

APLA Bulletin

The Atlantic Provinces Library Association

Volume 48 Number 3

ISSN 0001-2203

November, 1984

The Impact of Computer Technology on the Library Profession: A Preliminary Discussion

By
Richard Apostle, Boris Raymond and Paul Smith

In 1983, the School of Library Service at Dalhousie University conducted a study of the career paths of its own alumni. This study was primarily designed to obtain factual material about the careers of the School's alumni. The major questions concerned such topics as present job locations, salaries, first jobs taken, how these were obtained, and other similar questions. A report summarizing these results has been circulated among the School's staff and alumni, and is available on request from the Dalhousie School of Library Service.¹

During the analysis of the survey results it became evident to the present authors that it also contained interesting data on several key questions affecting the future of the library profession: the impact of computer systems upon job content for professional librarians; the amount of formal training that work with library computer systems requires; and the extent to which our "information society" is creating new jobs outside the library for individuals with a library education.

This paper is an attempt to present some tentative findings from the study, and to discuss the potential implications from this investigation. Of the 302 people who participated in the study (an 85.4% completion rate), there were 241 respondents who were working at the time of the survey. Of these, 125 respondents, or 51.9% of those working, stated that their job required them to work with computer systems. It is on this particular group that the following discussion will focus. Of the 125 members of this computer-using sub-group 116, or 92.8%, were librarians working in a library; 7, or 5.6%, were librarians not working in a library (mostly self-employed), and 2, or 1.6%, were individuals who were employed in an institution where library skills were important.

The principal competencies that the respondents perceived as being required can be seen in Table 1. Those competencies which are especially related to computer usage are marked by an asterisk (*). Table 1 shows that only 9.6% of the group perceived these competencies as being their primary job skill requirement, and 29.1% perceived these skills as their second most important requirement. This pattern is further elaborated by information in Table 2 which shows how computer technology was actually utilized by this sub-group of 125 respondents. Of those individuals who reported that they were engaged primarily in "housekeeping" activities such as cataloguing, circulation, serials check-

in, and the like, 81.2% stated that they required little formal computer training — 1 or 2 weeks at the most, in order to perform their jobs. Individuals using computer systems for bibliographical searching gave an almost identical response: 80.6% of them indicated that the optimum level of formal computer training that they felt this type of work required was of a 1 to 2 week duration.

In terms of data on the availability of non-library "information profession" work for individuals with a library school education, the survey data suggests (Table 3) that at least as far as the Dalhousie Library School alumni are concerned, only a very small number (13 out of the 302 respondents) could be so classified

as of the summer of 1983. And even those 13 individuals were probably not all employed full-time in "information work"; some were simply "free-lance librarians" who occasionally performed such work.²

In attempting to obtain some informed perception of how present library skills may be changed by current technological trends, the survey instrument had a question requesting respondents to list the skills which they felt they would need to acquire in the next five years. It is true that there is no way of establishing whether the responses received reflected genuine trends or were mere perceptions of trends as influenced by current fashion. Nor could

(continued on page 6)

TABLE 1
COMPETENCIES USED ON PRESENT JOB FOR RESPONDENTS WORKING WITH COMPUTER SYSTEMS

First Most Important Competency			Second Most Important Competency		
Category Label	Absolute Frequency	Percentage	Category Label	Absolute Frequency	Percentage

Category Label	Absolute Frequency	Percentage	Category Label	Absolute Frequency	Percentage
Acquisition	2	1.6%	Acquisition	5	4.0%
Administrative Skills	32	25.2	Administrative Skills	12	9.7
*Automated Systems Management	2	1.6	*Automated Systems Management	12	9.7
Circulation	0	0.0	Circulation	0	0.0
Cataloguing and Indexing	31	25.0	Cataloguing and Indexing	6	4.8
*Computer Programming	1	0.8	*Computer Programming	2	1.6
*Computerised Search	2	1.6	*Computerised Search	8	6.5
Collection Development	5	4.1	Collection Development	12	9.7
*Data Base Search	3	2.4	*Data Base Search	9	7.3
Public Programs	0	0.0	Public Programs	3	2.4
Publicity	1	0.8	Publicity	6	4.8
Reference Skills	31	25.0	Reference Skills	26	21.0
Research	2	1.6	Research	7	5.7
Special Audiences	2	1.6	Special Audiences	2	1.6
Special Materials	3	2.4	Special Materials	5	4.0
Special Literature	3	2.4	Special Literature	4	3.2
*Systems Analysis and Design	4	3.3	*Systems Analysis and Design	5	4.0
No Answer	1	MISSING	No Answer	1	MISSING
TOTAL	125	100.0	TOTAL	125	100.0

APLA Bulletin

The *APLA Bulletin* is a bi-monthly organ of the Atlantic Provinces Library Association. The Association seeks to promote library service through the provinces of Newfoundland, New Brunswick, Nova Scotia, and Prince Edward Island, to serve the professional interests of librarians in the region, to serve as a focal point for all those in library services in the Atlantic Provinces, and to cooperate with library associations and other organizations on matters of mutual concern.

Individual annual membership in the Association is \$15.00, and includes a subscription to the *APLA Bulletin*.

The Executive of the Atlantic Provinces Library Association, 1984-85:

President William F. Birdsall Killam Library Dalhousie University Halifax, N.S.	Past-President Andre Guay Vaughan Memorial Library Acadia University Wolfville, N.S.	Vice-President and President-Elect Elizabeth Hamilton Harriet Irving Library University of New Brunswick Fredericton, N.B.
Vice-President (N.B.) Eric L. Swanick Legislative Library Fredericton, N.B.	Vice-President (Nfld.) Charles Cameron Provincial Reference and Resource Library Nfld. Public Library Services St. John's, Nfld.	Vice-President (N.S.) Peter Glenister Mount Saint Vincent University Library Halifax, N.S.
Vice-President (P.E.I.) Frances A. Dindial Robertson Library University of P.E.I. Charlottetown, P.E.I.	Secretary Gwyn Pace Patrick Power Library Saint Mary's University Halifax, N.S.	Treasurer Jane Archibald Patrick Power Library Saint Mary's University Halifax, N.S.
Councillor (Aims and Objectives) Priscilla Ykelenstam P.E.I. Provincial Library Charlottetown, P.E.I.	Councillor (Membership) Mary Blackford Maritime Museum of the Atlantic Library Halifax, N.S.	

All correspondence to the Association should be addressed to the appropriate officer, c/o the School of Library Service, Dalhousie University, Halifax, N.S., B3H 4H8.

The *APLA Bulletin* is indexed in *Library and Information Science Abstracts* and *Canadian Periodical Index*. Back volumes are available from University Microfilms, Ann Arbor, Michigan, 48106, U.S.A.

The individual subscription to the *APLA Bulletin* is \$15.00 per calendar year. Single copies: \$3.00.

Typed manuscripts, news, and correspondence should be addressed to The Editor, *APLA Bulletin*, c/o Queen Elizabeth II Library, Memorial University of Newfoundland, St. John's, Nfld., A1B 3Y1. The deadline for manuscripts is the first of the month preceding the month of issue, i.e. June 1, August 1, October 1, December 1, February 1, and April 1. All advertising correspondence should be addressed directly to the Advertising Editor.

Editor Joy Tillotson Queen Elizabeth II Library Memorial University of Nfld. St. John's, Nfld.	Managing Editor Ron Crawley Queen Elizabeth II Library Memorial University of Nfld. St. John's, Nfld.	Advertising Editor William Tiffany Queen Elizabeth II Library Memorial University of Nfld. St. John's, Nfld.
---	--	---

Display advertising rates may be obtained by writing or phoning the Advertising Editor. Classified ads are \$8.00 per 50 words or portion thereof, and MUST BE PREPAID. An ad not prepaid will be considered as display advertising. Contact William Tiffany, Advertising Editor, Queen Elizabeth II Library, Memorial University of Nfld., St. John's, Nfld., A1B 3Y1, (709) 737-7439.

From The President's Desk

Planning is underway for the 1985 annual conference in Fredericton. The theme of the conference is "Libraries and Learning for Life". As I indicated in an earlier report, Sheila Laidlaw is chairing the Local Arrangements Committee. Bill Molesworth, York Regional Library, has assumed responsibility for programme coordination.

The Executive is meeting October 19 and 20. On the evening of the 19th we are having a brainstorming session with the hope that we can generate some concrete ideas on how all of us can increase APLA's effectiveness. Executive members are, of course, always hoping to receive such ideas from APLA members at

any time.

I received an invitation from the Newfoundland Public Library Board for its reception on October 24 to celebrate 50 years of library service in Newfoundland. I regret that I cannot attend the reception but Charles Cameron, Vice President for Newfoundland, will be attending on behalf of APLA. I would like to take this opportunity, on behalf of APLA, to publically congratulate the Newfoundland Public Library Board for its noteworthy accomplishments over the past 50 years and to extend best wishes as it begins its next half century.

Grants

The Canadian Federation of University Women is offering two **Reading Stimulation Grants** of \$850 each for the purchase of children's books for public library use in areas in Canada where the library budget is limited and the need is great. **Conditions:** The staff member in charge of the children's department must be a qualified librarian, or an experienced children's library assistant, working under a qualified librarian; or, the library must be, or in the

process of becoming, a member of the Regional Library System directed by a qualified Regional Librarian.

Application forms will be sent when request is made to: Mrs. Denise O'Connor, 2162 Pasha Court Mississauga, Ontario L5S 1H7. Please indicate whether forms are required in English or in French. The closing date for receipt of completed application forms is March 31, 1985.



