

INITIATIVES AND TRENDS - OTTAWA REGION

Michael Brandreth
Associate Director
Information Sciences Division
International Development Research Centre
Ottawa, Ontario
K1G 3H9

ABSTRACT

This paper samples recent information developments in the Ottawa area, most of which can have a bearing on activities in the rest of Canada. Examples are taken from the fields of cooperative international information systems, Canadian data-bases, Canadian software systems, and studies and surveys.

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RESUME

Cette étude décrit le récent développement dans l'industrie d'information dans la région d'Ottawa, qui peut être considéré comme ayant un influence sur les activités qui se passent à travers le Canada. Des exemples sont pris à partir de disciplines comprenant les systèmes d'information coopérative internationale, centres de données canadiens, systèmes "soft ware" canadien et plusieurs autres analyses.

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INTRODUCTION

For obvious reasons, many initiatives in Ottawa are of importance to the whole of Canada. Despite the government's policy of decentralization, Ottawa remains the location of several libraries and information centres with big budgets and national responsibilities. Ottawa also tends to handle Canada's links with the international programs of United Nations agencies and non-governmental organizations. Several activities in the Ottawa area are described in detail in papers presented at this Conference. This paper highlights developments in the past year or so, most of which are aimed at optimizing the use of Canadian information resources in response to needs expressed throughout Canada.

CANADIAN PARTICIPATION IN INTERNATIONAL SYSTEMS

On the international scene, many cooperative information systems are in operation or have been proposed to promote the equitable sharing of resources among nations. Canada is taking part in several which are operated under the auspices of the appropriate United Nations agencies. The basic principle is the same with all of them. These systems depend upon national input of records to information produced within each country, the input cost being roughly proportional to the extent of the country's activities in the subject concerned. In return, the participating country has access to the world data-base produced by the merging of all the national inputs by the international agency. The output is available in printed or machine-readable form, and in bibliographic systems may be supported by a file of the non-conventional literature on microfiche.

For several years Atomic Energy of Canada Limited has been participating in the International Nuclear Information System (INIS), a bibliographic system coordinated by the International Atomic Energy Agency (IAEA) and the first of the big cooperative systems to become operational. The product, *INIS-Atomindex*, has levelled out at some 80 000 records a year (including abstracts) with Canadian input (on magnetic tape) accounting for about 1% of that figure. SDI services from the tapes are provided from AECL's computer in Chalk River. The IAEA is also spinning INIS tapes, and may provide services through EURONET into which Canada could tap.

In 1975, Canada, through what is now the Federal Department of Fisheries and Oceans, joined the Aquatic Sciences and Fisheries Information System (ASFIS) operated under the auspices of the Food and Agriculture Organization (FAO) of the U.N., the Intergovernmental Oceanographic Commission of Unesco, and the U.N. Department of

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Economic and Social Affairs. ASFIS is largely bibliographic at present but the system has scope for directories and other types of files. The main product, *Aquatic Sciences and Fisheries Abstracts* (ASFA), which has been available in printed form for several years, was released in machine-readable form in January 1978. Environment Canada is responsible for the dissemination of the ASFA data-base in Canada, through the Water Resources Document Reference Centre (WATDOC). Canada is the first country to make the data-base publicly available on-line (through QL Systems), although a small test data-base has been run in Canada and the U.S.A. since 1976. An interesting experiment in computer conferencing is taking place in conjunction with the ASFIS program. It is testing the possibility of using this technique on an international scale (among several institutions in Europe and North America) as a tool for managing an international cooperative system.

Towards the end of 1978, Canada agreed to participate in the International Information System for the Agricultural Sciences and Technology (AGRIS) coordinated by FAO. The mechanisms for collecting and processing input are still being worked out within Agriculture Canada. The data-base is available in the printed form *Agrindex*, but Agriculture is planning to evaluate the tapes for output services, initially with the aid of CAN/SDI.

In 1975 the International Development Research Centre (IDRC) of Ottawa and several international agencies sponsored the feasibility study of a Development Sciences Information System (DEVSIIS). DEVSIIS has not yet been adopted by any international host, but IDRC has been testing the DEVSIIS methodology and producing a demonstration product, *Devindex*, containing current Canadian-produced references on economic and social development in the Third World. In 1977 and 1978 the first experiment in decentralization and cooperation was conducted as a joint effort of IDRC and the German Foundation for International Development. Collection and processing of documents were done in both countries, and the records were merged on a minicomputer in Ottawa to produce a machine-readable file from which the printed bibliography *Devindex 1977* was obtained. The next issue of *Devindex* will demonstrate further decentralization by involving developing-country institutions. A back-up file of the Canadian documents is also being produced on microfiche.

