

Online at the Synagogue and Religious School Library: the Background, Planning, and Implementation of a Computerized Library Management System

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Introduction

While most research and scholarly libraries are now fully acquainted with automation procedures, many synagogue, school and center (SSC) libraries are still unfamiliar with the procedures of, or benefits to be derived from computerization. With the advent of microcomputers, automation is no longer restricted to large libraries. This paper describes how automated processes were implemented in the Sindell Library of Temple Emanu El in Cleveland.

The Impetus to Automate

The library staff had for some time been concerned with the need to improve general library efficiency, especially in retrieving bibliographic information that can be searched by a variety of access points, e.g., author, title, subject, call number, and accession number. We also wanted to develop a more efficient circulation system. Book cards had been used for circulation control, but our filing system had become complex. We filed by date due, subdivided by faculty or student homeroom, and then by author. The system was difficult to use. A considerable amount of time was spent filing cards for items borrowed, and carding returned items. Approximately half of all staff hours was consumed by the maintenance of circulation records. When a mistake was made and a card misfiled, valuable time was spent searching for the stray card.

We decided that improving our circulation service was to be our top priority. We began to search for an automated system (a combination of software and hardware) that would suit our needs. We felt that a commercially produced circulation program would be superior to anything that we could write and create on our own. Although we knew how to use a computer, our technical skills did not compare with those of professional computer programmers. Noting that the cost of commercial programs was relatively modest, we sought to rely on the programming experts rather than to develop an in-house system.

Our selection of software was restricted by the fact that a TRS-80 Model 4 computer

had been donated to the library. We could therefore consider only software that was compatible with this type of computer.

Evaluating Software

Most reliable software producers are pleased to provide a demonstration disk for examination and evaluation. While the "demo" disk is generally only a representation of the program, it was generally more than adequate to allow us to become familiar with a given program. We evaluated commercially produced software programs that would accomplish what we wanted, and reviewed thoroughly their descriptive material. Having examined several simple programs that were compatible with our TRS-80, we selected one that was adequate for our circulation volume. The program did not require the input of collection data to be functional.

The program, called Bookworm, which is produced by the J.L. Hammond Company, is extremely "user-friendly." It provides an options "menu" for selection of a desired function. Upon choosing the option, additional clear and brief directions prompt the user. Printed documentation is clear and concise. Technical support is available from the producers, through a toll-free number, in the event that problems arise.

The program clearly met our needs. Our only dissatisfaction came from the failure of the software developers to provide an updated version of the program. (Many software producers periodically issue updated versions of their programs, which provide adjustments based on feedback from users, while maintaining the original format of the program.) We did not consider buying a different, more powerful program for our old computer since newer programs, with enhanced features, are seldom serviceable with older equipment.

Assessing the First Stage of Automation

When we first began to use the TRS-80, Model 4 computer in September 1984, we had heralded it as being the ultimate in library efficiency. After using the program

for approximately two years, it was possible to assess our automation project. In retrospect, our initial system might be compared to moving from the Stone Age to the Machine Age, but during the first year of computerization, it had appeared as the cure-all for all of the library's technical problems. We believed that we had made the best decision based on the prevailing factors. Our high volume of circulation, especially during religious school class visitation periods, became much more manageable with the system. We were able to determine quickly when charged volumes were overdue. We could promptly produce overdue notices to patrons by accessing this information through multiple fields, while previously we could only access this information through date due and—with additional effort—classroom or homeroom.

Patrons quickly recognized that the library was using a more efficient system. This perception of increased efficiency motivated users to return books promptly. The presence of an "electronic big brother," vigilantly watching over circulation records, led to a decrease in overdue books. Most importantly, we realized that not only had the technology changed, but our own perception of what we required in an automated system had changed as well.

Researching a Second-Generation System

Our awareness of the inadequacies of the initial system was of practical benefit when we considered the specifications for a second-generation system. We had become convinced that to provide fully automated services, a hard disk system would have to be acquired. We initiated a search for software and hardware that would best serve the library's needs.

