

## REGIONAL INITIATIVES AND TRENDS - WESTERN REGION

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### ABSTRACT

Automation activities in the four western provinces, Manitoba, Saskatchewan, Alberta and British Columbia, are reported. The intention is to provide general, rather than detailed, information about the wide variety of automation applications in the western region of Canada. These applications include such diverse systems as a union list of newspapers, a text processing system for the Athapascan languages in Canada, a bilingual dictionary, a cancer patient registry, cooperative public library projects, a braille book production capability, as well as extensive on-line data base searching.

### INTRODUCTION

The compilation of any report of automation activities requires input from numerous knowledgeable sources. Those to whom I am indebted include Eric Marshall, Mike Luke, Ian MacLean, Dianna Christensen, Nita Cooke, Sheila Bertram, Fernie Linzmeyer, Oldrich Stander, Charles Davis, Marianne Jamieson, Larson Brodner, Jack Thompson, Mike Storozuk, and Bob Campbell. In some instances their reports to me have been included almost intact.

### MANITOBA

#### WHITESHELL NUCLEAR RESEARCH ESTABLISHMENT, PINAWA

At Technical Information Services of Whiteshell Nuclear Research Establishment at Pinawa, Manitoba, the latest phase in a gradual program of computerized library and information services, has been the addition of on-line searching to provide access to literature in fields related to nuclear energy. The on-line service using CAN/OLE, ORBIT and DIALOG has been operational for about a year and has been well received by the scientists at Whiteshell. It is used almost entirely by Technical Information personnel but has been demonstrated extensively to clients. The statistics for the first quarter of 1977 show how useful the service is: of the seventy-one retrospective searches run during the period, twenty-five were on-line only, thirty-five used both manual and on-line searching and only eleven were manual.

## FRESHWATER RESEARCH INSTITUTE

An information retrieval system for bibliographic references called FAMULUS is in use at the Institute with annotated references on the collection, culture and bioassay methods for freshwater invertebrates.

## ON-LINE SEARCHING

Numerous on-line data bases are being searched in Manitoba. The Freshwater Research Institute is searching CAN/OLE, ORBIT, QL, and will soon add DIALOG. The University of Manitoba, Medical Library uses Medline. The University of Brandon has ORBIT. The Manitoba Department of Industry and Commerce and the Manitoba Research Council share ORBIT and will soon add CAN/OLE.

## CIRCULATION SYSTEMS

The University of Winnipeg uses a bar-code on-line system, while the University of Manitoba has a batch circulation system for the Dafoe Library and several branches.

## MANITOBA GEOLOGICAL SURVEY

Manitoba Geological Survey is utilizing the computer to compile information from the geological field data checklists which are completed on field trips. A variety of statistical plots as well as plots of structural, petrological or other selected parameters can be produced.

## MANIFILE

University of Manitoba is still operating its computer-based file of the world's nonferrous metallic deposits, called MANIFILE.

## SASKATCHEWAN

## UNIVERSITY OF REGINA

## CODOC

University of Regina has recently implemented the CODOC Government Publications system on the SaskCOMP Xerox Sigma 9. They currently have about 37,000 records in their data base and, Sandra Dey reports, about 35,000 pages on printout. This hard copy material will soon be output on COM. To create their data base, University of Regina searched the master CODOC data base to extract applicable records; however, now that they have machine-readable records for most of their existing documents, all records for new items are being coded and keyboarded locally.

### Cataloguing Support

An automated cataloguing support system study is underway, with a decision, on the route to take, expected before the end of June. Unicat/Telecat is being very seriously considered.

### CANADIAN PLAINS RESEARCH CENTRE

The Canadian Plains Research Centre is building a machine-readable data base of records describing research relevant to the Canadian Plains. As well, they are, under agreement with Schick Information Systems Ltd. of Edmonton, adding records which will make up a directory of Alberta Environmental Information. The data base is being updated and searched on the SaskCOMP Xerox Sigma 9 through a Comshare software package known as V.I.P. - Versatile Information Processing. As a limited-time introductory offer beginning later this month, the Centre will be offering free searches of their data base to interested researchers.