Canada is also participating in several international systems which are not of the abstracting and indexing type. The National Library acts as the national centre for ISORID (the International Information System on Research in Documentation), which is operated by Unesco and the International Federation for Documentation (FID). Records of research in progress (about 15 per year from Canada) are now submitted directly to FID's Research Referral Service (rather

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than to Unesco as formerly) and appear in *R & D Projects in Documentation and Information*. The National Library also has responsibility for assigning International Standard Book Numbers to Canadian publications, and is the national centre for the International Serials Data System (ISDS). The ISDS register has become available on microfiche in the past year. Also in the field of serials, the CONSER (conversion of serials) project has recently announced two new services - microfiche and a machine-readable tape service. CONSER, which involves the National Library, the Library of Congress and several major U.S. libraries, has accumulated since 1975 a database of 75 000 serial records using the OCLC system.

Finally, in a third type of system, the Canada Institute for Scientific and Technical Information (CISTI) is the Canadian participant in the International Referral Service of the U.N. Environment Program, the file of which is now called INFOTERRA. As its name implies, IRS identifies the location of expertise, and in 1978 CISTI produced the first directory of Canadian environmental experts, which listed just over a thousand names.

One policy issue facing the participants in cooperative international systems is of particular importance to Canada. This is the issue of the conditions under which the data-bases are made available and how they may be exploited. The INIS policy makes the data-base available to national participants for use only within their country's boundaries. The policies of other systems are still being worked out, and Canada has taken a leading role in the last year in the formulation of the policy for the ASFA data-base.

CANADIAN DATA-BASES AND SPECIALIZED INFORMATION SERVICES

As access to the giant data-base spinners becomes cheaper and easier, there is increasing emphasis upon data-bases of information produced in Canada or about Canada. Some of these can be extracted from the international systems in which Canada participates, but most must be specially constructed within Canada to meet the specific needs of Canadian users. The National Library is compiling a data-base of Canadian data-bases which is accessible on-line within the National Library. It now contains 62 entries but is growing rapidly. Some of the data-bases produced in the Ottawa area have seen developments in the past year.

Perhaps the best known Canadian data-base, the National Library's *Canadiana*, has been available since January 1978 in a computer-output microform version known as *Canadiana Microfiche*. It is ready for distribution as early as two months before the printed version. Each part appears on a separate fiche to facilitate inter-

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filing of the various parts each month. The indexes are cumulated with each issue to cover all previous issues for the current calendar year.

WATDOC, the Water Resources Document Reference Centre of Environment Canada, produces the Canada Water data-base. Under the auspices of the federal/provincial Mackenzie River Basin Study Program, the Boreal Institute for Northern Studies in Edmonton is now abstracting and indexing documents relating to the Mackenzie for inclusion in Canada Water. WATDOC also has agreements with the Delft Hydraulics Laboratory in the Netherlands whereby WATDOC has commenced converting the Delft card index on hydrology literature to machine-readable form. The resulting Delft data-base is now publicly available on-line on QL.

In the area of geoscience information, there has been an agreement between four federal and seven provincial agencies to develop a comprehensive bibliographic file of information about the Canadian land mass. It is known as GEOSCAN, and has developed out of the *Canadian Index of GeoScience Data*, maintained by the Canadian Centre for Geoscience Data of the Department of Energy, Mines and Resources. GEOSCAN will be a centralized file containing both literature produced in Canada and literature written about Canada, and eventually will be made accessible through the appropriate on-line system. A study on the need for a bibliographic data management system, defining users' needs and alternative ways of meeting them has begun.

Energy, Mines and Resources is also mechanizing its bibliography on remote sensing. The data-base, known as RESORS (Remote Sensing On-line Retrieval System), contains some 20 000 items and will be up-dated quarterly. Indexes and citations will be output on tape and on computer-output microfiche. As RESORS is aimed at a very specialized clientele and requires special features, it runs on an in-house computer and is not likely to be made available on the more general systems.

Agriculture Canada has developed a file of the current Canadian literature on cooperatives, a joint project of the Cooperatives Unit and the Libraries Division. It is not limited to agriculture, but covers cooperatives of all types from baby-sitting to mortuaries to banking. The system, which has the acronym COINS, is linked to the U.S. National Agricultural Library, the file being a subset of the AGRICOLA data-base. Records are keypunched in Ottawa and transmitted by data line to Washington; the output is available with AGRICOLA through the U.S. commercial systems. The French-language documents recorded in COINS are abstracted in French (as well as in English) and thus some output is available from the U.S. systems in French.

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On the negative side, two specialized Canadian services in the social sciences have been forced to cease operation recently. SOCSCAN (the Canadian Directory Service of Social Scientists), operated by the Social Science Federation of Canada, provided a data-base of biographical information about Canadian social scientists together with information about publications, expertise and research topics. The Data Clearinghouse for the Social Sciences was intended to inventory all quantitative machine-readable data in the social sciences in Canada or about Canada. Both services ceased through lack of funding.

SOFTWARE SYSTEMS IN THE OTTAWA AREA

CAN/OLE now has over 400 terminals distributed throughout the country. CISTI is placing increasing emphasis upon making Canadian data-bases available and of the twelve mounted on CAN/OLE at present, seven are Canadian. The Alberta Oil Sands Index, the Department of Transport file, and Canadian MARC have all been added in the past year. There are now over seven million records in CAN/OLE, the average search time has been reduced to six or seven minutes, and the average connect time cost per search is about six dollars. CAN/OLE has been complemented in the past year by CAN/DOC, which enables documents identified in a CAN/OLE search to be ordered directly from CISTI through the terminal. Use of this facility is increasing.

