

Submission to: THE INTERDEPARTMENTAL TASK FORCE
ON TRANS BORDER DATA FLOW

November 12, 1981

From: Canadian Independent Computer
Services Association
499 Portage Avenue
Winnipeg, Manitoba
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This brief concerns TBDP

It was prepared for the

of the

on

of the

by CICS

Transborder Data Processing

Economic Working Group

Interdepartmental Task Force

Transborder Data Flow

Government of Canada

Canadian Independent Computer

Services Association

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INTRODUCTION

"The flood of tide is upon us that leads on to fortune; if we let it pass it may never recur again. If we let it pass, the voyage of our national life, bright as it is today, will be bound in shallows. We cannot wait, because time does not wait; Heaven grant that it is not already too late; Heaven grant that whilst we tarry and dispute, the trade of Canada is not deviated to other channels, and that an ever vigilant competitor does not take to himself the trade that properly belongs to those who acknowledge Canada as their native or their adopted land."

Sir Wilfred Laurier
Speech to the House of Commons
July 30, 1903

Trans Border Data Flows (TBDF) have no doubt been with mankind as long as there have been borders. Letters, money, radio and television broadcasts, stock market quotations and any number of other forms of data cross borders. All sorts of means of communication have been used for these crossings -- couriers, railways, telephone lines, etc. Nevertheless, TBDF has suddenly become a topical and contentious issue in most countries.

What is the reason for this? Certainly computers and the development of computer communications are at the root of the problem. However, it really makes no difference to anyone that money transfers between countries can now be made more efficiently with the aid of computers rather than by mail or telegraph or even that messages can be transferred from one country to another by electronic mail.

TBDF in the conventional sense is a non-issue.

But there is evolving a new form of TBDF. This is a different issue which arises from the fact that we can now not only send data across borders, we can have it received by a computer, changed or processed, and sent back in its new form. This we will refer to as Trans Border Data Processing (TBDP).

This brief is concerned with TBDP and its potential for changing the opportunities for Canadians to enjoy "the trade that properly belongs to those who acknowledge Canada as their native or adopted land."

PREMISES

- * CICS members are aware of many instances of Canadian companies sending data across the border for processing outside Canada. So many that our estimate of the work going out is higher than the only existing estimates, those made in 1978.
- * In our work within our own companies, CICS members have experienced the impressive development of data communications. Data now flows faster, more accurately, and at much less cost than could have been expected as recently as 1978. The opportunities for data to flow out of Canada have been made immeasurably greater by developments of Datapac and satellites and many other devices and concepts. Developments on the horizon will augment this trend. TBDP is consequently a growing concern.
- * Although there is still argument about how much data is moving south for processing outside Canada, the potential costs and benefits to Canada are not in doubt. The costs include:
 - The loss of tens of thousands of good jobs in a non-polluting industry. These jobs include some of the best opportunities for women, for minority and handicapped groups, and for the young.
 - The loss of head offices and all their good jobs, their control of capital, and all the high level services they consume (banking, legal, accounting, advertising, printing, R&D, etc.). Head offices automatically shift to where information is richest, which will be in the U.S. if data is permitted to flow there.
 - The loss of skills. If U.S. data processing service and software companies are permitted to dump their surplus capacity in Canada at low prices, Canadians will never develop those skills. There may be low prices in the short run, but the costs will be high in the longer term.
 - The loss of revenue. Our trade imbalance will be made much worse if data processing for Canada is permitted to be done in the U.S. That inevitably leads to lower average incomes in Canada and therefore lower standard of living, lower tax base, etc.
 - The loss of national identity. Where will Canada be if many of its industries are totally under not only the financial control of foreigners but under the day-to-day operational control of persons located outside our borders?

- The loss of consumer protection. If credit records are held in the U.S., whose laws apply?
 - The loss of domestic markets for Canadian hardware manufacturers. Decision makers will buy from local sources.
 - The loss of exports. We cannot export what we cannot do. TBDP will deny Canadians opportunities to perform many computer-related functions which could later be exported as skills.
 - Oddly, the loss of economic efficiency in many cases. Often TBDP is engaged to get control and to prevent Canadian affiliates from knowing full details of their own operations. In these cases costs are often higher for the Canadian firm.
- * If the Canadian border is left porous to data, data processing will become just another industry in which little research and development is done here, like the industries dominated by subsidiaries of foreign companies.