### SASKATCHEWAN PROVINCIAL LIBRARY

In the past year or so, the Saskatchewan Provincial Library has begun to subscribe to the following on-line reference services: CAN/OLE, Medline, Infomart, DIALOG, QL Systems and the N. Y. Times Data Bank. The Provincial Library offering is unique in that it is part of the backup reference services provided by the Provincial Library to the public, regional, special and government libraries that participate in the Saskatchewan Union Catalogue System. This means that if an answer to a reference inquiry cannot be supplied by conventional means, then almost any resident of the province of Saskatchewan can have his questions answered using free, though indirect, access to on-line search services through his local library.

### SASKATCHEWAN TECHNICAL INSTITUTE

Saskatchewan Technical Institute is developing a minicomputer-based on-line system to provide access to its A/V collections, portions of which are in different locations on the campus. The system, which will run on a PDP 11, should be operational this September. Software development is complete and records will be input over the course of the summer. Each record will store call number, author, title, publisher, date and subject keywords in a locally-designed format. Saskatchewan Technical Institute hopes in future to expand the system to include its 12,000 item collection of printed material.

### UNIVERSITY OF SASKATCHEWAN

#### Circulation System

A new on-line, minicomputer-based circulation system has been approved and the hardware is now on site. The circulation terminals (each comprised of a Monarch bar-code pen and a CRT terminal) and the inquiry CRT terminals are being supplied by Sask Tel, while the

minicomputer is from Digital Equipment. Initially, the circulation system will have 12 terminals.

### Serials

Phase I of the TESA-2 serials project, creating 16,000 short machine-readable records covering all current and non-current titles held by the University Library, was recently completed. The next phase, coding holdings of bound volumes of these titles, has just begun. The holdings will be stored in a newly-implemented holdings field which will support not only location/holdings display and search, but circulation of individual items on the new circulation system mentioned above.

### Shelf List Conversion

A small-scale project has begun to convert the library's shelf list to machine-readable form to support the new circulation system and a projected machine-produced catalogue. Full bibliographic records are keyed in the University of Saskatchewan mini-MARC-compatible TESA-1 format. To date, a pilot project has created 1,500 records and as of mid-May, two staff members will be assigned full-time to the project.

## ALBERTA

### UNIVERSITY OF ALBERTA COMPUTING CENTRE, EDMONTON

#### SPIRES

The University of Alberta Computing Centre has purchased SPIRES, the Stanford Public Information Retrieval System, which is being used for a number of applications. One example is a restaurant file which can be searched by name, cost, type of food and meals served, i.e. Chinese, Italian, etc. The data base was compiled originally when the Learned Societies meeting was held in Edmonton. It is anticipated that it will be used again in 1978 when CLA is in Edmonton. DATABASES is a survey of computerized data bases that are publically available in Alberta. The subfile, created by AIRA (the Alberta Information Retrieval Association) includes information on the location, subject area, cost, contacts and other details on each data base. A hard copy listing COIN; a Directory of Computerized Information in Alberta was published in April 1977. RCA UNIONLIST (the Research Council of Alberta) is the union list of serials held in three provincial government libraries in Alberta. It has been compiled and maintained by the Research Council of Alberta. In addition, there is a listing of the programs publically available at Computing Services. A medical patient records subfile and a University student records subfile can also be searched using SPIRES. The Government of Alberta Publications List is also produced at the Computing Centre using SPIRES.

### Text Editing

The computing Centre also supports manuscript production software which is used by students to edit and produce theses and dissertations. There is also the facility to typeset by computer. The Computing Services Bulletin is produced in this way.

### Books in Braille Produced by Computer

Staff at the University of Alberta's Computing Centre have been working on a project to produce books printed in Braille using the Centre's computer. To date they have printed 4 or 5 books. One title is 1984. There is much interest in this project, but so far sufficient funds are lacking. The text is entered into machine readable form and can then be output in Braille on special thick paper using the IBM printer with Braille print train. Since the data can easily be stored on tape, it can be printed on demand. The Alberta Department of Education is interested and the long-range possibilities (Braille texts, etc.) are exciting. A similar project has been operating at the University of Manitoba for two years or more. They use a Braille embosser (developed by MIT) to produce books. The University of Manitoba also gives a computer course for the blind. Don Keeping is the instructor.

