion of data might cause it to be accepted without due question. The possibility of

malicious insertion of false or damaging information must also be addressed.

We recommend that a Board, with wide representation from all classes of users and parts of the country be appointed to select categories of data for inclusion in the data base.

The same concern was expressed with regard to the withdrawal of data from the system. The same Board might well rule on this question.

2. Concern was expressed about the up-to-dateness of information carried on the system. Certainly all information carried should have an indication of its currency. One of the great advantages of such a data base over printed publication is that it can be maintained currently. It is recommended that such updating take place on a daily, weekly or monthly schedule as appropriate. A pattern such as is presently followed by the Statistics Canada on-line data base could be followed.

3. Concern was expressed, particularly by the scholarly and library communities, that the mounting of such a government data base would be viewed as a reason to limit severely or even terminate the present publishing programme of the government. We emphasize that such a data base would not be an efficient replacement for the present printing and distribution programme. It will, in effect, primarily be opening up a new market, and only to a secondary degree satisfying the old in a new way. There is no likelihood that a federal data base, using current technology, could carry the total information and data production load of the federal government. In addition, many methods of study and analysis require access to the printed or microform version. In fact, one likely consequence of the establishment of the data base would be an increased demand for printed output from those newly apprised of the existence of such information, as well as an increased paper burden for civil servants engaged in responding to such requests.

We suggest, therefore, that the establishment of the on-line data base be viewed as part of a total package of government provision of information to the nation, and not as the first step in the reduction of the printing and distribution programme.

4. A great concern was expressed over who would be able to afford to use this data base. The community service organizations and libraries in particular drew attention to the fact that very often the persons most needing government information were those who

were least likely to be able to pay for it. The same problem would apply to businesses and agencies. The question was raised as to whether or not access to the data base should be free in the same way as mail access to Members of Parliament is free. This problem is compounded by the fact that the Department of Communications has indicated that as soon as Telidon is able to cease operating under the wing of government it will be turned loose to do so. We believe that one of the most important points in any such decision would be the profitability of the system. Access to the federal data base should be free, and carrier charges subsidized to the same level as the printing and distribution programme. It is to be hoped that the community agencies, etc. would be able to make arrangements for Telidon hardware through their usual funding agencies.

## APPENDIX A

### PERSONS AND ORGANIZATIONS CONTACTED

R. Campbell	Systems Manager, University of Victoria
J. Clemson	National Film Board
C. Davis	Province Newspaper
S. Dodson	Head, Government Publications, UBC
I. Elliott	Richmond Information Centre
R. Harris	Management Advisory Council
G. Homer	Chief Librarian, Okanagan College
R. Jeffels	Open Learning Institute
R. Jewel	RJ Wordcraft
P. Martin	Director, Library Services Branch
A. Mohammed	Metropolitan Trading
I. Muggeridge	Open Learning Institute
V. Richards	Director, Edmonton Public Library
R. Scales	Open Learning Institute
M. Yurchuck	Richmond Crisis Centre

In addition, mail contact was made with sixteen Chambers of Commerce, ten public and academic libraries, seven associations, six labour unions, five special libraries, four community information centres, three counselling centres, two political parties and two veterans' organizations.

APPENDIX B

BRITISH COLUMBIA - DEMOGRAPHICS

Source:  
British Columbia Economic Activity  
1979 Review and Outlook

LIST OF TABLES

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2.	Population of British Columbia
3.	Births, Deaths and Marriages in British Columbia
4.	Personal Income in British Columbia
5.	Labour Force, Employment & Unemployment in British Columbia
6.	Estimates of Employees in Selected Industries in British Columbia
7.	Average Weekly Earnings in Selected Industries of British Columbia
8.	Wages and Salaries for Selected Industries in British Columbia
9.	Consumer Price Index, Vancouver
10.	Selected Price Indexes in British Columbia
11.	Retail Sales in British Columbia
12.	Cheques Cashed Against Individual Accounts at Clearing-House Centres in British Columbia
13.	Total Sales of Motor Gasoline in British Columbia
14.	Log Production in British Columbia
15.	Pulp and Paper Production in British Columbia
16.	Lumber and Plywood Production in British Columbia
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19.	Farm Cash Receipts in British Columbia
20.	Wholesale and Landed Value of Fish Products in British Columbia
21.	United States Automobiles Entering British Columbia
22.	Supply and Disposal of Electric Energy in British Columbia
23.	Principal Statistics of Manufacturing Industries in British Columbia
24.	Manufacturing Shipments by Selected Industry Groups in British Columbia
25.	Capital and Repair Expenditures in British Columbia
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27.	Value of Building Permits Issued in British Columbia
28.	Dwelling Starts by Type in British Columbia
29.	Value of Exports Through British Columbia Customs Ports
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TABLE 1

## BRITISH COLUMBIA

## GROSS DOMESTIC PRODUCT

Year	Current Dollars		Constant 1971 Dollars	
	(\$million)	Percent Change	(\$million)	Percent Change
1969	8,758	13.2	9,636	7.2
1970	9,324	6.5	9,891	2.6
1971	10,484	12.4	10,484	6.0
1972	11,954	14.0	11,211	6.9
1973	14,547	21.7	12,224	9.0
1974	17,420	19.7	12,941	5.9
1975	19,319	10.9	12,702	-1.8
1976	22,729	17.7	13,451	5.9
1977	25,414	11.8	14,188	5.5
1978	27,978	10.1	14,785	4.2

SOURCE: Central Statistics Bureau  
Ministry of Industry and Small Business Development

TABLE 2

## POPULATION OF BRITISH COLUMBIA

Year	Population <sup>1</sup>	Percent Change
1969	2,060,000	2.8
1970	2,128,000	3.3
1971	2,184,621 <sup>2</sup>	2.7
1972	2,241,400	2.6
1973	2,302,400	2.7
1974	2,375,700	3.2
1975	2,433,200	2.4
1976	2,466,608 <sup>2</sup>	1.4
1977	2,493,700	1.1
1978	2,530,100	1.5
1979 (prel)	2,566,900	1.5