Against these losses, the potential gains from open borders do not seem impressive:

- It is possible even in the long term that some export industries could be helped to stay competitive by cheap foreign data processing. If so, maybe some exceptions will have to be recognized.
- TBDP sometimes gains cheap data processing for Canadian companies. At least in the short run.
- Canadian data processors can get contracts in the U.S. However, the total of these export sales has remained tiny in comparison with the import purchases of U.S. services, and big contracts usually result in Canadian companies establishing computer centres in the U.S., which might actually be a net loss of jobs and skills for Canada! For instance, Data-crown.
- The prospect for Canadians to expand their market area into the much larger U.S. market is more apparent than real. Every data processing company that has tried it in the past has failed.
- Some claim the U.S. will retaliate if Canada restricts TBDP. There are here sovereignty implications. Upon a little reflection it will be realized that direct retaliation or restrictions of its own are not possible choices for the U.S. Since the U.S. expects to gain from open borders, it must maintain them open as a matter of firm principle and cannot

give the example of closing borders against any country's data and its data processing industry.

- Those who oppose absolutely every form of government action (a common, if unnatural, position in Canada) will be comforted if the border is left freely open to data transmission in any direction.

CICS CHALLENGES

1. To those who oppose any form of government involvement:

If TBDF is small and unimportant, hardly anybody will be bothered by regulations.

If TBDF is big and important as CICS believes it is, regulations will provoke a huge outcry. The outcry will prove how badly the regulations are needed!

2. To those major interests who say Canada lacks people with the talent, the initiative, and the organization to develop most or all of the data processing services needed:

How insulting to the hundreds of Canadian companies now profitably and ably operating data processing services! This attitude has ancestors. Remember when it was argued that Canadians could not get a satellite system up and working? Or that Canadians could not run an oil industry? Or that the Canadian army in Europe could not produce its own generals but had to 'borrow' generals from a friendly ally? Those nonsensical arguments had influential supporters in Canada.

CICS declares that Canadians can perform all the data processing work for Canada.

CICS RECOMMENDATIONS

1. The Government of Canada should restrict the processing of Canadian data outside Canada by one or more of the following methods:
 - (a) The use of telephone systems, satellites, and other utilities for transmission of data across borders should be permitted only under license. Licenses should be granted only for specified purposes, and not for processing Canadian data outside Canada for return to Canada unless the processing is of a 'class or kind not made in Canada.' Communications companies then become associated with government policy, paralleling the present situation where customs brokers participate in the process of importing materials.
 - (b) The costs incurred in processing data outside Canada could be disallowed for tax purposes. If the charges are internal within a company, fair market evaluation should be determined.
 - (c) Tariffs on data transmitted from the U.S. and on imported software could be established. Telephone companies can easily identify and measure data flows as opposed to voice transmission. They could be the "tariff collectors." This does not mean they would examine the content of the data. It is merely a measurement process.
2. The Government should encourage the development of software packages in Canada by treating the function as research and development. Like other R&D situations, software development would then qualify for a 150% write-off for tax purposes. This write-off should be allowed to the purchaser of packages still in the development stage.
3. Tariffs alone are not enough. Restricting ownership of data processing firms to Canadians is essential. In the earlier case of manufacturing industries, high tariffs increased the desire of foreign companies to acquire Canadian firms and leap over the tariff wall, and thus increased the price of the Canadian firms which in turn increased the willingness of Canadian owners to sell out. If this were to be permitted in the data processing industry, Canada would lose more than just control of an industry. We would lose the experience and ability of the people who sell out. The Government must take steps to ensure substantial Canadian control of an important industry . . . before ownership is lost.

4. FIRA should become more familiar with the data processing industry. FIRA will no doubt have to judge the exceptions when foreign firms are permitted to buy into Canada. FIRA's record is not good. In the case of ADP, Inc., of New Jersey, for instance, FIRA was apparently confused by the bizarre impression that any one specialized data processing enterprise includes all other specialties. ADP was in Canada providing certain particular data processing services to automobile dealers. This was seen as reason enough by FIRA to permit ADP to take over the payroll services business of the Bank of Montreal. Now it seems any other data processing enterprise ADP wants to operate in Canada is also acceptable to FIRA. If FIRA can see that shipbuilding is different from making automobiles even though both use bolts and steel, then FIRA can learn that different data processing enterprises are different.

5. A study should be made of the difference to local economies of head office jobs as opposed to production jobs. We believe that head offices not only employ higher paid personnel but that the effect on local purchases is far greater. TBDP threatens the prospect of many head office jobs being moved out of the country. We believe the effect of such moves would have far greater impact on Canada than just the loss of computer-related jobs.

CANADIAN ANALOGIES

Time and again, Canadians have had to make a choice between two sharply contrasted alternatives:

either pay extra to remain Canadian
or rely on foreigners to provide vital services.