### Amdahl

In December, 1976, an Amdahl 470 V/6 was installed at the University of Alberta, Computing Services Department, to replace the previously operated and overloaded IBM 360/67. Using the Michigan Terminal System (MTS) as the prime operating system, this facility supports the academic and research computing requirements of this university as well as several administrative functions; two of which are the library's Acquisitions and Cataloguing systems. On line terminal support for both systems is provided by MTS; however, the Cataloguing system batch up-date runs are completed under MTS while the Acquisitions system is dependent upon the secondary operating system, IBM OS/MVT, for batch update support. OS/MVT is currently available for a limited time each day and will be phased out in the near future. This will necessitate a complete rewrite of the Acquisitions system, or the transferral of the batch update portion of this system to the Office of Administrative Systems which operates an IBM 370/145 under OS/VS1.

### UNIVERSITY OF ALBERTA LIBRARY

#### On-Line Data Bases

The University of Alberta Library system has access to four on-line information retrieval systems, CAN/OLE, DIALOG, ORBIT, and QL from QL Systems. Fourteen trained librarians in four branch libraries with access to over seventy unique data bases performed 884 searches and printed 91,503 references during the academic year April 1976 to March 1977. This is in spite of a new charging scheme of \$20.00 per data

base search which became operational May 15, 1976.

#### Computer Assisted Cataloguing System

A computer assisted cataloguing system has been operative in the Cataloguing Division of the University of Alberta Library since the early spring of 1974. This system, using eight on-line IBM 3270 CRT terminals for input and verification and an off-line system for data processing produces alphabetized catalogue cards sorted by location, pocket labels, spine labels and book circulation cards. Records on the machine readable data base in MARC II format are altered via an off-line update program but hopes are high to develop an on-line system by the end of 1977. The system has eliminated routine jobs such as the manual preparation and revision of masters, the cutting of cards, the typing of added entries, the stamping of notes and locations and the proof-reading of each individual card. It has also abolished the typing of spine labels, the manual lettering of book pockets and the sorting and alphabetizing of catalogue cards. On the average between 50,000 to 70,000 cards are produced monthly for the two union catalogues and the thirteen branch libraries and reading rooms. Each year has seen a steady increase in the addition of titles to the data base: 58,341 for the year 1976/77. Total titles on the data base to date: 190,000.

#### UTLAS

Following its introduction in mid-February, 1977, and a "de-bugging" period of about one month, an on-line search link between libraries at the Universities of Alberta and Toronto is now, mid-May, 1977, functioning on a regular basis. Based on a single VUCOM terminal in University of Alberta Cataloguing Division which is connected via Dataroute to the UTLAS computer, this link currently provides the University of Alberta Library with search access to the entire LC MARC/CANMARC source record data base at UTLAS. Records obtained through successful searches are transferred weekly to magnetic tape at Toronto. The tape is mailed to University of Alberta where it is read/edited by local computing facilities, and the data is input to the University of Alberta automated cataloguing support system. It is anticipated that, initially, the maximum time between a successful search and receipt of hard-copy generated from the weekly tape will be ten days to two weeks. The minimum should be about four working days. Should delays or other problems occur and persist, other means of data transmission will have to be considered. The obvious brevity of our experience, with just over 2100 hits to mid-May, and the fact that we do not currently enjoy access to other user files (e.g. UNICAT/TELECAT), make meaningful assessment impractical at this time. However, staff reaction to the system, and the procedural streamlining already evidenced, have strongly indicated that we can only benefit from this kind of external link.

#### UNIVERSITY OF ALBERTA EDUCATION LIBRARY

The University of Alberta Education Library has kept a separate collection of Education theses dating from 1915. Catalogue

cards for these titles were included in the Author-Title and Subject card catalogues. However, the lack of subject specificity resulted in an under-utilization of the collection. Sieglinde Rooney and Don Cowper collaborated in producing a KWIC index of theses. Theses are arranged by title key word with author and year on the same line, for the entire collection. Theses are also listed first by Department and second alphabetically by author within the department. In addition, a KWIC index is produced for each department.

#### UNIVERSITY OF ALBERTA, DEPARTMENT OF EDUCATION

A Computer-Assisted Instruction (CAI) facility has been established and pioneered by Dr. Steven Hunka using the Department of Education's own IBM 1500 computer. CAI courses have been developed for electronics, French, pharmacology, mathematics, food sciences, reading, research design and statistics. Unfortunately the facility will likely be phased out since IBM will no longer provide support services after April 1980.