Introducing

EBSCONET



With EBSCONET you can now:

1. Transmit Claims
2. Transmit Interim Orders
3. Access EBSCO's Missing Copy Bank
4. Access EBSCO's Title File for Price/Bibliographic Information
5. Review "Summary of Publications Ordered" Report - by Title or by Subscriber

For a free brochure and details on On-Line Data Communications direct from your library to EBSCO and its potential - contact:

CANEBSCO SUBSCRIPTION SERVICES, Ltd.

Six Thorncliffe Park Drive
Toronto, Canada M4H 1H3
(416) 421-9000 Telex 06-23767



The Specialist Supplier of Books To Libraries.

John Coutts Library Services Limited
4290 Third Ave., Niagara Falls, Canada L2E 4K7
Telex 061 5299

A MEMBER OF THE NETWORK OF JOHN MENZIES LIBRARY SERVICES LTD.

Numeric Data Bases from I.P. Sharp

The past ten years has seen an information revolution. Advances in computer technology and data communications have helped to create a new global industry: online public data bases. One of the premier companies in this new industry is a Toronto-based international computer services company: I.P. Sharp Associates. With sixty offices in twenty countries, I.P. Sharp is Canada's largest exporter of computer services and the largest supplier in the world of online numeric data bases. Through a privately developed communications network, over 120 data bases can be accessed locally in 600 cities.

I.P. Sharp began offering public data bases in the early 1970's when asked by a client to support a data base from the Civil Aeronautics Board in the U.S. Since then, numeric data bases have become a specialty. A rare feature of I.P. Sharp's data bases is that the data is available in a programming environment, permitting users with programming experience to produce custom reports or perform highly specialized analyses. For the non-programmer or casual user, I.P. Sharp has developed a full complement of aids for accessing, manipulating, and displaying data.

Types of Data

I.P. Sharp's data bases can be classified into four major groups: financial, economic, aviation, energy.

Financial: Financial data comes from a number of highly regarded sources covering such areas as stock, option, and bond prices, currency rates, money market rates, and corporate and government statistics. Many, such as stock prices and currency rates are updated daily while others, such as corporate data, are updated quarterly or annually. Stock exchanges accessible through I.P. Sharp include Hong Kong, Singapore, Sydney, London, and all the North American exchanges. There is even a live feed from the TSE providing up-to-the-minute bid/ask and last trade prices. Corporate statistics on Canadian corporations are provided by Financial Post and on U.S. corporations by Disclosure Inc. Metal and soft commodity prices are reported from seven exchanges and currency rates from fourteen exchanges.

Economic: This group comprises a variety of socio-economic, national debt and trade data for most countries in the world. Contributors to this body of information include OECD, Business International, IMF, Statistics Canada, Australian Bureau of Statistics, U.K. Central Statistics office, National Planning Association, and Citibank. The information in this category is usually provided on a monthly, quarterly, or annual basis.

Aviation: I.P. Sharp is the pre-eminent supplier of aviation data.

The U.S. Aviation industry is particularly well represented, with millions of timeseries from CAB covering every aspect of commercial aviation. Other financial, operating and traffic statistics are provided by ICAO, IATA, and the Association of European Airlines. Flight schedules for all North American and international airlines are contained in the massive Official Airline Guide data base.

Energy: Crude petroleum data is the emphasis of the energy group of data bases. Prices, volumes, production, reserves and shipping costs are reported in a variety of forms from several U.S. and European sources: API, Argus, ICIS, Department of Energy, and Lundberg Survey Inc. In an effort to broaden the scope of the energy data bases, electricity and coal data bases are being developed.

Access Methods

Access methods for numeric data bases vary greatly from supplier to supplier. I.P. Sharp provides several methods which collectively satisfy most user needs.

The first access method is called Magic. Magic is a collection of English language commands which are used to retrieve, manipulate and report data from all public data bases. Magic provides the user with the highest degree of flexibility possible without the need to know any programming. As well as tabular reports, data can be plotted on any of several colour plotters and graphics terminals. Users with programming expertise who wish to do more sophisticated reports and analyses, can combine any of the hundreds of Magic programmes with custom written programmes, providing an added measure of flexibility.

I.P. Sharp also provides data through a newswire-like service called Infomagic. Infomagic contains hundreds of preformatted reports covering about 30 data bases.

The user selects reports by stepping through a series of menus, answering questions asked by the computer.

The popularity of the microcomputer has led to the development of yet another data base product, Microcomm. Designed especially for the IBM PC, Microcomm can be used to access data through Magic and to download (transfer) the data to the PC. The data is sent in a form which then allows it to be used by certain spreadsheet programmes such as Visicalc or Lotus 1-2-3. Alternatively, the user may write programmes on the PC to manipulate the data directly.

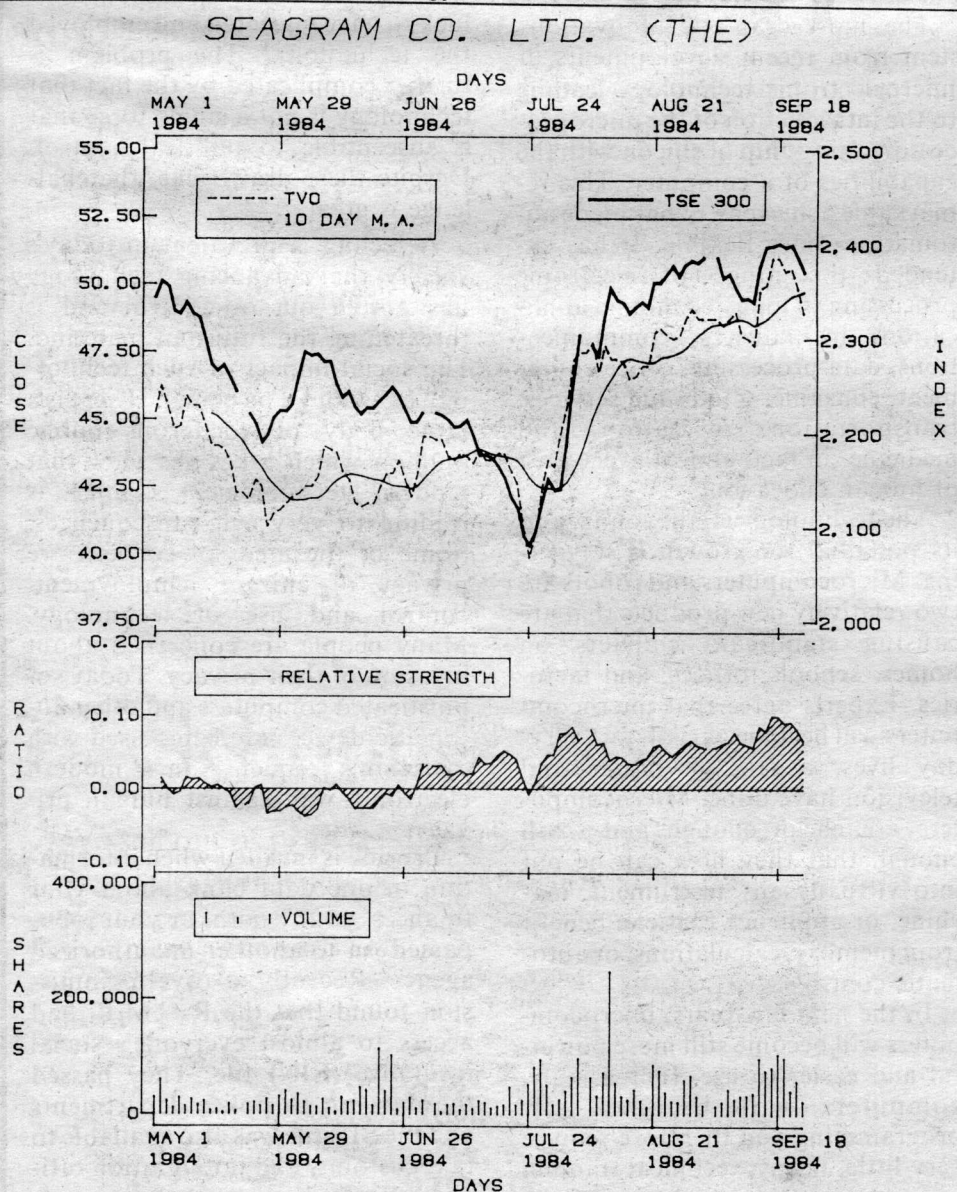
Costs of Using Data Bases

I.P. Sharp provides all public data to all users without subscription fees or surcharges. (There are a few exceptions, though.) Most data suppliers charge monthly or annual subscription fees for each data base they provide. Often, there is also a monthly minimum or administration charge for computer usage. For the occasional user or for someone accessing a great number of different data bases, the cost can be very high for the amount of data retrieved. With I.P. Sharp, users pay as they go. Magic and Microcomm are charged on the basis of timesharing rates, which measure the amount of computer resources used, while Infomagic users pay a flat hourly fee, \$60 per hour.

Information Available

I.P. Sharp has a selection of literature describing individual data bases, access methods and other services. This information is free on request by calling or writing to: I.P. Sharp Associates Limited, Atlantic Regional Office, Suite 706 Cogswell Tower, 2000 Barrington Street, Halifax, Nova Scotia, B3J 3K1, (902) 423-6251

By Don Howson
I.P. Sharp Associates Ltd.
Halifax, N.S.