<sup>1</sup> As of June 1st

<sup>2</sup> Census Years

SOURCE: Statistics Canada, 91-201

TABLE 3

BIRTHS, DEATHS AND MARRIAGES IN BRITISH COLUMBIA

Year	BIRTHS		DEATHS		Number of Marriages
	Number	Per Thousand People	Number	Per Thousand People	
1969	35,383	17.2	17,377	8.4	18,284
1970	36,861	17.3	17,020	8.0	20,026
1971	34,852	16.0	17,783	8.1	20,389
1972	34,563	15.4	18,021	8.0	20,659
1973	34,352	14.9	18,095	7.8	21,303
1974	35,450	14.9	19,177	8.0	21,734
1975	36,277	14.9	19,143	7.8	21,824
1976	38,590	14.5	19,100	7.6	22,280
1977	37,620	14.7	19,190	7.5	21,220
1978	37,360	14.7	19,660	7.4	21,660
Jan.-June Total Year-to-Date					
1978	18,430	-	9,690	-	9,060
1979	18,080	-	9,480	-	8,040

SOURCE: Statistics Canada, 84-001, 84-205, 84-206

TABLE 4

PERSONAL INCOME IN BRITISH COLUMBIA

Year	Personal Income (\$millions)	Personal Income Per Person (dollars)
1969	6,645	3,226
1970	7,245	3,045
1971	8,182	3,745
1972	9,417	4,201
1973	11,331	4,921
1974	13,687	5,761
1975	15,787	6,488
1976	18,222	7,387
1977	20,247	8,119
1978	22,224	8,784

SOURCE: Statistics Canada, 13-202



TABLE 5

## LABOUR FORCE, EMPLOYMENT AND UNEMPLOYMENT IN

## BRITISH COLUMBIA

Year	Labour Force			Employed ('000)	Un- employed ('000)	Unemploy- ment Rate %
	Total ('000)	Male ('000)	Female ('000)			
1969	830	554	276	788	42	5.0
1970	871	578	293	805	67	7.7
1971	899	596	303	834	65	7.2
1972	938	614	324	865	73	7.8
1973	987	644	343	920	66	6.7
1974	1,040	670	370	976	64	6.2
1975	1,087	680	407	995	92	8.5
1976	1,116	694	422	1,020	96	8.6
1977	1,144	711	433	1,047	97	8.5
1978	1,192	725	467	1,093	98	8.3
Jan.-Nov. Average Year-to-Date						
1978	1,192	725	467	1,094	98	8.3
1979	1,222	741	481	1,128	94	7.7

SOURCE: Statistics Canada, 71-201, 71-001

TABLE 6

ESTIMATES OF EMPLOYEES IN SELECTED INDUSTRIES  
IN BRITISH COLUMBIA

Year	For- estry <sup>1</sup>	Mining	Manufac- turing	Const- ruction (thousands)	Trade	Services	Public Admin & Defence
1969	22.2	10.3	126.9	38.9	111.1	188.8	43.4
1970	20.6	11.7	124.5	35.3	113.2	194.0	44.1
1971	22.3	12.0	130.1	41.4	117.6	197.7	44.3
1972	18.6	12.8	136.4	44.4	130.7	206.6	46.3
1973	22.9	14.1	147.2	50.3	141.1	219.1	51.4
1974	22.1	13.9	151.7	49.9	151.6	233.6	54.5
1975	18.7	13.9	139.7	55.7	155.4	247.4	63.3
1976	21.7	13.2	146.1	52.9	149.8	254.1	65.2
1977	23.0	14.1	151.5	54.0	155.3	270.8	66.3
1978	23.2	14.3	155.5	48.4	161.6	282.9	69.8
Jan.-June Average Year-to-Date							
1978	21.7	14.3	153.9	46.6	157.7	284.6	69.1
1979	23.4	14.6	160.9	52.8	165.2	298.9	68.7

<sup>1</sup> includes logging and related services

SOURCE: Statistics Canada, 72-008

TABLE 7

AVERAGE WEEKLY EARNINGS IN SELECTED INDUSTRIES OF BRITISH COLUMBIA  
(dollars)

Year	Forestry <sup>1</sup>	Mining	Manu- facturing	Con- struction	Trade	Services	Industrial Composite
1969	160.00	160.35	137.82	181.11	106.23	88.06	129.35
1970	162.76	177.23	146.97	196.74	113.21	94.19	137.97
1971	178.03	191.10	162.67	224.68	123.06	102.80	152.50
1972	196.76	206.00	178.81	246.71	132.36	109.56	165.08
1973	225.06	227.00	193.27	246.59	148.09	119.17	178.22
1974	247.40	262.28	217.71	282.75	167.14	132.75	200.55
1975	278.13	297.51	252.77	344.41	190.08	149.38	229.97
1976	327.38	330.66	288.34	378.23	212.20	169.32	259.52
1977	350.11	359.60	314.65	424.69	231.00	182.09	284.13
1978	382.21	383.41	339.66	476.66	236.08	189.21	301.26
Jan.-Aug. Average Year-to-Date							
1978	384.85	377.28	334.72	469.77	234.47	186.82	298.15
1979	409.01	419.03	363.66	504.28	252.42	198.48	321.16