#### UNIVERSITY OF ALBERTA, DEPARTMENT OF LINGUISTICS

John Gray, while with the Department of Linguistics at the University of Alberta developed a specialized use of computer text processing to produce testual materials in Canada's original languages, concentrating on the Athapascan languages. The initial effort was with Slavey and required five characters in addition to the regular alphabet. These are available on the ALA print train. A Slavey lexicon was also produced from the textual materials. The word list could be used as a basis for a bilingual dictionary. It would be possible to produce a text in one language and use the editing facilities to produce taylor-made versions for local areas.

#### THE UNIVERSITY OF ALBERTA FACULTY OF LIBRARY SCIENCE

The University of Alberta Faculty of Library Science has just completed the first year of its new two-year MLS program, and it is moving ahead with the implementation of a research-oriented program in the second year that has definite information science overtones. A considerable amount of applied information science is being incorporated into the traditional courses such as reference, cataloguing and classification, and administration and management. The required course in Research Methods and Systems Evaluation is also deliberately designed to acquaint students with the fundamentals of systems analysis as well as "classical" concepts such as hypothesis construction and testing, and it includes an introduction to both descriptive and basic inferential statistics. In the second year, students have the option of taking a new second-level course in data processing for libraries that provided hands-on experience with the University's research computer. Among other things students learn relevant computer programming for such library and information centre tasks as keyword indexing, document retrieval, and SDI (the Selective Dissemination of Information). This part of the curriculum goes well beyond on-line searching, which is viewed as part

of the more basic courses, and covers the implementation as well as design of automated systems through batch-mode and on-line programming. During this part of the program students are also required to do either a thesis or a major project. The thesis option is clearly intended for those interested in research, while the major project may be preferred by students whose studies are of a more practical and professional nature.

#### Workshops, Seminars, Student Chapter of ASIS

During this year, the Faculty has sponsored a number of seminars and workshops, including an NFAIS (National Federation of Abstracting and Indexing Services) seminar on indexing, a workshop on ISBD(M), a BIOSIS Previews Seminar, and a forthcoming presentation dealing with OCLC. In addition, fourteen students from the Faculty have petitioned for the formation of a Student Chapter of ASIS, which should be chartered at the Mid-Year Meeting at Syracuse. It is expected that the Chapter will work actively with Wes-Can ASIS, and joint sessions are already being planned for next year. Three Faculty of Library Science students have received National Research Council scholarships of about \$6000. These are awarded to Science graduates pursuing studies in library and information science. Two other students received a grant from the Health protection Branch of Health and Welfare Canada to develop aids for enhancing cooperation and resource sharing among addictions libraries and information centres in Canada.

#### Data Base of Librarians and Library Technicians

The Faculty of Library Science has a database of more than 800 librarians and library technicians in Alberta. It also has a smaller list of the Faculty's alumni. The databases are used to provide labels for newsletter mailings such as LAA LAA LAA published by the Library Association of Alberta, for mailings for workshops, etc.

#### OCLC

Students in the Faculty of Library Science now have access to OCLC through Tymnet. A special allowance from the University's Office for Planning and Development has permitted the school to add a high-speed portable terminal to its existing stationary terminal. Both will be used for demonstrating OCLC and other computer-based systems. They are already using DIALOG, Infomart, and CAN/OLE.

#### Doctoral Dissertations in Progress

A computerized data base of doctoral dissertations in progress in Canada and the United States has been moved from the University of Michigan to the Faculty of Library Science. This is available for on-line searching by author, title or subject.

#### ALBERTA, DEPARTMENT OF ADVANCED EDUCATION

VISA (the Vocational Information Service for Alberta) will



provide relevant information about careers, career requirements, institutions and other areas relating to career decisions. The purpose is to complement school counsellors' activities. The system has been modelled after SGIS (the Student Guidance Information System). However, trade training job opportunities, general employment conditions as well as all other information is pertinent to Alberta's situation.