Always that choice seems to be difficult for Canadians.

Whenever there is a national debate of this sort, there will be on opposing sides those who oppose any government involvement as evil in itself and those who look for governments to change the world. In most cases, Canadians seem to have agreed on the need for some government action.

- * Canada's transcontinental railroads were built only with government support, after decades of debate. Nobody now doubts that the railroads were essential to Canada's existence as a nation, and they are now profitable.
- * The gas pipeline issue of a few years ago seems much like the TBDF issue today. Gas pipelines cross the border carrying gas for sale in the U.S. But the gas which is shipped east for use in Canada is controlled all the way in Canada ... even though it might have been cheaper in the short term to route it through the U.S. Furthermore, it was decided clearly that gas processed further for sale should be processed in Canada. That decision can be translated into TBDF terms: data that is to be used only in the U.S. can be transmitted to the U.S. freely; but data that is to be used in Canada must stay in Canada and be processed here. After all, it is important to recognize that telephone lines are pipelines for data.
- * Canada has characteristically acted to establish and protect Canadian influence in the media of information and culture. There was a major dispute when the Government of Canada proposed to guarantee a strong Canadian magazine industry, but the Government won. Actions to maintain a strong Canadian presence in the broadcasting industries are always controversial, and always taken. Several Canadian governments act to establish a Canadian presence in the motion picture industry. When any important medium is threatened with foreign domination, it is felt that Canada's psyche is under attack. The same should be felt of the data processing industry. If it is handed over to the U.S. we will have given up our brains as well as the revenues to be earned by using them.
- * Periodically, Canada faced a 'brain drain,' as in recent decades when Canadian engineers couldn't find work in Canada and moved south. There they frequently found work on Canadian projects

being engineered at head offices located outside our borders. Ironic. The result has been actions by such governments as that in Alberta, and Canadian engineering firms have not disgraced us by any lack of ability to tackle all these jobs. Now Canadian engineering is a significant export. Similarly now, Canadians who have been trained to work on the development of large operating computer systems have to move to the U.S. to pursue their chosen careers. Their talents will help the U.S. dominate Canada!

The arguments on both sides of the transborder data flow argument are not unfamiliar. The decision should not be unfamiliar either.

In a perfect world, no police or government would be needed. Until the world becomes perfect, Canada will have to make special arrangements to retain its separate identity.

In each of the analogous situations to which Canada has had to respond in the past century there has been a new technology changing the world. But never at the speed with which computer and data processing technology is moving! The consequences to Canada's economic independence, to our national identity, to our problems of living in the shadow of a neighbor with a big market and advanced technology, and all the other problems of historic importance and familiarity are the same. Only the compactness of time caused by the speed of change in this technology is different.

It is to be expected that such a rapidly developing problem is difficult to understand. We don't know how great the volume of traffic across the border is. We even use the wrong terms to talk about the problem . . . for example TBDF. There has always been data flowing across the border, and that will always be necessary. The real problem is TBDP: transborder data processing.

In the recent past, TBDP was solved by customs officials. When data was shipped in the form of printed reports, it was held up by customs officials. Their slowness made processing in the U.S. ineffective. Now data flows back and forth over their heads and beyond their awareness.

Meanwhile the situation becomes more consequential. Data processing adds functions like credit checking, alarm systems, stock market systems, and any number of others as technology and practice evolve. The consequences of losing control grow ever more serious.

WHO OPPOSES A CANADIAN INDUSTRY?

If it were only the multinational companies and the U.S. government opposing Canadian restrictions on TBDP, the situation would be simple and easy to understand.

But there are also many 'Canadian' organizations in the open border camp. Datacrown, for example. That company has a substantial contract with the U.S. government and does not wish to prejudice its U.S. business by closing the Canadian border. Actually, none of its American data will be processed in Canada, but in Datacrown's new Washington computer facility. Probably the U.S. government would not have permitted essential data leaving the U.S. So Canada gains an investment in the U.S. but gets not one job in Canada. Probably Canada gains no data processing skills from Datacrown's U.S. success, but the U.S. gets a powerful lobby in Canada. Furthermore, as Datacrown's Canadian data processing exceeds the capacity of its Canadian computer, will its expanded facility be in the U.S.? When its present Canadian computer has to be replaced will the replacement be located in the U.S.? The answer is, most likely, yes. At that point Datacrown's Canadian customers would be getting all their processing done in the U.S.