We already knew that it was necessary to match a computer system (the hardware) with an appropriate program (the software). Thus, our evaluation process involved not only reading reviews of library programs, but also consideration of the equipment on which the programs would be operated. By attending three conferences dedicated solely to library automation, we observed first-hand the

operation of several systems, and heard personal accounts of systems already implemented. We examined several demonstration diskettes, but most importantly, *knowing our particular set of circumstances*, we bombarded the producers with questions directly related to our operational setting, vis-à-vis the specifications of the programs they offered.

Choosing an Upgraded System

We had used the Apple MacIntosh for word processing in the library for some time. The simplicity of its operating system is impressive, and this was a significant factor in our final selection of hardware. The ease with which the MacIntosh allows for menu selection through pull-down screens by "mouse" control, combined with the excellent on-screen prompts in compatible programs we had used, influenced our decision to find a software package that would serve as a powerful library management tool operable in combination with the simplicity of the MacIntosh hardware.

Limitations of space make it impossible to relate all the details that were considered before a final decision on a program was reached. We selected the Mac Library System (MLS) produced by CASPR (Computer Advanced Software Products) of Cupertino, California. This program integrates seven library modules into one program, for use on the MacIntosh computer. Each module is a sub-program within the software system that is designed to manipulate any or all of the following files: budget, vendor, acquisition, catalog, patron, and circulation information. A bar-code reader can be used to enter both patron information and bibliographic data when utilizing this program.

The system utilizes the pull-down screen and mouse control features of the MacIntosh. The modules are so well integrated that a natural progression occurs from one to the next, allowing for "seamless" operation of the program.

In sum, this program automated major library functions in a manner that we found to be exceptionally "user-friendly," and at a reasonable cost. Student library helpers in the sixth grade have even learned to use the program.

Preparing to Automate

We spent a considerable amount of time placing our entire collection in proper order during the summer preceding implementation of the system, as a minimum of items are in circulation during this season. We

went through the collection in shelf order and prepared an accurate inventory of items. We then prepared a "shell" or "skeleton" record in the database for each work to be cataloged, by entering the call number, author, title, and subtitle of every item that was physically available. To avoid the creation of duplicate catalog records, as items were returned after the inventory began, we checked the database to see if the items had already been entered. (The system now checks ISBN to avoid duplicate records.)

The shell records can easily be updated. More extensive information was not entered, as the MLS program will soon feature MARC (machine-readable cataloging) tags, enabling us to download/receive complete bibliographic records from the Library of Congress. Importing information from such records will save a vast amount of time.

An Online Catalog and More

The Mac Library System (MLS) enables us to prepare a bibliographic record for each work in the database. Once a bibliographic record has been made, a pull-down of "+ copy" enables us to add data for additional copies of the same book. Thus, only one

bibliographic record is made for each title, with the exception of books with new editions. In such cases, a new bibliographic record is made to reflect the data for the new edition. Once the initial bibliographic record has been created, all of the functions of the program are activated.

Subject Access

Key word search facility is the most outstanding feature of this program; it compensates for the inability to perform a direct search on subject headings, even though there are subject headings in the records. When a "key word" is entered, the computer lists all matching entries; the individual catalog records can then be displayed. This search method has several distinct characteristics. Individual words can be searched without entering lengthy subject headings. The method locates the search term if it has been entered in any of several fields: author, title, subject headings, and notes. Thus, a term that is part of a subtitle, for example, can be located. Such a word might not be found in a traditional subject heading. A patron was highly enthusiastic when he entered the word "Irgun" and three entries were found. All the entries came from the title field.

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On the negative side, frequently used words and names (e.g., *Israel*, *Bible*, or *Abraham*) result in a large number of entries being located using key word search. The number found may be so great that a disproportionate amount of time must be spent on looking through retrieved records for the desired item. Furthermore, since it is not possible to restrict a "key word" search to a specific field, a search on names such as *Abraham*, *Israel*, or *Noah* will retrieve records regardless of where such terms are found—in the author, title, subtitle, or subject field. In such cases, subject access would be more efficient than key word search.

From experience with other databases, however, we have found that subject access is impeded if a subject heading is not entered properly by the patron. A subject search will not be successful if a part of the heading is not entered in the proper sequence or is misspelled. In contrast, there is a smaller margin of error when using key words, which are shorter and more concise.