SOURCE: NASTOCK DATA BASE
DATA TO CLOSE OF 840924

```
)LOAD 39 MAGIC
SAVED 2.45.19 09/24/84
```

```
1 2 3 4 5 DAILY, DATED 10 9 84
AUTOLABEL
PUT 'TVO' NASTOCKD 4 5 6
'HLRT' TABLE ABOVE
```

```
SEAGRAM CO. LTD. (THE)
```

```
HIGH | LOW | CLOSE
```

10SEP84	48.75	48.13	48.13	10SEP84
11SEP84	48.75	48.00	48.00	11SEP84
12SEP84	47.88	47.38	47.75	12SEP84
13SEP84	50.13	47.75	49.88	13SEP84
14SEP84	50.38	49.63	50.00	14SEP84
17SEP84	51.38	50.00	51.00	17SEP84
18SEP84	51.25	50.75	51.00	18SEP84
19SEP84	51.00	50.38	50.50	19SEP84
20SEP84	50.88	50.38	50.63	20SEP84
21SEP84	51.00	49.88	49.88	21SEP84
24SEP84	50.00	48.75	48.88	24SEP84

Social Effects of Modern Technology

By Dr. Nirmal K. Jain, Head, Science Library, Acadia University

One cannot deny the fact that technology has altered the contours of our modern life. This pervasive influence shows no sign of abating. On the contrary, technology's impact on modern life has been profound and promises to be of even greater import in the future, whether in terms of its impact on the natural environment, its contribution to the transformation of social and political relations, the changes it has wrought in the fabric of everyday life (in patterns of work and leisure), or its effects on modern consciousness.

The industrial revolution and present-day industrial automation have improved upon and replaced man's physical senses and muscular capabilities. They enable man to do things faster and better, with less labour. The basic function of technology is to expand the realm of practical human possibility. Technology as a perennial form of human activity arose because, unaided by technics, human capabilities are quite limited — for example, locomotive, perceptual, and mental abilities, abilities to lift, carry, dig, cut, see and hear, resist disease and the elements, perform arithmetical operations, and so on. Man attempts to overcome his shortcomings and his vulnerability by extending his limited capabilities. He thus enhances his power, which in turn often enables him to thrive. Two well-known scientists and re-

searchers, N. Bruce Hannay and Robert E. McGinn, have outlined at least six ways through which technology extends the realm of practical human possibility:

- (1) Extension of human faculties, directly through hearing aids, telescopes, microscopes, megaphones, and indirectly through newspapers, television and records;
- (2) Increasing the efficiency of human activities through power saws, automobiles, electronic calculators, typewriters, and the like;
- (3) Reducing or eliminating risk through contraceptives, seat belts, catchers' masks, and so on;
- (4) Substitution, for example, of automatic dishwashers, lawn sprinklers, and phone-message-recorders;
- (5) Qualitative innovations on human activity - flying and predetermination of sex of offspring; and
- (6) Expansion of means for expressing inner life - sculpture, painting, musical instruments, and biofeedback machines."

(Hannay and McGinn, 1980:pp.35-36)

Besides the basic function of technology, there are other specific functions served by technology in modern society. For example, modern technology has embarked on a long, although brisk, march through the

entire range of human faculties and capabilities. The ongoing thrust of this effort is the extension of muscular abilities, locomotive and perceptual abilities, the augmentation of certain mental abilities (memory, logic, and calculation abilities through the computer), the making of more and more comprehensive prostheses (for example, the artificial heart) and the performance of biological functions and capabilities (artificial insemination and in vitro fertilization). It is difficult to specify any human faculty or ability that is not, or would not be, an eligible target for technological extension. There would no doubt be ephemeral expressions of concern at the appearance of some new extensions, such as the recent accomplishment of in vitro fertilization.

Technological extension can go, and in numerous cases in recent years has been thought by some groups to have already gone, "too far" thus raising an ethical or values issue. One thinks of the quantum leap in human ability to inflict destruction represented by nuclear weapons; of the enormous increase in the tree-felling abilities in methods used for clear-cutting forests; of the incursion into wilderness areas of off-road vehicles; and of conflicts over requiring helmets for motorcyclists and seatbelts or airbags for motorists.

The most dramatic innovations stem from recent developments in microelectronic technology leading to the introduction of the microprocessor, a tiny chip of silicon with the capabilities of a computer. This remarkable achievement has made automation more flexible. It has extended the range of electronic processing to many economic applications in industry, communications, data processing, office equipment, consumer goods and services, transportation, recreation, and medicine; in fact, almost every area of human endeavour.

The technology is still young, and its potential for growth is staggering. Microcomputers and robots are two relatively new products that are causing significant impacts on homes, schools, offices, and factories. Experts agree that microcomputers will become part of our everyday lives, as the telephone and television have done. Microcomputers are cheap enough and small enough that they now can be put into virtually any instrument, machine, or appliance that can benefit from memory, calculations, or automatic controls.

In the next few years, microcomputers will become still more powerful and easier to use. Increasingly, computers will become self-programming and therefore require very little, if any, technical training for operation. A prototype of the self-programming computer is expected to be commercially available soon.

Microelectronic technologies already have changed the daily lives of millions of people: office workers use word processors; shoppers pick up cash from 24-hour computerized bank tellers; students receive computer-assisted instruction. The rapid advances and pervasive impact of technology during the past decade, coupled with the anticipated acceleration of the development of new technology, clearly indicate that remarkable changes in our everyday lives will occur as a direct result of microelectronics.

Another important function for which products of modern technology are used is to occupy leisure time. The modern "technologized" entertainment or "culture industry" — movies, records, television, and video — is so successful because of the abundance of relatively inexpensive, convenient ways it offers to pass time.

It is difficult to forecast the economic effects of computers; it is even more difficult to determine the effects on society itself. If it is true that microelectronics and modern communications technologies are going to provide us with material goods more cheaply, more effectively and with less effort than in the past, then will the market prevail? If it does, will benefits be shared or will they accrue to the individual or groups who had the wisdom, foresight or luck to have mastered and employed the technology? The problem is further complicated by the fact that technology is not a single force that is susceptible to political control. Despite these drawbacks, the challenge is great.

A feeling is prevalent in today's society that advancing technology has gotten out of control and is threatening the future of mankind. The social impact of such technology may not all be benign. There is a large body of vociferous public opinion which takes the view that modern technological change is leading to very evil consequences. Some of the areas of concern are privacy of citizens, employment control and use of technology. Many people are concerned about invasion of their privacy. Today sophisticated computers and other automatic devices are being used with increasing frequency in a modern electronic war against human privacy.

Privacy is invaded when information in one data bank about your finances, your health, or your job is passed on to another unauthorized agency. Recently, a royal commission found that the R.C.M.P. had access to almost everyone's social insurance (SIN) file. They passed the data on to police departments and the SIN file was also available to tax, customs, and immigration officials. Banks have used their power to give or deny credit to make the customer sign away his right to keep his financial affairs confidential.

(continued on next page)

PLAIN AND SIMPLE

Our physical size and financial strength — necessary to make and honor commitments — indicate the successful working relationships we have with thousands of libraries worldwide.

But the plain truth is, simply, that it is our sensitivity to your unique requirements, and our flexibility in providing an exhaustive and relentless effort for total customer service that is our real strength.

We want to work with you — to help you provide exceptional patron service, which is your strength.

We can help. Write today —

CANESCO SUBSCRIPTION SERVICES, LTD.

The Serials Professionals



Six Thorncliffe Park Drive
Toronto, Canada M4H 1H3
(416) 421-9000
Telex: 06-23767

Nova Scotia

A Council of Nova Scotia Archives has been formed. Its first meeting was planned for October 26, 1984, at the Colchester County Museum.

The Western Counties Regional Library produced several programs for cable television to be shown on their local network this winter. The programs, on crafts, exercise, cooking and puppet shows, were organized by three students hired under a Canada Summer Works grant and supervised by Virginia Eamon, Co-ordinator of Library Services. The students also organized a summer reading program called the Blue-nose Club, supervised by Trudy Pace, Co-ordinator of Library Services.

The Halifax City Regional Library has received approximately \$15,750 from the estate of the late Edna M. Haviland. Given in memory of Alice M. and Laura G. Haverstock, the money will be spent on an additional microform reader-printer for Reference Services and display shelving for Adult Lending Services as well as for books for the regional library system. "Film Criticism," the open film lecture series and/or university credit course offered by St. Mary's University at the Halifax City Regional Library's main building started September 11, 1984. The course, illustrated by films on videotape, is being taught by Professor Edward Flynn of the English Department at St. Mary's.

To reach the Nova Scotia Provincial Library you can now use ENVOY. Their address is ILL.NSHPL. The Provincial Library has subscribed to two new loose-leaf reference works on small computers — Databook Management of Small Computer Systems and Databook Reports on Microcomputers.

Library staff in the Halifax City School Libraries will be working with teachers and staff on an Invention Convention. The idea is for elementary schools students to invent something and then display their inventions at a convention. Libraries in participating schools will be planning special programs relating to inventors and inventions with accompanying displays of relevant materials.

\$75,000 has been granted to the Canadian Learning Materials Centre to continue its Leadership Pro-

NEWS

gram East until March, 1985. Phase I of the program involved the Centre over the past three years in establishing a broad-based network of parents, trustees, teachers, librarians, senior policy makers, publishers and the media who have become informed about the importance of providing a Canadian perspective on education and related issues. In Phase II of the program, the Centre proposes to offer in-service and pre-service seminars for teachers and librarians at universities in Atlantic Canada. It also proposes to sponsor and coordinate a Summer Institute for teachers in Canadian Studies and to hold a series of regional seminars on the general theme of Canadian museums as learning resources for Canadian schools.

New Brunswick

The Ross Memorial Library in St. Andrews has added an "international flavour" to their reading club. Members are issued a passport which is stamped each week for the country featured in that week's reading.

The Board of the Campobello Public Library was invited last spring to apply for a Parks Canada Centenary Celebration grant. They learned in August that their proposal for a major renovation of their 1897 building has been adopted by the Centenary Commission. Work is expected to begin by the fall of 1985.

A toy-lending library has been started by the Riverview Public Library with funds provided by a local chapter of the IODE. Riverview has also acquired a video cassette recorder and a colour television for children's programmes through a donation from friends of the late Helen Diamond, the previous chairman of the Riverview Public Library Board.