<sup>1</sup> includes logging and related services

NOTE: Based on a survey of firms with 20 or more employees

SOURCE: Statistics Canada, 72-202, 72-002

TABLE 8

WAGES AND SALARIES FOR SELECTED INDUSTRIES IN BRITISH COLUMBIA

Year	For- estry <sup>1</sup>	Manufac- turing	Const- ruction	Transport Communi- cation & Utilities (\$millions)	Trade	Services	Public Admim.	Total Wages & Salaries
1969	191.1	943.2	385.9	563.0	651.0	947.3	320.8	4,352.9
1970	183.6	990.5	364.9	631.3	708.4	1,072.7	347.4	4,699.7
1971	216.7	1,113.9	504.2	713.6	779.9	1,221.7	375.9	5,359.7
1972	223.8	1,270.9	562.8	793.6	903.3	1,389.2	418.4	6,081.3
1973	300.5	1,513.4	708.2	932.9	1,052.7	1,660.1	499.9	7,313.4
1974	340.4	1,788.7	794.9	1,154.8	1,276.8	2,084.7	633.7	8,843.7
1975	318.8	1,865.7	980.4	1,320.0	1,468.6	2,521.5	815.7	10,199.6
1976	476.8	2,288.2	946.1	1,544.9	1,661.3	2,978.3	947.1	11,822.0
1977	514.2	2,547.1	1,115.2	1,691.6	1,782.8	3,331.0	1,041.2	13,268.7
1978	576.7	2,845.5	1,145.3	1,798.7	1,899.6	3,546.6	1,147.8	14,345.0
Jan.-June Total Year-to-Date								
1978	277.1	1,385.0	536.2	870.5	931.5	1,805.5	565.3	7,598.8
1979	294.7	1,522.7	612.5	957.5	1,010.7	1,981.7	599.6	7,669.8

<sup>1</sup> includes logging and related services

SOURCE: Statistics Canada, 72-005

TABLE 9

CONSUMER PRICE INDEX, VANCOUVER  
(1971=100)

Year	Food	Housing	Clothing	Trans- portation	Health and Personal Care	All Items	Percent Change
1969	94.2	94.2	94.7	91.0	92.8	93.7	3.4
1970	96.9	97.8	97.5	95.1	96.7	96.9	3.4
1971	100.0	100.0	100.0	100.0	100.0	100.0	3.2
1972	107.6	106.0	103.5	103.5	104.1	105.3	5.3
1973	123.3	111.9	108.8	107.0	109.4	112.9	7.2
1974	146.6	123.2	120.2	114.8	119.6	126.1	11.7
1975	165.8	136.6	127.0	127.4	133.2	140.1	11.1
1976	172.5	153.5	135.1	149.9	145.7	153.7	9.7
1977	183.0	168.6	142.4	158.8	155.7	164.7	7.2
1978	206.5	179.4	149.7	166.7	164.5	177.4	7.7
Jan.-Nov. Average Year-to-Date							
1978	205.9	179.0	149.2	166.1	164.1	176.9	7.8
1979	230.0	187.6	161.0	181.0	178.5	190.6	7.7

SOURCE: Statistics Canada, 62-010

TABLE 10

SELECTED PRICE INDEXES IN BRITISH COLUMBIA  
(1971=100)

Year	INDUSTRY SELLING PRICE INDEXES FOR SELECTED COMMODITIES					BUILDING CONSTRUCTION	
	Lumber, Hemlock	Lumber, Spruce - B.C. Interior	Plywood, Douglas Fir	Newsprint for Export	Bleached Pulp for Export, B.C.	Resi- dential	Non-Resi- dential
1969	110.7	101.8	100.7	N/A	N/A	N/A	N/A
1970	88.5	76.6	88.0	N/A	N/A	N/A	N/A
1971	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972	126.6	137.0	121.0	102.9	93.8	109.2	106.7
1973	173.7	166.1	139.0	108.4	117.4	121.3	114.8
1974	161.7	131.2	153.8	134.7	189.8	132.4	134.7
1975	158.8	125.5	161.0	180.3	243.2	142.0	150.7
1976	173.5	152.6	173.8	180.4	233.2	157.9	165.3
1977	204.0	182.3	177.5	200.4	237.3	175.0	177.5
1978	239.2	238.7	229.0	228.2	216.7	192.3	190.6
Jan.-Sept. Average Year-to-Date							
1978	229.6	236.1	223.8	223.5	206.0	190.1	188.6
1979	307.6	277.9	251.4	252.1	277.8	210.3	208.8

N/A - Not available

SOURCE: Statistics Canada, 62-008, 62-010

TABLE 11

## RETAIL SALES IN BRITISH COLUMBIA

Year	Chain Stores	Independent Stores (\$millions)	All Stores
1969	1,277.8	1,887.7	3,165.4
1970	1,420.3	1,839.5	3,259.8
1971	1,569.2	2,062.8	3,631.9
1972 <sup>1</sup>	1,759.6	2,337.1	4,096.7
1972	1,777.0	2,209.8	3,986.9
1973	2,096.7	2,549.2	4,645.8
1974	2,486.3	2,942.2	5,428.6
1975	2,777.5	3,160.3	5,937.8
1976	2,948.4	3,726.4	6,674.8
1977	3,233.7	4,053.7	7,287.4
1978	3,635.8	4,604.6	8,240.4
Jan.-Oct. Total Year-to-Date			
1978	2,808.5	3,787.9	6,596.4
1979	3,178.5	4,173.5	7,351.7

<sup>1</sup> Due to a revision in the retail trade survey data from the new survey is only available from 1972 onward.

SOURCE: Statistics Canada, 63-005

TABLE 12

CHEQUES CASHED AGAINST INDIVIDUAL ACCOUNTS AT  
CLEARING-HOUSE CENTRES IN BRITISH COLUMBIA  
(\$billions)

Year	Vancouver	Victoria	Total
1969	49.4	7.4	56.8
1970	50.2	7.3	57.4
1971	56.3	8.7	65.0
1972	68.8	10.0	78.7
1973	89.3	12.7	102.0
1974	113.3	20.2	133.4
1975	133.1	30.9	164.0
1976	161.4	32.8	194.3
1977	172.0	35.8	207.9
1978	190.9	42.5	233.4
Jan.-Sept. Total Year-to-Date			
1978	138.1	30.1	168.2
1979	165.9	40.8	206.7

SOURCE: Statistics Canada, 61-001

TABLE 13

TOTAL SALES OF MOTOR GASOLINE IN BRITISH COLUMBIA  
(1000 cubic metres)