#### ALBERTA GOVERNMENT LIBRARIES COUNCIL

In Alberta, the Provincial Government libraries have formed a group called the Alberta Government Libraries Council. The Council meets once a month and the members share experiences, problems, solutions, etc. One of their projects is a Union List of Serials which is produced twice a year and now includes 14 libraries. The list is co-ordinated by the Consulting and Bibliographic Services Section of the Alberta Legislature Library and is run on the Government Data Centre computer. The Legislature Library is seriously investigating the possibility of providing input into the CODOC system so that Alberta government documents will be included. Money is the hold-up right now, but if all goes well, the project should start input April 1, 1978. Within the government libraries there are several KWIC and KWOC indexes and automated book catalogues.

#### ALBERTA COUNCIL OF COLLEGE LIBRARIANS

The Alberta Council of College Librarians is another Alberta group which gets together periodically to explore ways and means of co-operation and networking. They presently have an automated holdings list of media in the various college libraries and are exploring the use SPIRES to produce a Union List of Serials. They are also looking into the feasibility of having a common automated circulation system.

#### AIRA (THE ALBERTA INFORMATION RETRIEVAL ASSOCIATION)

AIRA had its beginnings in 1966 as a cooperative group interested in experimenting with SDI. It was first called the Alberta Experimental SDI Association, then later changed its name to AIRA. Its present purpose is to promote computerized information retrieval within the scientific, technical and industrial communities in Alberta. The Association has a Board of Directors of twelve, a membership of approximately 60 people across Alberta.

Today AIRA acts as a billing agency for a variety of information systems at the Research Council of Alberta. Data base searches are done for members and non-members with AOSTRA (the Alberta Oil Sands Technology and Research Authority) subsidizing some of the communication costs so that the same search costs the same regardless of where the searcher resides in Alberta.

The major data bases have already been mentioned, since each is a cooperative project involving one or more organizations. These data bases are COIN, GAP and the RCA Union List. AIRA has had an historically important role in information retrieval in Alberta and continues to make a significant contribution to the provincial scene.

#### BOREAL INSTITUTE FOR NORTHERN STUDIES LIBRARY

The Boreal Institute has produced its KWIC Indexes and Yukon Bibliography for the past several years. The data bases for these two projects have been mounted by QL Systems, so that they are now available on-line as well as in hard copy. Boreal also has UDC (the Universal Decimal Classification) schedules automated. Their catalogue cards are now being produced by the computer.

#### W. W. CROSS CANCER INSTITUTE

A cancer research information system has been developed by Ron Taylor at the W.W. Cross Cancer Institute. The system is basically a cancer registry listing all cancer patients in the province. It contains the identification of the patient, diagnosis, extent and treatment of the disease. In addition, information on follow-up care, pathological reports and research data could be added. It is designed to provide a research base to identify the most effective treatment for various types of cancer. It also supports an administrative system for identifying all patients seen in any of the provincial clinics. It contains identification information which is produced weekly on COM for use in Patient Service Departments. This system is updated on a daily basis to provide the most current information.

#### GALLAGHER LIBRARY OF GEOLOGY, CALGARY

Gallagher Library of Geology in Calgary provides the Petroleum Abstracts Current Awareness service through a cooperative arrangement with the University of Calgary Information Systems Department, Alberta Information Retrieval Association and the University of Tulsa. Requestors' profiles are run against the latest Petroleum Abstracts data base three times a year. The cost of the service for one year is fifteen dollars.

#### MISCELLANEOUS

The Canadian Arctic Gas Library has a computer produced book catalogue. Both Calgary Public Library and Edmonton Public Library are investigating the purchase of automated circulation systems with the increased government grant received this year. Imperial Oil in Calgary now has COM facility which it is using to produce its non-proprietary Environmental Index.

## UNIVERSITY OF CALGARY

The activity at the University of Calgary Library includes an acquisition/cataloguing system, circulation system, periodicals system, as well as a financial control system. The acquisitions/cataloguing system is a modified version of the University of Saskatchewan's Tefta system. MARC searching is done at the verification stage and can be done at various subsequent stages.

All films are catalogued through this system and various film catalogues are produced at least annually. Cataloguing assistance is being provided to the Medicine Hat College. The circulation system is a standard circulation system supported by Colorado Instrument Data Collectors and Mohawk tape drives.

The expenditure control system provides the library with considerable financial detail and control with particular emphasis on the book budget. There are now at least 77 data bases available on line to the users.