The librarians in the Saint John area Library Information Network participated in their local school district's Careers Expo '84 from October 2-5. Susan Collins reports that several hundred students stopped to see their display of photographs of libraries, catalogues from library schools and posters. A big drawing card was a hook-up to the University of New Brunswick online catalogue.

About 50 librarians and trustees attended the fifth joint annual meeting of the New Brunswick Library Trustees Association and the New Brunswick Library Services on September 24, 1984. The meeting was addressed by Armand Saintogé, deputy minister for the Department of Historical and Cultural Affairs; Cyril Reid, President of the Canadian Library Trustees Association; Katherine LeButt, regional librarian for York County; Alan McNairn, director of the New Brunswick Museum in Saint John; Marion Beyea, director of the Provincial Archives; and Lorraine MacQueen, chief of the Service for Handicapped Persons at the National Library of Canada. The new executive of the NBLTA is Mardi Cockburn, Past President; J. Ian MacDonald, President; Jaddus Chiasson, Vice-President; Barry F., Rayworth, Secretary-Treasurer; and Margaret Marceau, Director (representing the Haunt Saint Jean Library Region).

Dr. Norman J. Skinner, the first president of the New Brunswick Library Trustees Association and a library trustee for 45 years, was made an honorary life member of the Association at the annual meeting. A photographic portrait of Dr. Skinner was presented to the Saint John Free Public Library.

Newfoundland

Newfoundland Library Week is being celebrated this year from November 18 to 24 with the theme "Jog Your Mind — Run To Your Library". A kit containing a colour poster, ideas for activities and other information for the week is being sent to all libraries in the Province. The Library Week Committee is selling stickers which carry the theme and match the design of the posters.

Events marking the 50th Anniversary of the Newfoundland Public Library Services got underway with a press conference on October 23 and a Gala Reception on October 24. A publicity kit to assist local public libraries in their anniversary activities has been distributed. Other activities include a Christmas card contest and the sale of the cards with the winning design for Christmas, 1984 and the production of an Anniversary Brochure.

Newfoundland's 107th public library opened on September 29, 1984 in Holyrood which is part of the Avalon region of the public library system. The town donated the site next to the town council building and construction was aided by grants from Ultramar Canada, the federal government and the provincial government. The librarian is Mary Hynes.



Ken Clare, head of circulation at the Patrick Power Library, St. Mary's University, explained the microfiche catalogue to students during an open house on September 11, 1984.

(social effects continued)

Computer files from different sources can be linked together to keep an individual under surveillance; computers keep his past alive to the grave.

Canadians are worried about the effects of modern technology on employment. It is hard to come to definite conclusions. In 1980, the Science Council of Canada's workshop participants on this subject reached no consensus on whether, and to what extent, microelectronics would displace labour. At this workshop on the question of technological unemployment, the views expressed were mixed. While objective data was lacking, the majority of the participants agreed that even if the

long term unemployment prospects were unclear, substantial unemployment will inevitably have to be faced in the next few years and that there may even be a degree of permanent unemployment with older workers and women most likely to be affected.

The employment prospects for appropriately educated people should be bright. A number of conventional jobs will, however, disappear. Robots will replace many blue collar workers. A number of middle management jobs will probably disappear as the processor will be a microprocessor, not an employee. It is inevitable that the service sector will be radically affected. Electronic funds transfer systems will continue

to grow. Automatic switching and billing devices will replace operators and office staff. Intelligent, interactive, and interconnected word processors will replace the stenographer, upgrade the secretary, and eliminate postal workers involved with first class mail.

There will be, of course, new products on the market and new opportunities. Home entertainment and information centres will be attractive, useful and relatively inexpensive. Videotex terminals and attachments to provide the many services possible will be items for which there should be a substantial demand. In fact, a multitude of new products will appear on the market, and those industries that are able to identify

and respond to the new opportunities will prosper.

It would be difficult to arrive at definite conclusions which would help the public in dealing with the problems and opportunities posed by modern technology. It is not the intention of this author to achieve such an outcome. Rather it is hoped that the author has succeeded in identifying and explicating some of the issues pertaining to the impact of modern technology in our society.

Reference Cited

Hannay, N.B. and R.E. McGinn. "The Anatomy of Modern Technology: Prolegomenon to an Improved Public Policy for the Social Management of Technology." *Daedalus* 109 (Winter, 1980): 25-53.

(continued from page 1)

one be sure from the way that the question was asked whether respondents answered it in terms of what their **present** job would be like in five years, or in terms of what they anticipated that they would be personally required to know in a new job five years hence. Nevertheless, the results of this question (Table 4) were dramatically different from those dealing with the present skills that were needed. A comparison of Tables 1 and 4 clearly indicates that the respondents felt that within five years computer skills will play a much more significant role in library work than they did in 1982/1983. For example, whereas 1.6% of the respondents had automated systems management as their most important competency at the time of the study, and 9.7% had it as their second most important competency, 9.8% and 27.2%, respectively, thought it would be important five years later. However each individual may have defined these terms, automated system management, computer programming, data base searching, as well as automated systems management and design, were perceived as major job skills that will be needed in the proximate future for library work.

Discussion

The principal conclusions that seem to be indicated by these survey results in the area of the impact of high technology upon the library profession are:

1 — The utilization of computer technology in libraries appears to be quite extensive — 51.5% of the working respondents are involved in some activity with computer systems.

2 — However, the intensity of formal training that respondents involved with computer systems perceived as being required for adequate performance of such work appears minimal; 73.5% stated that the optimum amount of training that their work with computers requires is 1 to 2 weeks or less. This may well be a reflection of the technical rather than professional level of work that most computer technology demands in the library. This perceived pattern also suggests that here we are dealing with two very different skills: the highly complex skills involved in the designing, installing and "de-bugging" of new computer-based information systems and the essentially technical skills required for the day-to-day utilization of these systems in libraries. While the former activity requires the collaboration of engineers, individuals with advanced degrees in computer science, and a small number of highly trained librarians, it offers employment to only a handful of library school graduates across Canada. And even if there is a major "invisible revolution" in computer-based library operations under way, it does not appear to promise any major shift in the ratio of professional to technical jobs in its wake.

3 — The respondents anticipated major increases in the importance of computer-related skills for librarians in the next five years. This perception, if correct, argues for the

TABLE 2

TYPE OF COMPUTER SYSTEM USAGE BY OPTIMUM LEVEL OF TRAINING REQUIRED

Type of computer system usage	On the job training	Vendor workshop	1-2 weeks formal course	1-2 months formal course	1 year formal course	B.Sc. Computer Science	Blank	Total
Housekeeping	28	6	5	2	1	-	6	48
Bibliographic	7	13	5	2	-	2	2	31
Factual Information	-	2	-	-	-	-	-	2
Computer Programming	1	-	-	-	1	1	-	3
"Other" ¹	12	5	2	3	4	1	6	33
TOTAL	48	26	12	7	6	4	14	117
PERCENTAGE OF TOTAL	41.0%	22.2%	10.3%	6.0%	5.1%	3.4%	12.0%	

¹ The "other" category comprised a large number of computer-related activities such as various types of data base searches, utilization of management information systems, electronic messaging, data base management, systems planning and development and writing specifications for programmers.

TABLE 3
PROFILE OF POSSIBLE "INFORMATION PROFESSIONALS" WHO USE LIBRARY SKILLS IN A NON-LIBRARY JOB.*

Case Number	Type of Employment	First Skill Used	Second Skill Used	Percentage of Work Time With Computers	Kind of Use of Computers	Perception of Training Time Necessary
1	self-employed	systems analysis and design	data base search	11-25	data base management systems	1-2 weeks
2	"other"	systems analysis and design	reference/publicity	51-75	software design	2 years
3	self-employed	automated systems management	systems analysis and design	76-100	bibliographic search	1-2 months
4	self-employed	indexing and cataloguing	special materials	1-10	bibliographic search	on the job training
5	self-employed	cataloguing and classification	automated system management	51-75	housekeeping	B.Sc. in computer science
6	self-employed	cataloguing and classification	research	26-50	bibliographic search	1-2 months
7	self-employed	administrative skills	automated systems management	26-50	design and management	on the job training
8	self-employed	publicity and promotion	reference	no answer	no answer	vendor's workshop
9	"information officer"	reference	database and computer search	26-50	bibliographic search	on the job training
10	self-employed	administrative skills	publicity and promotion	11-25	no answer	1-2 weeks
11	"non-librarian"	data base search	reference	11-25	programming	1 year
12	self-employed	administrative skills	reference	1-10	no answer	1-2 months

* A manual search was made of all the 302 responses in order to extract those individuals who could potentially be considered to be working as "non-library employed information professionals". These individuals were selected according to criteria listed in Footnote #3.

Remarks

- "Own business--librarian and information consultant--research design--microcomputer information." "Yes" on computer use for "DBMS". "... need skills in promoting our skills to general public and to business community ...".
- "Employed as a librarian for the design and implementation of an information network, and for the management of several types of library services within the corporation, and as a consultant for other special library information systems."
- Works in "information network" ... doing "indexing".
- "My work is in administration of cataloguing and reference service, with a heavy dose of systems analysis and design in automated applications ...".
- Works for a "branch library information center..." and states that "... officially my position is classified as an IS, information officer. And officially, the qualifications and skills for and the duties of the position require an MLS degree."
- Uses computer systems for "organizing data to ready for input and inputting it".
- Works with computer systems, usually 1-10% of time, "designs automated system for accessing a collection" and needs "ideally 1-2 months of training for optimum level...".

conclusion that computer literacy will become a *sine qua non* for future professional library work. However, because of the need for only a relative low level of expertise with computers that is indicated by the responses, one should not be misled into viewing such skills as professional rather than technical: much of this work, especially in the technical services area, can be performed by well-trained graduates of library technicians' programs.