Year	Sales
1969	2,510.9
1970	2,613.6
1971	2,803.6
1972	3,026.9
1973	3,278.1
1974	3,503.5
1975	3,590.9
1976	3,590.2
1977	3,796.4
1978	4,036.0
Jan.-June Total Year-to-Date	
1978	1,872.4
1979	1,942.7

SOURCE: Statistics Canada, 45-004, 45-205

TABLE 14

LOG PRODUCTION IN BRITISH COLUMBIA  
(million cubic metres)

Year	Coast	Interior	Province
1969	28.16	25.36	53.52
1970	28.84	25.90	54.74
1971	28.40	28.16	56.56
1972	24.71	31.75	56.46
1973	32.73	37.42	70.15
1974	27.87	32.21	60.08
1975	21.37	28.71	50.08
1976	32.20	37.33	69.53
1977	28.56	41.42	69.98
1978	32.33	42.84	75.17
Jan.-Aug. Total Year-to-Date			
1978	15.64	23.46	39.11
1979	N/A	N/A	44.95

SOURCE: Ministry of Forests, Annual Report, as indicated by timber scaled

TABLE 15

PULP AND PAPER PRODUCTION IN BRITISH COLUMBIA  
(thousand short tons)

Year	Wood Pulp <sup>1</sup>	Paper <sup>2</sup>
1969	4,879	1,922
1970	4,519	1,846
1971	4,860	2,013
1972	5,044	2,021
1973	5,883	2,236
1974	5,807	2,151
1975	4,407	1,628
1976	5,864	2,164
1977	5,376	2,197
1978	5,933	2,384
Jan.-Sept. Total Year-to-Date		
1978	4,439	1,801
1979	4,352	1,756

<sup>1</sup> Includes production of pulp used in papermaking

<sup>2</sup> Includes newsprint, other paper and paper board

SOURCE: Statistics Canada, 25-202 and 36-204, and the Canadian Pulp and Paper Association

TABLE 16

LUMBER AND PLYWOOD PRODUCTION IN BRITISH COLUMBIA

Year	Coast (in millions of f.b.m.)	Interior (in millions of f.b.m.)	Province	Softwood Plywood Production (in millions of sq.ft. 3/8" basis)
1969	3,785	3,911	7,696	1,885
1970	3,790	3,867	7,657	1,698
1971	4,185	4,752	8,937	1,874
1972	4,027	5,479	9,506	1,965
1973	4,402	6,022	10,424	2,197
1974	3,403	5,339	8,742	1,832
1975	2,501	4,945	7,445	1,786
1976	3,988	6,639	10,626	2,191
1977	4,498	7,528	12,026	2,343
1978	4,803	7,742	12,545	2,510
Jan.-Sept. Total Year-to-Date				
1978	-	-	9,418	1,875
1979	-	-	9,403	1,824

SOURCE: Statistics Canada, 35-001, 35-204

TABLE 17

## VALUE OF MINERAL PRODUCTION IN BRITISH COLUMBIA

Year	Copper	Zinc	Molybdenum	Coal (\$millions)	Crude Oil	Natural Gas to Pipe- line	Others	Total
1969	111.6	46.6	48.0	6.8	58.2	27.9	165.3	464.4
1970	124.7	44.1	52.6	19.6	60.4	29.8	157.4	488.6
1971	131.0	49.7	37.0	45.8	66.5	31.9	166.1	528.0
1972	209.4	47.2	43.3	66.0	63.2	41.6	165.5	636.2
1973	582.8	62.6	51.9	88.0	68.3	54.8	201.0	1,109.4
1974	541.6	59.6	60.8	154.6	103.3	128.0	216.3	1,264.2
1975	331.7	80.6	71.2	317.1	94.2	214.7	254.5	1,364.0
1976	379.0	65.5	94.1	298.7	116.6	288.0	278.4	1,520.3
1977	384.7	61.3	142.1	328.8	132.9	396.6	341.8	1,788.2
1978	431.7	52.0	167.7	381.9	145.0	401.4	406.8	1,986.5
1979 <sup>1</sup>	652.6	63.1	322.1	523.8	173.7	565.1	566.6	2,867.0

<sup>1</sup> Estimated by Ministry of Energy Mines and Petroleum Resources  
SOURCE: Ministry of Energy, Mines and Petroleum Resources

TABLE 18

## DISTRIBUTION OF BRITISH COLUMBIA NATURAL GAS AND CRUDE OIL

Year	Crude Oil		Natural Gas	
	British Columbia <sup>1</sup> (1,000 cubic metres)	Deliveries to Export	British Columbia <sup>2</sup> (millions of cubic metres)	Deliveries to Exports <sup>3</sup>
1969	3,386.0	736.1	2,604.9	4,446.7
1970	3,643.8	552.8	2,826.8	4,626.1
1971	3,806.1	295.3	2,958.0	5,027.0
1972	3,791.7	306.1	3,413.2	6,952.2
1973	3,646.8	129.9	4,320.3	7,386.1
1974	3,145.0	85.1	3,716.8	6,562.7
1975	2,555.3	85.8	4,238.8	6,010.7
1976	2,828.5	68.9	3,977.0	6,041.1
1977	2,473.6	83.0	3,956.6	6,502.6
1978	2,226.2	60.6	4,043.7	5,882.1
Jan.-Aug. Total Year-to-Date				
1978	1,359.5	432.9	3,828.0	2,511.0
1979	1,554.1	103.5	4,455.7	2,828.4

<sup>1</sup> Receipts at B.C. refineries of B.C. crude.

<sup>2</sup> Delivered to B.C. distributors

<sup>3</sup> From northeastern B.C.

