# HIGH SPEED ONLINE SEARCHING

# at the NATIONAL LIBRARY

# of CANADA

by

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ABSTRACT

Advantages and disadvantages of high speed online searching for Canadians are outlined. Experiences of the Computer-Based Reference Service at the National Library of Canada with 1200 baud searching since 1975 are also given.

In July, 1975, the SDI Division of the National Library of Canada received Ms Sally Batcheldor of the New York Times. The purpose of her visit was to assist in the start up of the SDI Division's use of the New York Times Information Bank. The equipment used by the Division at that time was a VuCOM I, an acoustic coupler and a non-impact printer. The Computer Communications Group of Bell Canada, represented by Bob Birks, was contacted to come in at the same time because, during the week prior to Ms Batcheldor's visit, it became obvious that the high speed of the Information Bank's data transmission would require some different equipment and possible adjustment of existing equipment. The VuCOM I, the coupler and the printer had been used by the Division since 1974 for CAN/OLE, QL, SDC, and Lockheed systems access. All of these systems operated at 300 bauds. The Information Bank at that time was accessible only at 1200 bauds. In order to access the Information Bank, the VuCOM I was switched to 1200 bauds. However, a 1200 baud modem was not available, so an Anderson-Jacobson modem had to be brought in from the United States. Since the printer could not be adjusted and no 1200 baud printer was available to us, we made adjustments whereby we set the terminal in page mode and when the screen was full we would stop the action, turn on the printer, bring the cursor up to the upper left corner and print the full screen, turn off the printer go on with the search until the screen was full and so on. This was not very satisfactory, due to the fact that the online time use is extensive and slow, and therefore costly. Another problem arose which confused us all. The VuCOM I was set for our searches on other systems at full duplex but this prevented the searchers using the NYTIB from seeing their own message to the computer. The solution, of course, was to set the switch to half duplex. This, in turn required other changes to the configurations. Perhaps the most exasperating was the requirement of the Information Bank to press CONTROL D instead of the carriage return key. Pressing Control D put the terminal in a send mode just when it should have been in a listening mode. This, unfortunately, caused the computer to drop us because the message the computer received was that we had closed off. Getting back on was not a problem but the searcher was dropped soon again. Thanks to the efforts of Bob Birks and Sally Batcheldor(now Sally Stanley) we persisted with the problems and developed rather strange search techniques to let the computer know we were still searching and waiting to receive. A few months later, the GDC-202 modem for 1200 baud transmission became available and many of our previous problems were cleared up.

By 1976, the New York Times made their system accessible at 300 bauds, as well as 1200. It had been apparent to Ms Stanley that they were missing a large part of the market in the United States and Canada by operating at 1200 bauds rather than 300 since most of the terminals and peripheral equipment were available and within reasonable price range for 300 baud searching only. In 1977, INFOMART (SDC in Canada) had contracted with the New York Times to represent the Information Bank in Canada. Many Canadian libraries and information centres were pleased to have this easy access to the NYTIB, which had previously been elusive due to the cost of equipment for 1200 baud searching, the necessary contractual agreements, the training costs and so on.

However, the pendulum is now swinging back to favour the 1200 baud transmission speed. At the 40th Annual ASIS meeting held in October 1977 at Chicago, there was an excellent tutorial on Telecommunications and Terminals for Online System Use. The topic which seemed to excite most interest was the use of 1200 baud access. Computer systems operators praised it and so did the small number of librarians who are now familiar with it. Advantages such as cost-effectiveness, browsing capability and, of course, speed, were mentioned. Judging by the response and size of the audience, U.S. librarians and information centres will be expanding their experience into higher speed transmission. No doubt, as more librarians become accustomed to online searching and more sophisticated and experienced in their knowledge of exploring data bases online, they will turn to higher speed data transmission as natural evolution.

The experience of the Computer-Based Reference Service (formerly the SDI Division) of the National Library, has proved extremely valuable in that 1200 baud searching is familiar and has been made to work to our advantage. Most online systems, are now offering 1200 baud access, as well as lower speeds. Thanks to DATAPAC, INFOMART and Lockheed can now offer Canadian searchers 1200 baud as well the lower speed transmission. QL Systems Ltd will have access to 1200 bauds shortly. Todate, CAN/OLE has no plans to offer higher speed access.

The experience of the Computer-Based Reference Service, has been that 1200 baud speed is especially useful for searching full text data bases such as the New York Times Information Bank and the same will be true of the Globe & Mail, when QL is available at 1200 bauds. The speed at which the data comes up on the CRT is very impressive, three times as fast as 300, and this can be very convincing at a demonstration. On the other hand, it is far too fast to be read at the normal rate and can bother the eyes of the searcher. The waterfall effect of the print cascading down the screen may even upset a less experienced searcher.

Printing online at 1200 bauds would be especially useful for Canadians searching remote computer files, the speed, the cost saving and the immediacy of the information would make it really worthwhile. However, up to now, 1200 baud speed printers have been extremely expensive and therefore the advantage of savings have been lost. Recently, however, a high speed portable printer has come on the market which is less than $3,000. This will make high-speed searching more attractive to Canadians. Searchers are able to browse without undue anxiety as to high cost and to more frequently make use of the NEIGHBOR and EXPAND commands.

The author has noted that most searchers at the NLC use the 300 baud access unless special features as those noted previously are required. The reasons they prefer 300 bauds have been that they like to read the screen to evaluate the search and that they want to demonstrate to the user and point out citations. Obviously, 300 baud has the

greater advantage for this type of online activity. However, for Canadians 1200 baud should prove popular, especially in view of the solution it offers to the present turn around time and postal lag of offline printing at remote locations.