Canadian banks also oppose any restriction on the processing of Canadian data in the U.S. Is it strange to find our banks in that camp? No. Their smokescreen claim is that there should be no impediment to the exchange of funds between nations. But the Canadian banks get the data processing for transfer of funds between Canadian domestic accounts done on U.S. computers. National Data, a U.S. firm, provides a relatively simple money management system for most Canadian banks; numerous Canadian sources could have been found for that service, but the banks went to the U.S. A similar situation may exist with respect to credit card accounts. If the banks have a good argument for sending their own data to the U.S. for processing and for lobbying for open borders for everybody else's data, they should make that case openly.

A number of Canadian data processing firms in CADAPSO hope to expand into the U.S. and fear their opportunity will be cut off if Canada acts against true TBDP. They may be right, in their own cases. The U.S. may act against them. But what would Canada gain if they do expand into the U.S.? Not jobs or equipment purchases or skills, for all those would be developed in their U.S. computer centres, not in Canada. It is cheaper to operate in the U.S., and there would be no problem with the U.S. being concerned about where its data is going. Could it be that these firms really want to process Canadian data on cheaper computer facilities located south of the border?

What does Canada gain from our companies selling across the border? Apparently not much. The total sales are small compared to those of U.S. firms in Canada, on any estimate. Comtech, Computel, Multiple Access, and Dataline have all tried, and nothing they have done encourages hope for a favorable balance of trade. They were burned, mostly. Only I.P. Sharp has a wonderful record, but it is in a different sort of international business, requiring TBDP that would likely be permitted activity under the arrangements we recommend.

Even our powerful banks have not done all that well in the U.S. When REITS were in vogue in the U.S., the Canadian banks invested heavily in them. Last year they seem to have invested heavily at fixed rates, as much as 8% less than they need now.

We had an excellent Canadian company called Massey Harris at one time. It had great multinational aspirations. The consequence was that rather than increase exports, it built factories throughout the world -- many of which sold into Canada. For Canada, it was a failure even before its much-publicized financial problems.

Investment by Canadians in the U.S. is not automatically an unqualified blessing. It should not be the goal if reaching for it imperils opportunities for Canadians to invest in Canada. While we have a serious trade deficit, we should look after our domestic market first.

Those who feel they can be world beaters -- let them go ahead and try -- and we wish them luck. But Canadian policies should never be moulded to suit their needs.

THE CANADIAN DATA PROCESSING INDUSTRY

The Services Industry

The Canadian computer services industry is developing strong specialists in many fields. The pattern is similar to that of the U.S. where large firms grow without directly competing against each other. That pattern avoids problems of low profits and loss of important staff.

The Canadian data processing market is relatively small, but the same strategy is working. Many of our small firms are producing healthy profits. They make highly efficient use of one of our most valuable assets -- skilled computer personnel.

Though the level of profits in the industry is far too low as a percentage of sales, this shortfall seems to be chiefly caused by the very large firms.

Growth in revenues is not as high as might be desirable for such a new industry (approximately 20% a year). Again, the large firms seem to be lagging, particularly when acquisitions and price increases are allowed for. Nevertheless the industry's situation is basically healthy.

Banks have seemingly been restricted from exploiting their position as bankers to sell data processing services. Telephone companies constitute a potential, and in some provinces a present day, threat. These organizations have unnatural advantages which restrict competition and innovation in the market place.

So far U.S. service bureaus have made only limited incursions into Canada. Why have they been timid? Maybe their U.S. market has been expanding so rapidly that they have not needed Canada. Maybe they are getting satisfactory chunks of Canadian business without bothering to enter Canada. Maybe business they could get through TBDP is much more profitable than anything they could get by actually investing in Canada. Maybe it is easy to get Canadian business by contacting the Canadian subsidiaries of U.S. companies.

Nevertheless, ADP is here, and it is significant. It was helped by the Bank of Montreal and by FIRA. ADP will simply import U.S. software, rather than develop it here. Takeovers like that or in other forms may be the pattern of the next few years.

The services industry is highly efficient in terms of utilization of people and capital resources. Since almost all of those capital resources are imported, efficiency can be important to our balance of payments by reducing imports.

The industry can adapt to technological change quickly. It can probably be justifiably claimed that the micro-computer industry is the offspring of the computer services industry. Many entrepreneurs in that industry got their experience in the computer services industry. It is creating pools of capital and new blood for the Canadian business scene. It has much to give to Canada.

The Software Package Industry

This industry is heavily dominated by U.S. firms with minimal offices here or none at all: M.S.A., Cyborg, Software International

It is tough to get started in this industry. A Canadian firm needs the experience of creating a system before it can really know how to create that system. Then it becomes easier to expand a system, improve it, market it. And it will then be harder for others to enter that part of the market. Unfortunately, Canadian firms find U.S. firms already here with all the kinds of systems, having had their first crack at the application a few years earlier. Encouragement to Canadian firms in this area is badly needed.