Going Online

Once the entire collection of books, cassette tapes, records, videocassettes, filmstrips, and study kits was entered into the database, it was possible to begin online circulation services using the computer. Our library patrons were fascinated to observe the system. Frequently, we found library users more interested in the new technology than in new books!

We can readily prepare a patron record for new users of the library. It is not necessary to issue a card to patrons, since the patron number can be found very rapidly on the system. We did, however, purchase a program that enabled us to prepare barcodes. This allowed us to make cards for students in our religious school. We wrote each student's name and religious school homeroom on a catalog card. We keep the cards in the library and distribute them to students when a class comes to the library. This enables us to have a person check out books by scanning the patron-number card and the bar-code on the book being borrowed. A date-due "gun" is used to place a label with the due date on the outside of the back cover of the book. This is identical to the method used in all public libraries in our area. We print the name of our congregation on the label, above the due date, to minimize the chances of our books being returned to a public library. We are now able to complete circulation for a class of twenty students, with each youngster borrowing two books, in less than five minutes! Additionally, we are able

to produce overdue notices automatically and instantly learn when a patron is delinquent.

This system makes it possible for our patrons to check out books when a staff member is not present. Since all of the books have bar-code labels, it is easy to check out a book when the system is not being operated. A sign directs patrons to record two data elements on a form: borrower's name and the four- or five-digit bar-code number that can be readily found in the book. When the circulation librarian returns, the information for each item charged out is placed into the database.

Backing-Up Data

Our greatest fear concerning the use of an online system was the possibility of a major data loss. Some confidence was gained from the fact that during the years when we used the TRS-80, we had backed up our records constantly, and we never had to rely upon our back-up diskette because of data loss. In considering the purchase of a hard disk system, we were concerned once again with the procedures for creating a back-up copy of the data. We had spent approximately five hundred employee hours to develop the initial database. In addition, approximately ten hours per week are devoted by the librarian to adding bibliographic records for new acquisitions to the database. A loss of data would be a tragedy, and we had to take all possible precautions. We needed a system that would enable us to back up our data quickly from the hard disk. For this reason, we purchased the Dataframe XP 60-40 unit, which rapidly prepares a cartridge tape copy of stored data. In approximately seven minutes, this unit produces a duplicate of the data held on the hard disk. During the period of major data entry, we deemed it prudent to run a back-up routine two times a day. Thus, had we suffered a major loss of data during that period, the system could have been restored with minimal difficulty.

Cost of the System

The cost of implementing this system was not insignificant. The purchase price of a single-station version (one terminal only) of the Mac Library System was \$1,695. The software must be operated using a hard disk drive for storage of the data. We purchased the Dataframe XP 60-40 unit, costing approximately \$2,500. Less expensive units are available; however, we opted for this model because of the ease with which a tape back-up can be made. The price of the MacPlus Computer was approximately \$1,500. A printer is essen-

tial to operation of the system as well, and our Imagewriter II cost approximately \$475. We purchased a bar-code reader for approximately \$700. Bar-code labels cost us ten cents each, although we have since acquired a program that enables us to print our own bar-code labels. We paid approximately \$2,500 to high school graduates who worked during the six-week period when we entered records for the vast majority of our holdings into the database. *Total start-up costs:* \$9,370, plus bar-code labels.

Conclusions

While the costs of implementing this technology were high, we feel that our new system has significantly improved the quality of service that we provide to our library users—thus, justifying the expenditure. We are constantly monitoring our circulation patterns—a task that can now be performed by computer. We find that library usage has increased by approximately 25% since the system was implemented. Additionally, the elimination of several manual functions, such as the typing of labels and acquisitions lists, as well as the general saving of time associated with automated circulation routines, reduces our need for student workers, which brings additional financial savings.

Although at the outset we had certain reservations about the use of a computer, from our initial experience, and with the continued enhancement of our automated services, we conclude that the computer has become a close friend and ally of librarian and library user alike. We have recently implemented MacLap, a patron access online catalog. Its features may be described in a future article.

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