4 — As of the summer of 1983 there was only a negligible number of Dalhousie Library School alumni who could be said to occupy non-library "information professional" positions. This datum suggests that while there may be many "information handling" jobs available in Canada, as the advocates of the "information society" theory assert, these jobs are being filled by individuals with training in skills other than those that are provided by the typical library school curriculum. Such skills would include expertise in computer programming, accounting, business administration, management information systems, electronics and engineering. This fact further suggests that a large number of "information-profession" positions for individuals with skills obtained in library schools are simply not there today and may materialize rather slowly, if at all.

These conclusions can, of course, only be made subject to the several limitations of the survey.

1 — Data from the alumni of only one school, and one that is somewhat regional in nature (57.7% of the alumni work in the Atlantic provinces), cannot shed light on the whole of the Canadian library scene; it may not accurately reflect some of the most advanced high-technology utilization by the country's largest libraries.

2 — Since the Dalhousie School of Library Service is relatively young, it does not have alumni who have had time to attain the highest employment seniority.

3 — A survey such as this cannot hope to predict the future; all it can do is to obtain the respondents' perceptions of present and future conditions.

4 — The survey had not been designed primarily for the purpose of studying the impact of computer technology on the library profession, and therefore did not ask many important questions that need to be

T A B L E 4
COMPETENCIES THOUGHT TO BE NEEDED IN 5 YEARS BY RESPONDENTS WORKING WITH COMPUTER SYSTEMS

First Most Important Competency			Second Most Important Competency		
Category Label	Absolute Frequency	Percentage	Category Label	Absolute Frequency	Percentage
Acquisition	2	1.7%	Acquisition	1	0.9%
Administrative Skills	52	42.6	Administrative Skills	10	8.8
*Automated Systems Management	12	9.8	*Automated Systems Management	31	27.2
Cataloguing and Indexing	8	6.6	Cataloguing and Indexing	4	3.5
Circulation	1	0.8	Circulation	1	0.9
*Computer Programming	6	4.9	*Computer Programming	4	3.5
*Computerised Search	12	9.8	*Computerised Search	14	12.3
Collection Development	5	4.1	Collection Development	4	3.5
*Data Base Search	7	5.7	*Data Base Search	10	8.8
Public Programs	0	0.0	Public Programs	0	0.0
Publicity	1	0.8	Publicity	1	0.9
Reference Skills	3	2.5	Reference Skills	8	7.0
Research	1	0.8	Research	6	5.2
Special Audiences	1	0.8	Special Audiences	4	3.5
Special Materials	3	2.5	Special Materials	4	3.5
Special Literature	2	1.7	Special Literature	1	0.9
*Systems Analysis and Design	6	4.9	*Systems Analysis and Design	11	9.6
No Answer	3	MISSING	No Answer	11	MISSING
TOTAL	125	100.0	TOTAL	125	100.0

answered in this area. Nor did it focus sufficiently upon the whole development of an "information profession." Such questions need, however, to be asked if many of the current speculations about an "information society" are to be answered factually.

5 — The survey did not attempt to investigate the work of non-librarians who work with or in libraries in the area of computer technology. Such individuals could not have been picked out in a survey directed to library school alumni⁴.

Whatever one may personally feel about these results, they seem to indicate important trends in terms of the impact of computer technology upon current Canadian librarianship and to require further study of such trends on a Canada-wide basis.

Footnotes

1. *Report on the School of Library Service Alumni Survey*. (Halifax, Nova Scotia: School of Library Service, Dalhousie University, 1983).

2. There is no generally accepted definition of "information work". The following criteria were used for the se-

lection into this category:

1a — performing work that involved some utilization of computer technology;

1b — not being employed in a library nor working primarily in a traditional library setting

1c — doing work which required the utilization of library-related skills; or

2 — irrespective of the above, being one of the respondents who indicated perceiving oneself as an "information professional".

3. This is particularly true of individuals working in a "one or two person" library.

4. Undoubtedly the instrument used could have been improved upon, despite the fact that all possible safeguards against introducing bias were followed under the direction of a carefully selected committee. Such mistakes as not listing "Indexing" as a separate skill in the list of needed competencies is an example. Another is the lack of clear distinction between "Data base searching" and "Computer searching". Another

still was a certain amount of ambiguity in determining whether a "free lance" individual was engaged in strictly information work or would take on any kind of contract library work that come along. Finally, the Alumni Survey Committee was not particularly successful in obtaining a more detailed evaluation of the terminology used to describe various types of computer applications in libraries. These and other flaws might have caused some minor shifts of the results. They would have in no way affected the central thrust of the data that this survey provided with respect to the actual impact of computer technology upon librarianship among Dalhousie Alumni. However, the very high response rate, 85.4% of the total population of alumni, makes its results quite interesting within the above limitations.

Richard Apostle is an Associate Professor in Sociology and Social Anthropology at Dalhousie University. Boris Raymond is an Associate Professor at the Dalhousie School of Library Service. Paul Smith is a graduate student in Sociology and Social Anthropology at Dalhousie University.

Card Catalogue Cabinets Available

Acadia University Library has four Card Catalogue Cabinets of 48 drawers each for sale. Any library interested in purchasing any of these, please write to the following address for further information:

University Librarian's Office
Acadia University Library
Wolfville, N.S.
Canada
B0P 1X1

APLA MEMORIAL TRUST AWARDS

Travel and Study Funds Available

Do you need financial assistance to study or do research? Awards are available from the APLA Memorial Trust. Write with details of your proposed programme and estimated costs to:

APLA Memorial
Awards Committee Convenor
c/o Dalhousie School of Library Service
Dalhousie University
Halifax, Nova Scotia
B3H 4H8

Deadline for applications is March 31, 1985.

Northern Libraries Colloquy

The 10th Northern Libraries Colloquy met in St. John's from August 12 to 16, 1984. The Colloquy first met in 1971 in Edmonton and since then has provided a forum for discussion of northern information needs. An international biennial gathering with meetings alternating every two years between Europe and North America, this year's Colloquy attracted approximately seventy librarians, bibliographers, information researchers and others interested in the North. Five were from Sweden, Denmark and Great Britain, 12 from Alaska and the remainder from the continental United States, Northwest Territories and the Yukon, western and central Canada and Newfoundland.

Following an "Ice-Breaker Reception" on Sunday evening at which Nita Cooke of the Boreal Institute in Edmonton gave a slide presentation on the Colloquy's history, the first session opened Monday with an address by William Frost, Assistant Deputy Minister of the Department of Culture, Recreation and Youth. Mr. Frost provided an overview of historic resources in the Province and current and future developments in providing automated access to local archival and museum collections.

On Monday several Newfoundland speakers described their collections and facilities, Tony Williamson of the Labrador Institute for Northern Studies; Gerry Panting of the Maritime History Group; David Davis of the Provincial Archives of Newfoundland and Labrador; Pearce Penney of the Newfoundland Public Library Services (NPLS); Anne Hart of the Centre for Newfoundland Studies; Charles Cameron of the Provincial Reference and Resource Library, NPLS; Jane Sproull-Thomson of Historic Resources Division and Elaine Morton of the Provincial Books by Mail, NPLS. At the end of the afternoon poster sessions were given by Elinor Benjamin on public library services in Western Newfoundland and Tony Murphy on the services of the Provincial Archives.

Tuesday's theme "Establishment and Development of Northern Collections" was reflected in 12 papers and 5 poster sessions. Among the papers were Midge King and Marshall Clinton's on the establishment of Northern Studies Services and data bases at Lakehead University, Heddy Peddle's description of the information system developed for the Royal Commission on the Ocean Ranger Marine Disaster; and Marguerite Cornwall's overview of Northern Information Indexing Technology at the University of Alaska. Cathy Innes-Taylor talked about co-operative collection Development in Alaska and the Alaska and Polar Regions Conspectus, the latter being a system devised to determine the strengths and weaknesses of Alaskan and polar collections. Margaret Orr's paper on "Frontier Libraries" was an over-

view of libraries in the Northwest Territories, with special emphasis on the Government Library in Yellowknife.

"Preservation, Organization and Indexing of Non-Books Materials", the theme for Wednesday morning's papers, was reflected in William Schneider's paper "What is Oral History?" describing his experiences in Alaska. Doris Saunders and Nancy Grenville gave a joint presentation on the archives of the magazine "Them Days" and oral history efforts in Labrador as well as recent archival developments in Newfoundland. One of the overseas delegates, Roger Krist, provided another slant to the day's theme with his paper "The Center for Arctic Cultural Research in Umea, Sweden."

On Thursday two themes were explored. The first, "Northern Collections — Can they survive in these economic times?" included a paper by Alan Cooke which recounted the controversy surrounding the demise of the Northern Studies Library as a separate entity at McGill University and also described his new venture the Hochelaga Research Institute in Montreal. Nita Cooke and Hazel Fry then gave an update on the current situation at their institutions, the Boreal Institute in Edmonton and the Arctic Institute of North America, formerly in Montreal and now at the University of Calgary.

The second theme of the day "An International Polar Information Network: Is it possible?" was reflected in papers on past attempts at bibliographical cooperation and current examples of information sharing. Martha Andrews in her paper "An International Polar Bibliography — will it be a network of networks?" maintained that a network for Arctic information already exists. In her review of the developments of the past 12 years she concluded that the Colloquy had enabled a specialized system of communication channels to evolve. An information sharing session gave several delegates the opportunity to make others aware of recent developments and publications.