Custom Software

Custom software creation is different. It necessitates close interaction with clients, and frequent follow-up, sometimes over years. Canadian firms do most of this work in Canada.

Unfortunately, custom software is expensive, and prone to replacement by more cost effective standard systems. Firms in this business either have contracts with very large firms, or they are not very successful.

Technological changes affecting service industries

Hardware prices are declining. Telecommunications and microprocessors are opening up important new opportunities. The industry demonstrates ability to adapt quickly and efficiently to all these changes.

The technological changes facing us seem favorable. The opportunities are nothing short of outstanding. With the application of business experience, these opportunities can be turned into businesses.

Short term and long term prospects

Regardless of any decision on TBDP, the computer services industry in Canada should prosper during the next few years. The longer term presents the Government with some specific concerns:

- the dampening effect of entry by telephone companies;
- the use of foreign software by Canadian firms, and non-development of a Canadian software industry;
- the eventual effect of unrestricted TBDP on all aspects of the Canadian industry;
- takeover of Canadian firms by U.S. firms.

CANADA'S BALANCE OF TRADE IN TBDP --
WE LOSE

The trends have to obey implacable facts:

- Computers are cheaper in the U.S. than in Canada.
- Telecommunication is cheaper in the U.S. Any company working both sides of the border wisely transmits data within the U.S. mostly, and in Canada only to the border. The place to locate a central facility is inevitably in the U.S.
- U.S. subsidiaries customarily use the computer at their U.S. head office. They may also prefer the same U.S. data processing service company to process their Canadian subsidiary's data. That eliminates the need to buy software and it offers maximum control. It is a common occurrence for members of CICS to succeed in winning a contract with a company in Canada but then lose it when a U.S. head office offers to cover that need. Perhaps the U.S. software is more developed than anything in Canada . . . and thus nobody will EVER develop such software in Canada, or learn how to do it.

This trend is not a serious problem for existing companies in Canada. This is business they have never had. It is serious for Canada, though.

Since it is business we have not ever had, we cannot estimate it precisely. The Government might find out by checking payments to foreign affiliates which must be reported to the income tax department. Or telephone companies could report on data flows, a subject they admit they know.

Until that information is gathered, we have such fragments of knowledge as the Statistics Canada report on installation of data terminals: it is up. It is safe to assume that TBDP is also up.

While checking volume, the Government might consider the reasons. It is not likely just economics. It is more likely first a matter of confirming control in head office. In effect, the real head office is leaving Canada, along with good jobs, service requirements, taxes, capital flows, and everything Canada hoped to get from the investment except resource exploitation and a market for cheap labor.

THE BEST OPTION FOR A COMPUTER SERVICE COMPANY
IS TO MOVE TO THE U.S.

If nothing is done to influence the course of events, two indisputable facts will determine our options:

1. Computers cost far less in the U.S.
2. Telecommunication costs in the U.S. are less.

That sets the options for subsidiaries of foreign firms in a simple order:

1. The best option is to require the subsidiary in Canada to have its data processed on the computers at head office. We can depend upon the data processing department in the U.S. to have normal empire-building motives and powerful arguments based on economy and control.
2. Another good option is to require the Canadian subsidiary to use the same service company as the head office in the U.S. Some U.S. service firms, notably ADP, move into Canada to encourage such arrangements, but most do nothing but accept the Canadian business when it falls into their laps.
3. Using a Canadian service bureau is only a third option. It will be the choice, but less often.
4. The idea of installing a computer in-house in Canada is becoming a fourth option, a last-place finisher. Too expensive.

The option for Canadian firms are not really different, particularly if the Canadian firm has operations in the U.S. For example, Great-West Life is expanding the data processing operation in its U.S. headquarters in Denver. Common sense suggests that new computers will be installed there rather than in Winnipeg, and that decision-making power will slip to Denver.

Of course, because U.S. firms get the big contracts, Canadians will not. It will then be said truthfully that Canadians cannot do that work, because Canadians have not had the experience. Thus, Canada cannot base an export sales campaign on non-existent abilities.

The clearest example of that involves the banking industry. Canada's banks have generally not entrusted their data processing problems to Canadians. Why should foreign banks help us?

We are left with two alternatives:

1. Go for the tiny bit of the international market that we can hope to get, and keep 50% of the Canadian market. That is the open border alternative.
2. Keep the Canadian market almost 100% Canadian, and hope that the skills Canadians develop can be sold internationally.

Is that a tough choice?