## BRITISH COLUMBIA

### TRIUL

#### Cataloguing Support

The TRIUL organization is made up of the libraries of Simon Fraser University, the University of British Columbia and the University of Victoria. TRIUL arranged an organizational meeting for libraries who are interested in trying to utilize a machine readable data base to do their cataloguing. This group became known as the British Columbia Catalogue Action Group under the general chairmanship of R. MacDonald from the University of British Columbia. Three Committees were established with an Advisory group, a Standards group and a Communication and Data Base group. The Terms of Reference were to prepare reports on the feasibility of using the University of Toronto system and a report submitted to the Provincial Government suggesting a cost sharing to fund this project. At the present time they have not had a firm reply from the Government, but are very optimistic of its outcome.

## UNIVERSITY OF VICTORIA

### Circulation

The University of Victoria is installing a Circulation Control System using the Epic Data terminals and a DEC Mini-Computer. The data terminals have the capability of reading punched bookcards, badges or using a light pen for bar codes.

### Serials

The serial application at the University of Victoria which is an on-line updating in full Marc has produced programs to convert upper case to upper and lower case for this file.

### CANADIAN BILINGUAL DICTIONARY

A publication utilizing a computer for a new bilingual Canadian Dictionary is slowly taking shape with completion approximately one year away. It is being completed by Paul Vinay of the Department of Linguistics and will contain approximately 100,000 entries including North American terms and French Canadian terms.

### UNION LIST OF BRITISH COLUMBIA NEWSPAPERS

TRIUL authorized a project to gather information about newspaper holdings. The newspaper project was spearheaded by Jean Whiffin, who along with a committee of users, defined the data elements that should be included in the file. The project is being undertaken at the University of Victoria. The National Library was approached to provide some financial aid for this project, and a grant was received. The project includes material held at the Legislative Library, the three Universities, the Vancouver and Victoria Public Libraries with expansion to other institutions possible in the future. The reports will be available only in printed form at first, but will also be in COM in the future. The Union list will be in order by geographic location subarranged by Title. The Title will indicate bibliographic notes as well as a holding statement for each institution. The microform statements will follow the letterpress. An index by title will also be provided. A MARC Format tape will be provided to the National Library for their use. The information may be distributed or available for other regional union files or as a base for a Canadian Newspaper Union File. Publication of the Union List is anticipated in 1977.

### UNIVERSITY OF BRITISH COLUMBIA

#### Circulation

The University of British Columbia has completely upgraded its Circulation Terminals System from IBM 1030 to Epic Control Data Terminals.

#### Co-operative Projects

Co-operative projects are being started between the University of British Columbia and Vancouver City College for the use of a Circulation Control System and at the University of Victoria for the use of the Serial System with Greater Victoria Public Library and Malaspina College.

### THOMPSON CARIBOO NICOLA REGIONAL LIBRARY

The Thompson Cariboo Nicola Regional Library is installing a Circulation Control System using the ULYSIS System.

### VANCOUVER ISLAND REGIONAL LIBRARY

#### Holdings Inventory

The Vancouver Island Regional Library has installed a Mini-Computer to provide the Central office with a complete inventory of holdings which allows for the production of book form catalogues to its many scattered branches. The whole Regional Library is connected via teletype for speedy communication and access to the materials stored throughout Vancouver Island. The Universities, British Columbia Institute of Technology, Vancouver Public Library and legislative libraries are presently providing On-line information retrieval services from INFOMART, DIALOG, MEDLINE, CAN/OLE and Q.L. SYSTEMS.

### GREATER VANCOUVER PUBLIC LIBRARY FEDERATION

#### Circulation

The Greater Vancouver Public Library Federation is investigating a Circulation Control System for its operation. A report is expected within the next few months.

### PROVINCIAL GOVERNMENT

#### COM Holdings

The Provincial Government has funded a project to produce on COM the holdings information of the three universities to be distributed to the colleges throughout the province. A separate project has also been funded to support the increased Inter-Library Loan anticipated by having this information in the field.

### BRITISH COLUMBIA SYSTEMS CORPORATION

Legislation is being prepared to create a British Columbia Systems Corporation dealing with a consolidation of provincial government computing and will include crown corporations and educational computing within its overall responsibilities.

### CONCLUSION

The purpose of this paper has been to convey the message that there is extensive activity in the field of information science in western Canada.