The Colloquy concluded Thursday afternoon with a general meeting which decided that the Northern Libraries Directory will be continued with information about major institutes and libraries which possess polar or northern collections. Phyllis DeMuth gave a report on the Northern Libraries Bulletin which she has been editing at the Alaska State Library since its inception. The Colloquy accepted an invitation from Ann-Christine Haupt to have the 11th Northern Libraries Colloquy at the University of Lulea, Sweden in the summer of 1986. A Technical Committee for the 11th Colloquy was formed before the meeting ended. The Canadian member of the Committee is Ramma Kamra, Departmental Librarian with the Department of Indian Affairs and Northern Develop-

ment in Ottawa.

In addition to the Sunday evening reception delegates enjoyed a banquet at Two Ninety Restaurant on

Tuesday evening and a bus tour of historic sites in St. John's and area on Wednesday afternoon.

Reported by Charles Cameron

People

Joy Tillotson started work as the librarian of the new Institute for Marine Dynamics, a National Research Council facility being built in St. John's, on Oct. 15. She will be replaced at Memorial by **George Beckett**, formerly the assistant government documents librarian.

The Dartmouth Regional Library has appointed **Barbara Cottrell** as Community Services Assistant. She will be responsible for adult programs, publicity and public relations.

Staff at the North Branch of the Halifax City Regional Library were pleased to learn that **Tracey Jones**, a part-time library clerk, has enrolled in the Master of Library Service program at Dalhousie.

Ann Rogers has been appointed Reference/Interlibrary Loan Librarian at the Nova Scotia Provincial Library, effective September 10, 1984. Ms. Rogers is a 1984 graduate of the Dalhousie University School of Library Service.

The Boards of the Oromocto Public Library and the York Regional Library have announced the appointment of **Jennifer Firth Gammon** to the position of librarian at the Oromocto Public Library. Ms. Gammon is a 1984 graduate from Dalhousie with experience in the Killam Library, the Halifax City Regional Library, Agriculture Canada and the York Regional Library. She succeeds **William Molesworth**, who left the Oromocto Library to accept the position of city librarian at the Fredericton Public Library.

An Atlantic Chapter of the Canadian Association for Information Science has been granted its charter and held an inaugural meeting on October 26, 1984. The guest speaker was Ann Kyle, National Manager of Benefit Services of Maritime Life Assurance Company who spoke on the topic "Moving End-users up Front: Experience with a New On-line Insurance Claims System." People who are interested in CAIS but were unable to attend the meeting could contact Ms. Verilea Ellis, School of Com-

puter Science, Technical University of Nova Scotia, Halifax, N.S. B3J 2X4, 429-8300 ext. 290.

Ruth MacEachern, formerly a cataloguer at the National Library, has accepted a contract with the National Library to complete a survey of Nova Scotian newspapers.

Jean Sawyer is acting Legislative Librarian in Nova Scotia.

Janice Boudreau has been appointed to a full-time position as Co-ordinator of Library Services Bilingual for the Western County Regional Library in Nova Scotia.

Two staff members have been hired for the new French community centre library in Saint John's which is due to open in November 1984. **Andre Paris**, a May 1984 graduate of McGill, has been hired as the librarian and **Carole Duvall** has been hired as a library clerk.

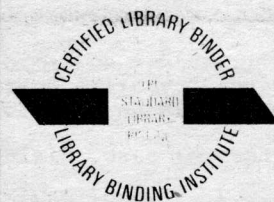
Mrs. Ruth Bray, former Children's Librarian at the Moncton Public Library, was promoted to Assistant Regional Librarian for the Albert-Westmorland-Kent Regional Library as of September 1984.

Mrs. Norma Dobson is now a full-time student at the Dalhousie School of Library Service. She has chaired the Riverview Public Library Board and the Albert-Westmorland-Kent Library Board and donated 2,000 hours of work as a volunteer in the Technical Services Department of the Regional Library.

Four contract positions have been filled at Memorial University Newfoundland. **Marion Matthews**, who had been doing freelance work in St. John's, is now working in cataloguing. **Judith Watts**, formerly clerk in the periodicals division and recently graduated from Simon Fraser College Graduate School of Library and Information Science, is working in the Centre for Newfoundland Studies. **Carol Anne O'Brien**, a recent graduate from the University of Toronto, and **John Neilson**, from McGill, are working in Information Services.

R & R BOOKBINDING LTD.

"EASTERN CANADA'S
CERTIFIED LIBRARY BINDER"



Hodgson Rd. & Vanier Hwy.
Comp. 13, Bates Building
Fredericton, N.B. E3B 5N6

506-452-0177

Interlibrary Loan Compensation System

Some interim observations from a net lender

At its September 30, 1982 meeting the Librarians' Council of the Association of Atlantic Universities (AAULC) agreed to an Interlibrary Loan (ILL) Compensation System as follows:

1. That there be a \$3.00 charge per completed ILL transaction between Atlantic university libraries. The \$3.00 fee would apply to both documents borrowed and photocopies provided. In the case of photocopying, the \$3.00 fee would replace any per page charge for copying and not be in addition to any such a charge;

2. That each participating AAULC library compile annually a list of the number of items loaned and borrowed from other participating libraries;

3. That the AAU office calculate net loans, bill the appropriate net borrowers and forward the compensation to the net lenders;

4. That the system be evaluated at the end of a two-year period.

The objectives of this system are:

1. To facilitate access to library materials for AAU faculty and students through an efficient ILL system;

2. To establish a more uniform ILL system among AAU libraries;

3. To compensate net lenders for part of the costs incurred;

4. To greatly simplify ILL accounting and record keeping procedures, thereby reducing costs.

The scheme was brought in January 1983 and is due for review in January 1985.

The two medical libraries — Dalhousie's Kellogg Health Sciences Library and Memorial's Health Sciences Library — opted out of the scheme since in the Atlantic they deal only with each other most of the time.

At the beginning, the University of King's College Library and the Law Library of the University of New Brunswick did not want to go

in; Memorial agreed reluctantly and reserved the right to decide not to charge net borrowers once the statistics were in. Later these libraries agreed to participate fully in the two-year trial.

At the beginning; Memorial, for one, had objections to the idea. It did not want to appear to endorse the principle of encouraging charges among libraries for ILL services. The ILL Librarian felt that the system could possibly penalize the smaller institutions which must borrow.

The AAU's third objective for the system would imply that AAU felt a loan charge was imminent if net lenders were to continue to afford interlibrary lending, however Memorial had not indicated that this was going to be necessary for Memorial and it wondered whether other libraries had, warranting AAU's decision.

It was thought that charging for items that would normally be free (previously all book loans were without charge) or under three dollars might encourage libraries to go outside the Atlantic region to free libraries for their materials. This could cause delays and, besides that, it would be out of step with the AAU's objectives.

Also, it was felt that the system could be abused by libraries needing large photocopying jobs (e.g. for very long articles or for theses). Under the scheme the charge is \$3.00 regardless of the number of pages copied.

Though the scheme is meant to simplify ILL accounting and record keeping, it requires, at the same time, a new set of statistics to be kept — on the number of books loaned and books borrowed, the number of photocopies sent and received and, if desired, the number of pages copied per transaction.

Also, with so many numbers to compile, with the borrowing and lending libraries keeping track of the

same transactions, and several exceptions to remember many errors can occur. For example, the Dalhousie Law Library is a separate library, their MacDonald Science Library is not — it is considered part of the main Killam Library — and their medical library is to be treated like a non-AAU library; the Nova Scotia Public Library refers requests on to an appropriate academic or public library or fills the request itself, sometimes leaving it unclear who has supplied the material.

Results of the First Year's Statistics

Results of the first year's compilation of statistics showed that Dalhousie University, the University of New Brunswick and Memorial University were net lenders in that order of volume. It was also discovered that most net borrowers were net borrowers by 150 transactions or less. An exception is Universite de Moncton which was a net borrower by nearly 1200 transactions.

About half of the transactions cancel each other out in terms of any net payments or receipts, and this is the overwhelming advantage of the scheme since no more time or energy need be spent in their accounting.

In response to a concern from some of the smaller institutions whose ILL lendings are primarily photocopies of their own theses, the AAU libraries, agreed to collect 1984 statistics with a breakdown between photocopies and book loans. Depending on the results and if the system continues, perhaps a maximum number of pages copied per \$3.00 request would alleviate this problem.

The scheme does not seem to have reduced loaning between AAU libraries; certainly Dalhousie is so busy it has asked the Nova Scotia Union Catalogue to consider Dalhousie the location of last choice when locating titles, and AAU traffic continues to comprise about 13% of Memorial's transactions.

As feared, the first year's statistics do show discrepancies in the recording of transactions. The amount others reported ordered from a given library differs in every case from what that library says was ordered. For example, Memorial reported it lent 868 items while it was reported by others as having lent 890 items. Dalhousie says it lent 1077 items and the borrowers say it was 1462.

The Universite de Moncton says it borrowed 1367 items while the lenders report it as only 1240 items. There is no way now of knowing what is correct. Still, the figures are good enough approximations to allow the system to work, as long as none of the participating libraries objects.

Whether or not the system has lived up to its objectives will be carefully examined in 1985. From a net lender's point of view, the centralized billing is a simplification over the former way. What will be interesting will be the opinions of the net borrowers who previously could borrow free of charge, the opinions of libraries that feel they are losing money on set-fee photocopying and AAU's feelings on the administration of the whole scheme.

Joan Ritcey
Interlibrary Loan Librarian
Memorial University of
Newfoundland

Schooner Books

We sell out of print scholarly books in most fields and have a large selection in stock. We also buy good books in most subject areas and are available for appraisals.

Catalogues issued twice yearly on rare and o.p. items of the Atlantic Provinces.

Schooner Books
5378 Inglis Street
Halifax, N.S.
B3H 1J5
(902) 423-8419

References

AAULC Interlibrary Loans — 1983 Statistical Table

Ellis, Richard H., University Librarian, M.U.N. to Mr. John R. Keyston, Executive Director, AAU, re M.U.N.'s participation in AAULC's ILL system, January 6, 1983.