WHAT TO DO TILL THE KNOWLEDGE ARRIVES

It is not at this moment possible to know precisely whether there is a trend to in-house data processing acting to the detriment of Canada. A sampling survey might indicate that U.S. subsidiaries are or are not moving their data processing functions to in-house head office operations. But that is only an indication.

Until proper information is available, some assumptions can be made.

1. Expect companies to act in their own best interests, within the law and with due regard for their responsibilities. Probably U.S. subsidiaries will see advantages all around to getting their data processed at head office in the U.S.
2. The most likely trend is to more transborder data flow. The least costly time to intercede is when it is least. That is now. It is only fair to make the decision as early as possible so that companies can plan their data processing investments. If they are going to be regulated into doing the work in Canada, it is best that happens before they set up foreign arrangements.
3. It is safe to assume that many firms are now waiting for a decision. If no decision is taken, they will have to proceed according to the best interests they can identify. It would not be fair to leave them in limbo for a long time, and then criticize the choice they made.

WHAT HAPPENS AFTER A DECISION
NOT TO RESTRICT TBP

A great many law-abiding firms are in a waiting mode right now. If asked in a survey, they are not now processing their data outside Canada.

If the decision is made that all data can flow out freely for processing anywhere, and flow back in improved form just as freely, honest companies will have to take all important advantages. That decision, in effect, would be advice to send data outside Canada.

The change would not then be just the continuation of a trend. It would be an avalanche! A decision not to restrict TBP would change the industry overnight -- towards U.S. domination.

THE REAL CONCERN

While the people now operating Canadian computer service companies will manage quite well no matter what decision is made concerning transborder data flow, the same cannot be said for Canada.

The issue is not just the revenues from data processing. In the case of a head office, data processing may cost just two percent of the revenues. It is not the biggest item in itself.

But, if the data processing function moves out of Canada, so does much of the decision-making power associated with head offices. Only where information is timely can decisions be made, and that is where the computer is.

The loss of the real power of a head office leads to serious losses for Canada:

- the best paying jobs move out
- the buying function moves out, and Canadian suppliers are put at a disadvantage
- the printing and advertising jobs move out
- the auditing and accounting functions move out
- the research function is moved close to the centre of real power most frequently
- the legal fees are more likely to be earned by lawyers who are in close touch with head office

Possibly as much as twenty percent of the spending of a head office can be moved out of Canada. And what is left is controlled from afar by people who are not subject to Canadian laws or aware of Canadian purposes.

Canada's stake in keeping control of data processing in Canada is much greater than any interest in the data processing industry itself.

OPTIONS FOR THE COMPUTER SERVICE INDUSTRY

1. If the border is opened to free flow of data in either direction, service companies will necessarily follow their customers south. Datacrown is leading the way.
2. If the Government indicates that restrictions of some effective sort will guarantee that Canadian data will generally be processed in Canada, CICS members and other service companies will invest in Canada so that this work will get done.

CICS is confident that Canadians can do the data processing work in Canada. The companies will generally find ways to be profitable. Most of our members do not want to export themselves to the U.S., unless all the business moves there.

But, if Canada does not move to make data processing a Canadian industry, the rate of development of the industry will be much less than it should be, and many needed new companies will never be formed.

APPENDIX A

STATEMENT OF OBJECTIVES OF
CANADIAN INDEPENDENT COMPUTER SERVICES ASSOCIATION

CICS was formed in October, 1980 in response to the need for consistent representation of the following objectives:

The General Objectives of the Association are:

- To promote the interests of Canadian Independent Computer Service Organizations generally and particularly with respect to matters dealing with legislation, regulation and public understanding of the industry.
- To encourage cooperation among its members and the exchange of ideas and service, in the interest of better service to the public.
- To inform members of opportunities and developments in the Data Processing Field.

Areas of Immediate Activity are:

- Encourage changes in the Bank Act to permit the appeal to the Courts if Banks are allowed to engage in non-banking data processing.
- Representations to the Department of Finance regarding regulations governing Banking related data processing.
- Trans Border Data Processing.
- Connection of non-telephone equipment to the Telephone System.
- Promotion of understanding of the industry by investors and lenders.
- Encourage involvement of the Computer Services Industry in the evolution of the payment system.
- The establishment of a newsletter for the exchange of views and information, and to facilitate the exchange of services among its members.