SOURCE: Ministry of Energy, Mines and Petroleum Resources

TABLE 19

FARM CASH RECEIPTS IN BRITISH COLUMBIA  
( \$millions )

Year	CROPS		LIVESTOCK PRODUCTS				Farm Cash Receipts
	Fruits & Vegetables	Grain and Other Crops	Dairy Products	Poultry & Eggs	Other Livestock & Products	Other	
1969	40.3	19.9	46.7	41.9	51.1	3.4	203.4
1970	50.4	23.3	50.7	42.3	47.2	3.7	217.6
1971	46.2	24.2	53.3	45.5	50.9	3.3	220.7
1972	51.4	23.7	57.9	48.6	59.4	4.6	249.4
1973	76.4	39.1	68.7	71.1	75.0	8.2	347.3
1974	77.4	54.9	92.2	79.7	60.0	23.4	407.8
1975	73.1	53.5	102.9	72.0	94.4	28.7	422.2
1976	80.2	61.5	107.7	84.4	86.8	50.4	480.3
1977	99.1	71.0	116.5	86.3	82.9	48.8	515.7
1978	111.7	92.3	125.0	95.8	128.1	31.4	582.0
1979 <sup>1</sup>	118.0	102.0	143.0	115.2	158.8	16.4	653.0

<sup>1</sup> Projection

SOURCE: Statistics Canada, 21-001

TABLE 20

WHOLESALE AND LANDED VALUE OF FISH PRODUCTS IN BRITISH COLUMBIA  
( \$millions )

Year	Wholesale Marketed Value					Total <sup>1</sup>	Landed Value <sup>1</sup>
	Salmon	Halibut	Herring	Other			
1969	58.0	16.6	0.6	10.6		85.8	47.4
1970	99.6	14.0	0.7	9.0		123.3	60.3
1971	96.9	11.4	2.3	9.5		120.1	58.6
1972	114.3	16.9	12.6	15.3		159.1	75.1
1973	221.6	13.0	34.6	15.8		285.0	130.4
1974	165.8	7.0	29.9	17.8		220.5	101.0
1975	99.7	12.9	34.9	19.5		167.0	79.7
1976	187.0	18.4	65.1	27.1		297.6	141.9
1977	229.8	12.7	97.1	32.1		371.8	167.9
1978	304.0	19.7	155.0	38.8		517.5	250.6
Jan.-Oct. Total Year-to-Date							
1978	N/A	N/A	N/A	N/A		N/A	244.4
1979	N/A	N/A	N/A	N/A		N/A	290.4

<sup>1</sup> Includes halibut landings by British Columbia fishermen at United States ports.  
N/A - Not Available

SOURCE: Federal Department of Fisheries and Oceans, Vancouver



TABLE 21

UNITED STATES AUTOMOBILES ENTERING BRITISH COLUMBIA  
(thousands)

Year	Enter and Depart on Same Day	Stay One or More Nights	Total <sup>1</sup>
1969	485.4	509.5	994.9
1970	548.2	547.9	1,096.0
1971	580.7	569.5	1,150.2
1972	560.9	551.6	1,112.5
1973	557.5	545.8	1,103.3
1974	553.8	542.4	1,096.3
1975	549.7	505.3	1,055.0
1976	518.1	470.2	988.2
1977	549.4	471.8	1,021.2
1978	565.4	496.9	1,062.3
Jan.-June Total Year-to-Date			
1978	268.6	186.6	455.3
1979	265.1	169.3	434.4

<sup>1</sup> Data for the years 1968 to 1971 are not directly comparable to the years 1972 onward due to changes in reporting methods and definitions.

SOURCE: Statistics Canada, 66-001

TABLE 22

SUPPLY AND DISPOSAL OF ELECTRIC ENERGY IN BRITISH COLUMBIA  
(gigawatt hours<sup>1</sup>)

Year	SUPPLY			DISPOSAL			
	Net Generation		Total	Receipts From Other Provinces And Imports	Total Supply	Delivered To Other Provinces And Exports	Total B.C. Disposal
Hydro	Thermal						
1969	24,662	2,190	26,852	523	27,375	943	26,432
1970	23,206	3,002	26,209	485	26,694	933	25,761
1971	26,646	2,393	29,038	825	29,863	823	29,040
1972	30,759	2,344	33,103	604	33,707	2,153	31,555
1973	32,843	4,884	37,727	713	38,440	4,848	33,591
1974	34,367	1,889	36,256	709	36,965	2,977	33,988
1975	31,028	3,514	34,542	1,301	35,843	3,154	32,689
1976	36,986	1,974	38,961	1,200	40,161	3,305	36,856
1977	41,241	1,945	43,185	1,007	44,192	5,749	38,444
1978	40,612	1,825	42,437	1,521	43,958	3,934	40,024
Jan.-Aug. Total Year-to-Date							
1978	26,025	1,244	27,269	1,201	28,470	2,451	26,020
1979	26,640	1,563	28,203	1,387	29,591	2,287	27,304

<sup>1</sup> Gigawatt hour = 1 million kilowatt hours.

SOURCE: Statistics Canada, 57-202, 57-003, 57-001

TABLE 23

## PRINCIPAL STATISTICS OF MANUFACTURING INDUSTRIES IN BRITISH COLUMBIA

Year	MANUFACTURING ACTIVITY			TOTAL ACTIVITY		
	Establishments (number)	Materials and Supplies Used (\$millions)	Value Added (\$millions)	Value of Shipments	Total Employees (thousands)	Salaries & Wages (\$millions)
1968	3,331	1,910.8	1,575.4	3,550.4	121.5	826.7
1969	3,329	2,125.6	1,744.5	3,917.8	126.4	922.8
1970	3,253	2,067.8	1,617.4	3,760.6	125.1	971.3
1971	3,302	2,301.7	1,864.4	4,236.0	129.3	1,099.1
1972	3,315	2,709.4	2,212.0	5,020.3	137.2	1,255.4
1973	3,288	3,466.6	2,927.3	6,387.1	145.9	1,478.7
1974	3,309	4,013.3	3,300.3	7,411.1	144.0	1,698.6
1975	3,131	3,884.0	3,284.7	7,326.5	137.1	1,804.1
1976	3,025	4,773.1	4,007.0	8,857.5	141.0	2,173.0
1977	2,899	5,356.7	4,498.9	10,058.5	142.1	2,407.5