Ellis, Richard H. University Librarian's report to the Librarian's meeting (M.U.N.), February 1, 1984.

Keyston, J.R. AAU Memorandum re ILL Compensation Scheme, September 20, 1983 to AAULC.

Keyston, J.R. AAU Memorandum re ILL Compensation System, December 15, 1982 to AAULC.

Keyston, J.R. AAU Memorandum re new ILL policy, January 25, 1983 to AAULC.

Developments in the Bibliographic Control of Government Publications

By George Beckett and Karen Lippold
*Government Documents Librarians,
 Queen Elizabeth II Library
 Memorial University
 of Newfoundland*

The library world is in a period of rapid change. A survey of the professional literature reveals heated discussion of the advantages or disadvantages of automated library systems, standards, and computers in general. Librarians are aware of technological developments but are often unsure of how to apply these developments for the greatest benefit of their library and their clientele. The following is a review of the major trends which we perceive to be important for the issue of bibliographic control of government publications. While viewed from the environment of a Canadian academic library, many of the observations are equally as valid for smaller libraries which include government publications in their collections.

It is our contention that developments in the field of bibliographic control for government publications have reached a point where librarians must re-evaluate their current procedures with a view to the future. Our society is on the threshold of new ways of accessing information. If we do not keep this in mind we may seriously undermine the value of the library as an information resource centre.

The Past to the Present

In order to understand why the developments of the last ten years are so important for the bibliographic control of government publications it is necessary to understand some of the history of government publication collections. Government publications first became a concern to libraries at the beginning of the twentieth century. In the United States the first depository library system was based upon the Printing Act of 1895. Canada's depository li-

brary system began in 1927. As governments grew larger and more active in all aspects of society, particularly in the post World War II era, the number of "free" government publications grew as did their importance as sources of information. It is impossible to conceive of research in many subject areas without using government publications.

To deal with this growth of publications, many libraries instituted separate government publication collections. A 1981 international survey indicated that of a worldwide response of 199 libraries, 46 percent of the North American libraries indicated that they had separate government publication collections while 59 percent had separate catalogues to access their collections (Johansson, 1983). A study conducted by our library in 1981 showed that of 26 major academic and public libraries in Canada 23 libraries had separate collections for government publications (Memorial University of Newfoundland Library, 1981).

Faced with an influx of government publications, libraries were forced to make value judgements on the cost and potential value of processing these materials using normal library bibliographic control procedures. A decision was often made to not treat government publications like other library materials. Separate government publications with access to the collections based upon reference service to assist the patrons to identify the publications they required, were seen as a solution. Typically, printed indexes and catalogues with descriptive cataloguing for "major" publications com-

bined with individualized reference service and shelf arrangement by issuing agency were the only means of access to these collections.

It is important to remember that these decisions were often made before shared cataloguing bibliographic utilities became commonly available in the early 1970s. Traditional library technical processing systems (including cataloguing) were still slow, labour intensive, and expensive. The developments which would change the technical processing systems of libraries had not yet occurred.

The first signs of the rapid changes we experience today appeared in the late 1960s to mid 1970s. Computers were applied to library processes for the first time with varying degrees of success. The new technology allowed new processing systems to be developed in libraries and contributed to the development of shared bibliographic information networks.

The availability of government publications also grew as did the number of libraries receiving them. In Canada the number of depository libraries grew from 25 full depositories in 1953 to 60 full and 2500 selective depository libraries by 1971/72. In-house systems were developed in some libraries to improve bibliographic control and access to separate government publications collections. In Canada, the best known of such systems is CODOC (Council of Ontario University Cooperative Documents Project) or simply the

Guelf Document System. These types of systems were, and are, developed in order to provide practical low cost processing for government publications.

CODOC was designed to provide access to government publications through corporate author, title, series, and keyword indexes as well as through its own classification scheme (Gilham, 1980). The economic justification for such systems was based upon the use of low level clerical staff for coding publications. The resulting records were usually purely descriptive in content since efforts at keyword enrichment or detailed quality control would reduce the cost effectiveness of the coding system (Cannon, 1982).

The greatest developments, and potentially the most important for government publications, have come in the last ten years. Many different developments could be itemized but certain ones stand out as being important. These are:

1. Bibliographic utilities with significant amounts of MARC cataloguing copy for government publications. The presence of such records allows for the possibility of shared cataloguing of publications and improved bibliographic control of publications. All of the major bibliographic utilities such as OCLC, UTLAS, RLIN, and WLN have libraries that contribute cataloguing records for government publications. UTLAS, for example, has 3 Canadian federal government and 19 provincial government libraries participating in its system (UTLAS Inc., 1984).

As well, major centres such as National Library of Canada (NLC), Library of Congress (LC) and the United States Government Printing Office produce bibliographic records for government publications which are available for use on these utilities. The CONSER listing of series and the *Monthly Catalog of United States Publications* listing of American government publications using full LC level cataloguing are two examples of the records which are becoming available for government publications.

Reports in the literature have cited hit rates for selected government publications of as high as 90 percent for post-1960 United States government publications (Walbridge, 1982). Our experience at Memorial University of Newfoundland has shown that there is a large amount of cataloguing copy available. We find cataloguing copy for approximately 60 percent of our

(continued on next page)

CALL-FREE
1-800-268-2138

**Your Direct Line
 for all your library needs**

CARR McLEAN

461 Horner Avenue, Toronto, Ontario M8W 4X2
 Tel: (416) 252-3371 Telex: 06-967866

JUST A PHONE CALL AWAY!

(gov't publications continued)

Microlog collection which contains a wide variety of Canadian federal, provincial, local government and private research organization publications. We find approximately 80 percent of the cataloguing copy for paper format publications in our collection using the UTLAS bibliographic utility. We are seeking permission to use the DOBIS Search Only system which will provide access to the bibliographic records of many of the federal government libraries which use it to catalogue their holdings.

2. Development of sophisticated automated systems for library control of and access to materials. The development and maturing of integrated library automation systems, and particularly the cataloguing, serials control, and public access modules are important. Using anything from a micro-computer to a mainframe it will soon be feasible for any library to use these computer systems to process library materials. Even now it is technically possible for our library to automatically include the entire contents of the *Monthly Catalog* in our catalogue data base. It will then be possible to provide online access to those materials through both descriptive and subject access points.

Revolutionary improvements over manual catalogue systems can be seen in online public access catalogues (OPACs) with the capabilities of keyword access, boolean logic, and controlled vocabularies for subject access to library materials. This is an important feature for government publications which traditionally have had limited subject success. When combined with sophisticated user-friendly systems, such as the U.S. National Library of Medicine's CITE system, they hold great promise for improved access to library collections (Siegel et al., 1984). The full effects of this improved access to library materials through OPACs has yet to be seen. It will, however, have a fundamental impact upon library services.

Another aspect of these developments is the improvement in the capabilities for communication between libraries. It is already common to use the bibliographic utilities as verification and location sources for interlibrary loan. Government publications which are listed in these utilities can be identified and shared for common use.

Improvements in the ability of computer systems to communicate between each other is also significant. In Canada the federal government has provided support for the NLC's development work in the area of Open System Interconnection which will allow for the direct exchange of bibliographic data between unrelated computer systems. It is likely that within a few years it will be possible to access, search, and transfer records between any libraries which adhere to the network standards under development.

3. Bibliographic Information Retrieval Systems. Systems such as DI-ALOG, BRS, CAN/OLE, SDC's ORBIT, and QL SYSTEMS have

large files of records which include government publications and information sources. The presence of government publications in these systems is an indicator of the value of government publications. These information retrieval systems are increasingly useful for serious research in many subject fields. As such they are an important means of making library patrons aware of relevant government publications.

4. Cataloguing code revisions. There has been much discussion about the changes in cataloguing codes which have occurred in recent years. We believe that the implications of these changes for government publications has been clear. They have helped to simplify the processing and access to most types of government publications. AACR II's preference for title main entry for serials and the simplification of the form of many corporate authors are two examples of improvements over the exigencies of AACR I. The simpler it is to process government publications within the standards defined for all library materials the easier it is to justify following those standards.

5. Development of a willingness to consider "cataloguing" government publications. The decisions to include government publication serials in CONSER and to fully catalogue all *Monthly Catalog* items can be seen as breakthroughs for the view that providing full cataloguing treatment to government publications is indeed possible and desirable. As shared cataloguing copy becomes available through the bibliographic utilities, the number of libraries cataloguing government publications has grown. In Canada there are at least four academic libraries which attempt to fully catalogue all of their government publications (Memorial, York, Laval, and Victoria). Many other libraries catalogue at least some of their publications and the amount of cataloguing copy available is growing.

This willingness to catalogue government publications is the result of the developments which are reshaping the way libraries process and deal with their information materials. Concomitant with the increase in cataloguing of government publications has been the increased concern for integration of bibliographic record files. The machine readable cataloguing records produced through the bibliographic utilities are the basis of today's COM catalogues and OPACs.

From the library patron's viewpoint, one of the greatest benefits of cataloguing government publications has been to allow integrated access to the library's entire collection through one catalogue and in a format which is consistent with other library materials. The greater the level of integration which exists for access mechanisms to a library's materials, the easier and more efficient it is for the patron to identify and retrieve the information which is being sought. This is one of the best arguments for the cataloguing of government publications and it

lies at the heart of the re-evaluation that librarians are faced with today in dealing with government publications collections.

The Challenge for Librarians

The challenge that faces us is to plan effectively for an uncertain future in which methods for bibliographic control and access will have changed greatly from those of the past. In the foreseeable future all libraries or information centres will depend upon some form of automated system to provide access to their information resources. These systems will be dependent upon readily available files of machine-readable bibliographic data in some standard format. Will government publications be included in these systems and if so at what level of integration?