APPENDIX B

CANADIAN INDEPENDENT COMPUTER SERVICES ASSOCIATION
MEMBERSHIP LIST

<u>Member Company and Address</u>	<u>Telephone Number and CICS Representative</u>
NOVA SCOTIA	
Dymaxion Research Ltd. Box 1053, Armdale Station Halifax B3L 4L5	(902) 429-3175
QUEBEC	
Acom Computer Systems Ltd. 900 Dorchester West, Lower Lobby Montreal H3B 4A5	(514) 871-9434 Stephen J. Berns, Vice- President
Business Progress Assistance Corp. 2735 Diab Street St. Laurent H4S 1E7	(514) 337-8227 S.B. Frandsen, President
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APPENDIX C
REVENUES AND PROFITS
OF THE COMPUTER SERVICES INDUSTRY

Statistics Canada indicates that 1979 revenues for "Establishments Primarily Engaged in Providing Computer Services" totaled \$638,038,000. This is an increase of \$106,252,000 or 19.98% over the 1978 total of \$531,786,000. Similar figures for 1980 are not available at this time, but an analysis of eight publicly listed firms (Exhibit D) indicates a 17.87% increase in revenues for those firms.

Industry profits have, according to published figures, been very meager. Exhibit E shows the revenues and (where available) operating profits of ten U.S. data processing firms. Exhibits D and E indicate the dramatic difference between the maturity of the Canadian and U.S. industry. Canadian firms are obviously not generating sufficient income to enable them to be aggressive in terms of research or expansion. They are vulnerable to takeover as investors tire of the long wait for returns.

The firms shown in Exhibit D are probably not representative of the industry as a whole. There are at least a few instances of small privately-owned firms generating substantial profits both in real terms and as a percent of revenue. Nevertheless, it is essential that the industry improve its profit performance. One way that this will be achieved would be to ensure that Canadian data processing remain in Canada.

Most often it appears that profits in the industry come easiest to firms specializing in fairly narrow areas of service. High rates of productivity can be achieved. For example, a single programmer/analyst can support revenues in excess of two million dollars annually in such an environment. Firms that try to respond to a wide variety of client needs and which customize their services often find themselves bogged down in masses of software that is extremely costly to maintain. Such software becomes a liability rather than an asset.

It is apparent that specialized computer services firms relieve the problem of shortage of programmers. For this reason, Canada can advance the computer services industry more effectively by encouraging the development of programs that have wide application.

APPENDIX D

FINANCIAL RESULTS FOR
PUBLICLY REPORTED COMPANIES
(AS PER FINANCIAL POST SURVEY OF INDUSTRIALS)
(000's)

	1980*		1979*	
	Revenue	Net Income From Operations	Revenue	Net Income From Operations
Data Crown Inc.	68,640	1,974	60,218	68
*Computel Systems Ltd.	30,993	(2,476)	23,034	322
Dataline Systems Limited	8,249	(149)	7,011	253
Comteck Group Inter- national	5,665	210	5,702	92
Data Tech Systems Ltd.	5,073	97	4,704	29
Real Time Datapro Ltd.	4,321	217	3,413	183
Computrex Centres Ltd.	3,756	(64)	3,398	(217)
Polycom Systems Limited	<u>3,328</u>	<u>283</u>	<u>2,831</u>	<u>240</u>
	<u>130,025</u>	<u>92</u>	<u>110,311</u>	<u>970</u>
Profit as % of Revenue		.071%		.879%
Increase in Revenue: 1980 over 1979				17.870%

*Computel results are for the years 1979 and 1978.

Source: Financial Post Survey of Industrials, 1981

APPENDIX E

FINANCIAL RESULTS FOR
TEN U.S. COMPUTER SERVICES COMPANIES
(000's)

	1980		1979	
	Revenues	Operat- ing Income	Revenues	Operat- ing Income
Computer Sciences	560,000	45,000	415,000	45,000
Automatic Data Pro- cessing	505,000	43,000	401,000	36,000
Electronic Data Systems	408,000		312,000	
System Development Corp	189,000	19,000	163,000	17,000
Informatics	126,000	8,000	112,000	6,000
Boeing	125,000		96,000	
Reynolds & Reynolds	118,000	10,000	110,000	19,000
Wyly Corporation	118,000	10,000	89,000	8,000
Dunn & Bradstreet (National CSS)	97,000		110,000	
Comshare	88,000		67,000	

Source: Datamation, June 1981

APPENDIX F

AN ADDITIONAL STATEMENT FROM
SUPERIOR DATA SERVICES

Superior Data Services
1340 Church Avenue
Winnipeg, Man. R2X 1G4
September 29, 1981

Mr. Jim Cook, President
Canadian Independent Computer
Services Association
499 Portage Avenue
Winnipeg, Manitoba
R3B 2E3

Dear Sir:

This letter is in response to your request for input regarding the increasingly common practice of Canadian commercial operations transmitting their computer data to the United States for processing. The reasons these companies give for such a practice are manifold, but basically fall into the two major categories of -

- (1) - companies whose head office is in the United States, and where this head office has determined that the processing will be performed there, and -
- (2) - those companies who have been offered low-cost data processing if they are willing to send their data to the United States for processing.