QL Systems now spins about thirty data-bases. Two or three are obtained from abroad but contain Canadian material that has been processed and input from Canada. The rest are entirely Canadian. An electronic mail service has been added to the system in the past year. Messages can be input at any terminal, stored, and extracted at another terminal. This is an interesting experiment that could develop into a national service in the next few months, for use, for example, for interlibrary loans connected with QL searches. The QL software has been sold to other organizations, several of them in the U.S.A. Newspapers, particularly, have adopted it because of its ability to handle full-text data-bases.

The project to test and implement DOBIS, the German on-line system for library management, continued under an agreement between the National Library and CISTI. The Library of Parliament and the Public Archives have also committed resources to its development and use within Canada. DOBIS includes modules for circulation, serials control, acquisitions and other aspects of library management, but it is the cataloguing and search modules that are being developed at present for Canadian application. Pilot projects are in operation at CISTI for cataloguing, interlibrary loans and reference. At the National Library, the application of DOBIS to the Union Catalogue of Serials is being worked on and this may be followed by a Union Catalogue

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of Books. Emphasis is being placed initially upon the use of DOBIS by federal libraries for input as well as for file searching. Interconnection with other systems, such as UTLAS, will be considered later for the exchange of records. A paper on DOBIS is being presented at this Conference.

At the beginning of 1978 IDRC put its MINISIS system into regular operation, and transferred all of its bibliographic activities away from the service-bureau computer which had carried ISIS (Integrated Set of Information Systems), the library management and bibliographic search system introduced into Canada by IDRC from the International Labour Office. MINISIS was designed by IDRC for use in its own library and documentation work, but with a view to mounting it in developing countries on a computer that would be cheap enough for dedicated use and for inclusion in foreign-aid-supported projects. It has many of the features of ISIS and runs upon a Hewlett Packard 3000 Series II. It is compatible with the international cooperative bibliographic systems and thus can assist developing countries participate in them. IDRC has now accumulated sufficient experience in operating MINISIS to consider transferring it to other users, and has already demonstrated its transportability in Canada, Holland, Singapore and the United Nations. The conditions under which it will be made available to tax-supported and profit-making institutions in Canada, developed countries and developing countries are now being decided.

SURVEYS, STUDIES, TRENDS AND COMMITTEES

At the National Library, a three-year study is being completed into the development of library networking and the role of the National Library. Emphasis is being given to computerized bibliographic centres in Canada, but not exclusively. A paper at this Conference surveys the scene. Another project is investigating the role of the public library in the national context.

CISTI is completing a survey of lending and photocopying policies in Canada, covering the 253 libraries in its union list project. This will improve the forwarding of requests that cannot be filled by CISTI. CISTI's collection of 29 019 serial titles remains the largest in Canada and is one of the foremost scientific and technical collections in the world. CISTI holds nearly 48% of all the serials included in the *Union List of Scientific Serials in Canadian Libraries* and is able to meet nearly 73% of all the demands made upon it. The Unified Literature Search Service, which uses CISTI's own resources and all the available tape services, saw an increase of 25% in its growth in 1978. Demands upon the National Library for computer searches through its terminal have reached nearly

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400 a month, a tripling in the past year.

With the large number of data bases available through CAN/OLE, QL Systems, DIALOG, ORBIT and other systems, an on-line users group has been formed in the Ottawa area. It has established itself independently of any other professional association or operational institution.

ABSTI, the Advisory Board on Scientific and Technical Information, continued to meet under a new chairman. Its purpose is to formulate general policies for recommendation to NRC which has the task, under the general direction of the National Library, of developing a national scientific and technical information system for the natural sciences and engineering, in consultation with existing organizations.

Another committee, which is not well known across Canada, is the Canadian National Committee for the International Federation for Documentation (FID). It was set up to advise NRC about Canadian participation in FID, and is trying to broaden its representation in order to communicate better with Canadian information scientists. At present Canadians are involved in FID's specialized committees on Information for Industry, Classification Research, Linguistics in Documentation, and Social Sciences Documentation. FID is redefining its program, with emphasis on documentation as a social science. NRC is the Canadian national member of FID at present, but the Canadian National Committee has already begun discussions with CAIS and with other professional bodies with a view to involving them more in its activities. Eventually there is the possibility of enabling one of them to represent Canada in FID.

CONCLUSION

Almost all the activities reported on here indicate that the conference theme "Sharing Resources" is an apt description for the developments centred in the Ottawa area. Cooperative systems, networking, sharing of development costs and maximum use of modern technology to reduce costs are the trend, encouraged no doubt by diminishing budgets and the impossibility of going it alone. Tight budgets are undoubtedly one contributing factor to last year's sudden increase in the use of national services. Some services have been cut back, some have disappeared, but the profession, which has always had difficulty in truly evaluating the effects of its activities, will benefit in the long run from its obvious willingness to make maximum use of limited resources.