SOURCE: Statistics Canada, 31-203

TABLE 24

MANUFACTURING SHIPMENTS BY SELECTED INDUSTRY GROUPS  
IN BRITISH COLUMBIA  
(\$millions)

Year	Wood	Paper and Allied	Food & Beverages	Petroleum & Coal Products	Primary Metals	Metal Fab- ricating	Total
1969	1,194	720	631	167	252	214	3,919
1970	1,034	728	649	181	204	235	3,761
1971	1,284	740	702	211	227	257	4,236
1972	1,698	840	801	222	252	253	5,020
1973	2,288	1,069	997	276	266	304	6,387
1974	2,070	1,551	1,166	406	365	413	7,411
1975	1,811	1,476	1,204	542	367	399	7,326
1976	2,643	1,856	1,297	604	414	405	8,857
1977	3,261	1,790	1,520	749	530	442	10,058
1978	4,123	2,058	1,804	910	643	504	12,186
Jan.-Sept. Total Year-to-Date							
1978	3,033	1,489	1,298	656	456	376	8,883
1979	3,573	1,849	1,554	793	595	468	10,681

SOURCE: Statistics Canada, 31-203, 31-001

TABLE 25

## CAPITAL AND REPAIR EXPENDITURES IN BRITISH COLUMBIA

Year	Construction (\$millions)	Machinery and Equipment	Total
1969	1,668.1	1,121.8	2,789.9
1970	1,710.6	1,223.7	2,934.3
1971	2,216.2	1,496.6	3,712.8
1972	2,275.0	1,503.5	3,778.5
1973	2,678.8	1,827.5	4,506.3
1974	3,225.8	2,174.9	5,400.7
1975	3,540.0	2,283.6	5,823.6
1976	4,260.5	2,546.1	6,806.6
1977	4,492.7	2,930.0	7,422.7
1978	4,976.4	3,149.7	8,126.1
1979	5,498.5	3,566.5	9,065.0

NOTE: 1978 is preliminary and 1979 is revised forecast

SOURCE: Statistics Canada, 61-205, 61-206

TABLE 26

## CAPITAL AND REPAIR EXPENDITURES IN BRITISH COLUMBIA BY SECTOR

Year	Primary Industries & Construction	Manufac- turing	Utilities	Trade, Finance & Commercial	Institu- tions and Government	Housing	Total
	(\$millions)						
1969	481.8	483.0	607.5	242.3	419.9	555.4	2,789.9
1970	525.2	534.4	694.0	222.4	404.1	554.2	2,934.3
1971	744.8	636.4	822.3	296.7	523.6	689.0	3,712.8
1972	544.4	585.9	819.6	394.4	590.7	843.5	3,778.5
1973	604.8	628.0	1,132.5	499.9	631.7	1,009.4	4,506.3
1974	775.8	761.7	1,348.8	531.2	808.7	1,174.5	5,400.7
1975	754.1	723.5	1,532.8	640.2	919.2	1,253.8	5,823.6
1976	1,016.3	839.1	1,524.7	659.7	1,002.3	1,764.5	6,806.6
1977	1,190.1	1,023.4	1,623.1	739.4	1,132.9	1,713.8	7,422.7
1978	1,386.7	1,072.8	1,846.2	839.1	1,210.1	1,771.2	8,126.1
1979	1,604.0	1,269.4	2,077.6	1,060.4	1,251.9	1,801.7	9,065.0

NOTE: 1978 is preliminary and 1979 is revised forecast

SOURCE: Statistics Canada, 61-205, 61-206

TABLE 27

VALUE OF BUILDING PERMITS ISSUED IN BRITISH COLUMBIA  
(\\$millions)

Year	Residential	Non-Residential	Total
1969	384.5	265.3	649.8
1970	337.8	266.4	604.2
1971	454.9	330.6	785.5
1972	525.0	345.3	870.3
1973	732.1	494.4	1,226.5
1974	762.6	497.2	1,259.8
1975	971.4	568.4	1,539.8
1976	1,115.3	690.5	1,805.8
1977	1,050.0	701.3	1,751.3
1978	957.6	697.7	1,655.3
Jan.-Sept. Total Year-to-Date			
1978	733.7	466.5	1,200.2
1979	839.5	632.9	1,472.4

SOURCE: Statistics Canada, 64-001

TABLE 28

DWELLING STARTS BY TYPE IN BRITISH COLUMBIA  
(number)

Year	Single Detached	Two-Family	Row	Apartment and Other	Total
1969	13,035	1,376	1,325	16,084	31,820
1970	13,691	1,169	1,566	10,890	27,316
1971	17,701	1,220	1,803	14,035	34,765
1972	18,890	818	2,362	13,247	35,317
1973	21,313	901	1,501	13,912	37,627
1974	18,254	1,050	1,740	10,376	31,420
1975	18,616	1,565	3,300	10,671	34,152
1976	20,247	1,723	3,263	12,494	37,727
1977	15,501	1,535	3,124	12,198	32,358
1978	18,195	1,374	2,687	6,362	28,618
Jan.-June Total Year-to-Date					
1978	13,456	1,036	1,802	5,090	21,384
1979	12,588	510	1,206	4,718	19,022

SOURCE: Statistics Canada, 64-002

TABLE 29

VALUE OF EXPORTS THROUGH BRITISH COLUMBIA CUSTOMS PORTS<sup>1</sup>

Year	United States	Japan	United Kingdom (\$millions)	Other Countries	Total
1969	995.7	500.9	201.1	591.3	2,289.0
1970	991.3	642.4	206.1	725.6	2,565.4
1971	1,091.8	642.4	171.2	865.5	2,770.9
1972	1,382.5	790.0	188.1	896.1	3,256.7
1973	1,685.2	1,508.0	301.6	1,158.0	4,652.8
1974	2,293.0	1,905.6	313.8	1,715.6	6,228.0
1975	2,710.8	1,770.2	261.6	1,615.9	6,358.5
1976	3,097.2	2,209.4	350.2	1,780.3	7,437.1
1977	3,556.0	2,127.2	350.9	2,257.3	8,291.4
1978	4,278.2	2,503.8	340.1	2,642.5	9,764.6
Jan.-Aug. Total Year-to-Date					
1978	2,799.8	1,665.5	215.4	1,709.7	6,390.4
1979	3,354.1	2,166.8	314.0	2,258.8	8,093.7

<sup>1</sup> Includes all products exported irrespective of Province of Origin  
 SOURCE: Ministry of Industry and Small Business Development  
 based on Trade of Canada data.