In the case of companies with a head office in the United States, and an operational staff in Canada to handle their normal day-to-day business, it immediately becomes obvious that if the data is being transmitted to the United States, then it will be used by employees in the United States. The effect of this situation is that a company's decision-making personnel will eventually end up concentrated in the United States, for the simple fact that the necessary data for decision-making will be most accessible there. This directly results in decisions being made with the best interests of the country of residence being foremost in the minds of the company executives, undoubtedly to the detriment of the portion of the Canadian economy that is dependent on the Canadian subsidiary. A further result of this centralization of data and the attendant centralization of decision-makers, is the drain from the Canadian executive pool of those Canadians who are determined by the United States head office to be of decision-making

value. This is definitely to the detriment of the Canadian business environment.

In the case of companies who are transmitting data to the United States for the purpose of obtaining cut-rate data processing services, we must examine the effect that such a practice has on the Canadian data processing industry. The data processing industry is in fore-front of new technological development, and it is of extreme importance to any modern country to create and maintain an active, modern and effective data processing community.

The practice of exporting the data processing service needs of the country to a foreign location has the direct effect of removing the basis for development and maintenance of a viable industry at home. Without a proper quantity of available data processing markets in Canada, the data processing facilities here must shrink, or at best stagnate. As this situation continues, the quality of data processing professionals and equipment available in Canada must deteriorate as compared to the personnel and equipment available in the area to which the data is being sent, resulting in a down-hill spiral that must finish with the irretrievable loss of computing personnel and capacity.

The data processing service industry is a major training area for computer personnel, and an important proving ground for new computer techniques and ideas. Without a viable data processing service industry, there is the very real danger that a severe loss of Canadian computing expertise will ensue. Every country has specific problems and conditions that are unique to it, and that are best solved by the residents of the area. The trans-border movement of data, and the attendant movement of processing capacity, will result in American-oriented solutions being applied to the problems of Canadian companies. The user of data processing services relies to a great extent on the advice and guidance provided by the service center, so these solutions will be accepted without question in a great many cases.

As the data processing service industry shrinks in Canada as a result of the exporting of data, so must the support industries that provide the physical hardware, that employ Canadians to develop new software, and that employ Canadians to service and maintain the equipment.

The answer to the problem is not to suggest that the Canadian data processing service centers cut their prices to compete, since the differences in the scale of operation between the Canadian and American data processing centers makes any comparison of costs of operation meaningless. The concentration of industry in the United States is far denser than that in Canada, resulting in the

ability in the United States to establish large facilities that can be supported by a comparatively small geographic area, with all the attendant economies that follow.

For the above reasons, we believe that the exporting of data to the United States for processing is extremely detrimental to the Canadian business environment. The question remains, how do we propose to fight it?

The practice of levying protective tariffs to encourage local industry is long-standing and is already used by the Canadian government to protect numerous other areas of the economy from foreign dumping of excess product or capacity. It has so far not been applied to the data processing industry, in spite of the demonstrated need for it. This failure has come about for a number of reasons - the relatively recent creation of the industry; the intangibility of the data itself; the absence of a physical product which can be counted, weighed, inventoried or inspected at the border; the fact that Transborder Data Flow was impractical until the recent improvements in transmission equipment; the lack of public comprehension of the data service industry as an essential Canadian need; and the fact that the new satellite communications have, together with the proliferation of remote job entry devices, made mass communication of data to another country an economically practical practice.

A form of tariff must now be established to control the transmission of data out of the country for processing. The economics and timings of such transmission dictate that in most cases the transmission must be done via a communication network, rather than by the physical transporting of source material or of the resulting report documents.

The only immediately practical method of controlling this type of data communication is through the control of the transmission devices themselves. This can be accomplished by the application of tariffs on the use of such devices, at tariff levels sufficient to offset any advantage gained by a company through foreign processing of its data.

By establishing meaningful tariffs, and thereby retaining the data processing function within the country, we can avoid the further erosion of the Canadian decision-making process, and retain this extremely important capacity within our own country. The modern world runs on rapid and accurate processing of information to allow timely decisions in the development and operation of business. We trust that Canada will see fit to maintain its capabilities in this important field.

Yours truly,
Fred M. Adams H.B.A.
Division Manager