The danger is that many libraries will still refuse to catalogue their government publications according to the standards which are developing in the library world. Many may feel that it is too expensive to catalogue, even using the bibliographic utilities (Morton, 1982). Or it may be that the thought of trying to convert older publications is just too overwhelming to consider changes to present methods. Others may feel that their locally developed systems, such as CODOC, are entirely adequate.

This is a pernicious idea since what was at the forefront of technology and originality of approach ten years ago may be a dead end in the future. It may be argued that any machine-readable bibliographic record, such as those produced by the CODOC system, are as useful for OPACs as any MARC record. It is possible to merge such records into one catalogue as has been proven at the University of Toronto Library (Hajnal et al., 1977). This creates a problem, however, of lack of uniformity in standards applied to the creation and content of bibliographic records from different coding/cataloguing systems.

Automated information retrieval systems offer many advantages over manual systems but they are also more sensitive to lack of uniformity in data organization and content. Lack of standardization in an OPAC or any automated bibliographic system is a severe limitation upon its effectiveness. This is as true of lack of standardization in MARC records as much as it applies to the bibliographic records of other systems. Any online data base searcher can attest to the difficulties of efficiently searching an online data base whose coding/cataloguing practices have changed over time.

The literature of the library profession is full of debates over this question of the need for standards and uniformity for online data bases. Are authority files needed in online systems? What are acceptable levels of MARC coding? Won't the computer take care of any problems of inconsistency in records? These are common questions which are being resolved slowly. The truth is that the higher the quality of the data bases which are created the

more efficient the retrieval process. The lower the efficiency of the retrieval system the less likely our patrons are to use them and the collections for which the systems are supposed to provide access.

Unfortunately for those libraries with separate systems for bibliographic control of their government publications (whether automated or not) the foreseeable future for library bibliographic control systems is oriented to MARC based OPACs for internal library use and bibliographic utilities for shared cataloguing. If integrated and effective access to all library holdings is to be provided, government publications must be included in these systems using full cataloguing procedures consistent with the treatment provided for other library materials. The bibliographic control of government publications in libraries must be freed from the limitations imposed by a heritage of separation and isolation from mainstream library activities. To insure the best possible service and use of government publications we must re-evaluate how we deal with government publications and prepare for the future which is upon us.

References

- Gillham, Virginia. (1980). The Guelph Document System. *Government Publications Review*. V. 7A: 211-216.
- Hajnal, Peter, et al. (1977). Marc and CODOC: A case study in dual format use in a university library. *Journal of Library Automation*. V. 10: 358-373.
- Johansson, Eve. (1983). A study of the availability and use of official publications in libraries. *Interlending and Document Supply*. V.11: 100-103.
- Morton, Bruce. (1982). Implementing an automated shelflist for a selective depository collection. *Government Publications Review*. V.9: 323-344.
- Memorial University of Newfoundland Library, (1981). Unpublished summary of government documents questionnaire responses.
- Pemberton, John E., ed. (1982). The bibliographic control of government publications. Oxford: Pergamon press, 172 p.
- Siegel, Elliot et al. (1984). A comparative evaluation of the technical performance and user acceptance of two prototype online catalog systems. *Information Technology and Libraries*. V. 3: 35-46.
- UTLAS Inc. (1984). WHO institution and source codes with WHO code group. Toronto: UTLAS Inc., 8 p.
- Walbridge, Sharon, (1982). OCLC and government documents collections. *Government Publications Review*. V.9: 277-287.

DID YOU KNOW THAT APLA HAS AVAILABLE FOR ITS MEMBERS SPECIAL FUNDS FOR VARIOUS USES?

THE FOLLOWING ARE AWARDS AND FUNDS AVAILABLE TO APLA MEMBERS.

Special Projects Funds

Up to \$1,000 is available in any one year for work that will make a contribution to library service in the Atlantic Provinces.

APLA Memorial Fund

This is money available from a trust fund. Amounts given depend on interest accrued in a given year.

Past participants have used the award to help finance continuing education studies at institutions across Canada. Others have used the award to do comparison studies of various aspects of librarianship, such as comparing community college libraries in two provinces.

Vice-President's Discretionary Fund

Each provincial vice-president has a fund available for use as that vice-president decides. In the past, the funds have been used to offset the cost of regional workshops.

Alberta Letts Travel Fund

This is available to Dalhousie School of Library Service students interested in attending CLA or APLA conferences, to defray travel costs.

FOR MORE INFORMATION ABOUT THESE FUNDS, PLEASE

CONTACT:

PUBLIC RELATIONS COMMITTEE

APLA

c/o School of Library Service

Dalhousie University

Halifax, N.S.

B3H 4H8

APLA MERIT AWARD Call for Nomination

Let's not forget those who have cut our paths in more than one way.

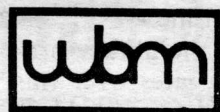
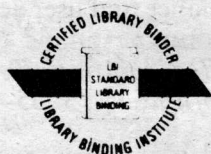
It is customary for the Atlantic Provinces Library Association to honour outstanding individuals who have significantly contributed to the profession of librarianship.

Consequently, the Atlantic Provinces Library Association has instituted the "APLA Merit Award" which is annually presented at the Association's annual Conference.

We will appreciate receiving your nominations as soon as possible. The nominee will be selected by the Executives at their Winter meeting.

All nominations to be addressed to:

Andre Guay
Past-President
APLA
38 MacDonald Avenue
Kentville, NS
B4N 2L2.



WALLACEBURG BOOKBINDING & MFG. CO. LTD.

95 ARNOLD ST.,
P.O. BOX 104,
WALLACEBURG, ONTARIO,
N8A 4L5
PHONE (519) 627-3552

1000 MICMAC BLVD.
UNIT 314
DARTMOUTH, NOVA SCOTIA
B3A 4M7
PHONE (902) 466-3770

RON RIEDSTRA

Sales Co-ordinator

Library Receives SSHRCC Grant

Dalhousie University Library is the recipient of a maximum grant of \$50,000.00 from the Social Sciences and Humanities Research Council of Canada (SSHRCC). The grant will be used to develop the French Linguistics (\$25,000) and British imperial history collections (\$25,000) in the Killam Library.

The French linguistics application was prepared by Dr. Rostia Koucourek from the French Department and Oriel MacLennan from the University Library. Dr. Peter Fraser from the history department and Gwyn Pace from the Library drafted the imperial history application. "The close cooperation between department and library was a critical factor in the success of both applications," says Dr. Gayle Garlock, Collections Librarian. "We really appreciate the effort they put into producing a first rate application."

The British imperial history grant will be used to purchase a microfilm collection of the British Foreign Offices U.S. correspondence from 1930 to 1948. These files will show the increasingly over-shadowing role of the U.S.A. in all British discussions of imperial defense, mandates, Middle East policy, trade, fi-

nance, etc. In terms of research value this correspondence is extremely diverse in content and comprehensive in scope of topics. It will present the British view of a major world power during the period of decline for the British Empire. Faculty and students in history, political science, and African studies will be using the files for research.

The French linguistics grant will be used to purchase a microfiche collection entitled *Archives de la linguistique française*, journal backfiles, and dictionaries. These acquisitions will significantly strengthen the library's capability to support the Department's strong interest in French linguistics. The Department's theoretical and historical approach to lexicology and terminology make its research activities unique in Canada.

"These grants are a real boon to the Library in its efforts to support the ever growing research interest of the University," says Dr. Garlock. "The SSHRCC program encourages the development of unique specialized research collections in order to improve research resources in Canada for our scholars. It's a valuable program."

BAFFLE BOARD

Baffle #9: Tech Talk

Report on Baffle # 8 PRESS GANG: Matching Newspaper Names

You were challenged to match the locales for newspapers which appear in the Atlantic Region and elsewhere. For those who may not know, the **other** APLA is the American Patent Law Association.

1. **APLA Bulletin:** St. John's, Nfld. and Arlington, Va.
2. **Northern Light:** Bathurst, N.B. and Thief River Falls, Minn.
3. **Gleaner:** Fredericton, N.B., and Kingston, Jamaica
4. **Western Star:** Corner Brook, Nfld., and Lebanon, Ohio
5. **Advertiser:** Grand Falls, Nfld., and Kentville, Nova Scotia (Never say the Quizmaster is fair.)
6. **Citizen:** Amherst, N.S., and Ottawa, Ont.
7. **Advocate:** Pictou, N.S. and Red Deer, Alta.
8. **Guardian:** Charlottetown, P.E.I., and Manchester, England
9. **Free Press:** Dartmouth, N.S. and Winniepg, Man.
10. **Bugle:** Woodstock, N.B. and Nile, Illinois.

Here's another round of English words whose meanings or whose homophones have been applied to high technology industries. For example, RAM is no longer just the male counterpart to EWE; it's an acronym for Random Access Memory. This Baffle devotes itself to tech talk word games. We'll tell you what it's not; you tell us what it is! Up screens!

1. A **mouse** is no longer just a pest or a black eye.
 2. You can have **jitters** with your **bugs**, but they don't necessarily go together.
 3. **Bits and bytes** are not snack foods.
 4. **CATSS** are not domestic pets which purr.
 5. A **PC** could be a politician or library resource, but not to you **hacker**.
 6. Any way you **slice** it, a **breadboard** isn't for your casual use.
 7. You don't throw a **SNOBOL**.
 8. **ULYSIS** is not a Greek hero.
 9. **Screens** once kept out flies.
 10. A **floppy disk** is not a **Reader Digest** promotional record.
- In the next issue, the answers to what those computer buffs are really saying in cocktail party corners.