TABLE 30

VALUE OF IMPORTS THROUGH BRITISH COLUMBIA CUSTOMS PORTS<sup>1</sup>

Year	United States	Japan	United Kingdom (\$millions)	Other Countries	Total
1969	637.0	184.0	64.0	244.2	1,129.2
1970	613.9	235.5	52.0	254.4	1,155.8
1971	668.5	358.3	51.5	261.7	1,340.0
1972	832.7	499.3	70.0	346.9	1,748.9
1973	1,126.4	446.9	65.2	382.6	2,021.1
1974	1,589.3	681.3	66.7	537.8	2,875.1
1975	1,473.2	488.0	74.1	553.2	2,588.5
1976	1,633.9	714.9	73.8	634.1	3,056.7
1977	1,760.9	887.7	86.9	791.7	3,527.2
1978	2,188.2	1,229.1	105.9	968.4	4,491.6
Jan.-Aug. Total Year-to-Date					
1978	1,404.2	791.3	67.4	662.9	2,925.8
1979	2,040.5	721.8	89.2	860.3	3,711.8

<sup>1</sup> Irrespective of Province of Destination  
 SOURCE: Ministry of Industry and Small Business Development  
 based on Trade of Canada data.

TABLE 31

ESTIMATED VALUE OF EXPORTS OF BRITISH COLUMBIA  
PRODUCTS THROUGH ALL CANADIAN CUSTOMS PORTS<sup>1</sup>

Year	United States	Japan	United Kingdom (\$millions)	Other <sup>2</sup> E.E.C.	Other Countries	Total
1969	1,150.9	315.3	180.2	174.2	163.2	1,983.8
1970	1,041.4	387.5	207.5	190.6	205.1	2,032.1
1971	1,245.2	359.8	173.8	205.8	205.5	2,190.1
1972	1,615.2	465.8	201.3	239.4	236.8	2,758.5
1973	2,009.4	924.5	325.8	295.4	265.8	3,820.9
1974	1,921.2	1,053.9	325.5	454.4	422.2	4,177.2
1975	1,886.3	863.0	264.3	457.2	401.5	3,872.3
1976	2,670.2	1,040.4	351.4	629.6	578.0	5,269.6
1977	3,423.7	1,225.4	359.8	647.5	651.3	6,307.7
1978	4,202.1	1,559.2	352.0	711.6	733.1	7,558.0
1979 <sup>3</sup>	5,060.0	1,840.0	460.0	902.0	938.0	9,200.0

<sup>1</sup> Estimates based on Statistics Canada, Province of lading statistics and other adjusted data.

<sup>2</sup> E.E.C.-European Economic Community (European Common Market) includes United Kingdom, Ireland, Denmark, Belgium, Luxembourg, France, Federal Republic of Germany, Italy, Netherlands.

<sup>3</sup> Advance estimate will be revised as soon as more complete data for 1979 is available.

SOURCE: Special projects, Ministry of Industry and Small Business Development

TABLE 32

MOTOR VEHICLE LICENCES IN BRITISH COLUMBIA

Licence Year <sup>1</sup>	Passenger Vehicles (in thousands)	Commercial Vehicles	Total Vehicles <sup>2</sup>
1969	790.5	197.8	988.2
1970	811.6	207.5	1,019.1
1971	856.1	228.1	1,084.2
1972	906.3	256.3	1,162.6
1973	961.5	286.9	1,248.4
1974	879.8	270.1	1,149.9
1975	884.2	283.2	1,167.4
1976	911.6	308.5	1,220.1
1977	989.1	353.7	1,342.8
1978	1,060.3	392.3	1,452.7

<sup>1</sup> From March 1st of licence year to end of February of following year.

<sup>2</sup> Excludes motorcycles

NOTE: Figures for 1969 to 1973 are not comparable to those for 1974 to 1978. Since 1974 vehicles on dealers' sales lots are not required to be licenced.

SOURCE: Ministry of Transportation and Highways

TABLE 33

INTERNATIONAL AND DOMESTIC SHIPPING IN BRITISH COLUMBIA  
(thousand short tons)

Year	INTERNATIONAL SHIPPING		DOMESTIC SHIPPING	
	Loaded	Unloaded	Loaded	Unloaded
1969	20,733	4,541	21,043	21,031
1970	27,053	3,326	18,191	18,187
1971	33,642	5,069	14,777	14,770
1972	35,187	5,224	14,196	14,196
1973	38,492	5,039	14,917	14,882
1974	35,928	5,576	13,619	12,619
1975	34,423	4,438	10,709	10,507
1976	36,791	4,674	12,233	12,130
1977	40,477	4,764	13,235	13,068
1978	43,157	5,043	17,949	17,618
Jan.-July Total Year-to-Date				
1978	25,308	3,068	10,488	10,415
1979	25,078	2,645	18,021	18,021

SOURCE: Statistics Canada, 54-002, 54-004, 54-005, 54-203, and 54-204

APPENDIX C

MAIL CONTACT INSTRUMENT





# THE LIBRARY MANAGEMENT GROUP INC.

P.O. Box 251 New Westminster, B.C., Canada, V3L 4Y6 Tel. (604) 596 - 1154

January 17 1981

Dear Sirs,

We are writing to you in connection with the Department of Communications' desire to obtain advice concerning its Telidon development programme. Telidon is a Canadian invention, consisting essentially of a communications protocol, and computer-stored data bases. These data bases would constitute a one- or two-way information system, and would be open to use by anyone possessing a modified television screen, and a hand held key pad, similar in some respects to a converter. The screen could then be used to display information on all topics stored in the data bases - local entertainment listings, airline schedules, supermarket specials, weather, sports, stock exchange listings, the names of Members of Parliament - anything in fact which someone had chosen to place in the data bases. The Department believes that the Telidon system will become widespread in Canada during the near future, presenting significant business opportunities, as well as entertainment and information services for the general public.

One data base which will be available on Telidon will contain information about or possessed by the Federal Government. In establishing what should be included, and in what order of priority, there are three important factors which the Department must consider. They are the provisions of any current freedom of information legislation, the protection of certain confidential or privileged information, and the types of information required by various sectors of the population, and of the country. We have been asked by the Department to present opinions on the third, with respect to British Columbia.

The range of information potentially available from the Federal Government is vast, if not always at present easy to obtain. If you have suggestions for material which would be useful to you if included in the Federal data base, would you please let us know. In addition, we would be pleased to receive and to pass on to the Department, any general comments on two-way information systems. Our initial response to the Department must be completed by the end of this month, but comments received later will be included in a supplementary Report.

Yours sincerely

Dr. David R. Williams  
President

APPENDIX D

SAMPLE RESPONSE TO MAIL CONTACT

# THE 411 SENIORS' CENTRE SOCIETY

411 Dunsmuir Street,  
Vancouver, B.C.,  
V6B 1X4  
Phone: 684-8171

23 January 1981

Dr. David R. Williams,  
President,  
The Library Management Group Inc.,  
P.O. Box 251,  
New Westminster, B.C.

V3L 4Y6

Dear Dr. Williams,

Thank you for your letter of January 17 regarding Telidon to which I am replying in haste and without staff consultation in order to provide some input for your initial response to the Department. Also, to assist you in evaluating my comments, I enclose a copy of the Information and Referral Service statistics for December 1980.

Federal Government Information required:

- a. Old Age Security, Guaranteed Income Supplement, War Veterans Allowance, and Civilian War Allowance payments change quarterly. We are at least three weeks late in receiving what the new rates are. If it were on Telidon we could get first day information.
- b. What are the conditions of eligibility for Federal government programmes; e.g., all Income Assistance Programmes, Residential Rehabilitation Assistance Programme, NHA and CMHC assistance? We need in addition access to the regulations that influence entitlements; e.g., a married couple are each entitled to CPP, the husband dies, what is the basis on which the wife's entitlement is calculated?
- c. What were the Bank of Canada daily and annual foreign exchange rates for major foreign currencies for the last calendar year?
- d. What were stock prices on Valuation Day?
- e. By subject, what publications are available?
- f. New Programmes; e.g., conditions and method of application for Federal Funding for the Year of the Disabled.

Provincial Government Information required:

- a. The regulations and rates for the various Plans of G.A.I.N., Handicapped Person's Income Assistance, etc.
- b. Regulations and rates for Medical Services plan.
- c. Regulations governing and the rates and benefits available to Welfare cases.
- d. The boundaries of responsibility and location and telephone number of each government office.

Municipal Information required:

- a. By-laws.
- b. Whom to contact by subject.

Community Resources

- a. All.

Yours truly,



Frank R. Wiggs  
Director

cc. Greater Vancouver Information and Referral Service.

INFORMATION AND REFERRAL SERVICE

SUMMARY OF STATISTICS - DECEMBER 1 TO DECEMBER 31, 1980

TOTAL NUMBER OF TELEPHONE CALLS HANDLES - 2,411

TOTAL NUMBER OF ENQUIRIES

TELEPHONE ENQUIRIES	1713
OFFICE VISITS	629

CATEGORY OF ENQUIRIES

BUS PASSES	1247
PHARMACARE	126
S.A.F.E.R.	80
G.I.S.	28
MEDICAL	134
LEGAL	46
LONG TERM CARE	16
FINANCIAL	343
ELIGIBILITY	245
LOST I.D.	60
ADDRESS CHANGE	70
GENERAL	295

SERVICES PERFORMED

INFORMATION SUPPLIED	2045
FORM COMPLETED	152
REFERRAL MADE	383
OTHER CONTACT	69
COUNSELLING	24
LETTER WRITTEN	11
MAIL OUT	32
REPLACEMENT REQUESTED	36

MINISTRY OR OFFICE RESPONSIBLE FOR SERVICE

MINISTRY OF HUMAN RESOURCES	1675
MINISTRY OF HEALTH	139
MINISTRY OF HOUSING	51
FEDERAL GOVERNMENT	223
MUNICIPAL GOVERNMENT	5
OTHER	275

TYPE OF ENQUIRY

* MINOR	2080
* MAJOR	262
* MINOR ENQUIRY - UNDER 5 MINUTES	
* MAJOR ENQUIRY - 5 MINUTES OR OVER	
*****	
NOVEMBER 26 - 31, 1980	1,834
NUMBER OF BUS PASS PHOTOS TAKEN - G.V.R.D. - DECEMBER, 1980	10,072
*****	
JANUARY 2 - 13, 1981	1,267
*****	
TOTAL	13,173

MUNICIPALITIES CALL ORIGINATED FROM

VANCOUVER	-	1797	NORTH VANCOUVER	-	60
BURNABY	-	184	WEST VANCOUVER	-	9
RICHMOND	-	68	WHITE ROCK	-	21
NEW WEST.	-	69	LANGLEY	-	11
SURREY	-	21	COQUITLAM	-	5
DELTA	-	17	OTHER	-	22
			UNDETERMINED	-	58
*****					
TOTAL					2342