capturing color. Numerous connectivity solutions such as MS-DOS drives, modems, network boards, cables, emulation boards, etc. provide routes of information transfer among different operating systems. The AppleFAX modem offers standard FAX capabilities as well as easy transfer of high quality documents among Macintoshes. Laser printers include the low-end quickdraw printers, PostScript printers, and high-end color printers. Many well-equipped service bureaus provide access to expensive and higher quality input and output devices.

Software capabilities have improved dramatically. Third- and fourth-generation desktop publishing packages provide numerous new features as well as import and export filters to collect pieces from various sources of publication. Graphic tools such as FreeHand and Illustrator 88 can produce PostScript artwork, convert bitmaps to vector graphics, and generate color separations. Programs such as ImageStudio and PixelPaint provide grayscale and color manipulation of scanned images. High quality PICT and EPS clip art as well as halftone photographs are becoming available on floppy as well as CD-ROM. Network software such as TOPS and file translation filters make file translations among operating systems almost transparent to the user.

With all the hype about hardware and software capabilities it is easy to lose sight of the most crucial element in the desktop publishing equation: personnel to operate desktop publishing systems. Producing good-looking materials requires a combination of graphic skills, visual literacy, editing skills, and layout design experience. Unfortunately the learning curve for these skills is often much steeper than for learning how to use hardware and software. While many librarians already possess the skills for processing text, graphics and design are crucial elements of desktop publishing. Without these right-brain skills, desktop publishing might become another "half brained" idea (Murr and Williams, 1987).

As personnel become proficient at desktop publishing, questions of job definition may arise. How much time should be devoted to desktop publishing? Is your primary function as a librarian or a desktop publisher? How can desktop publishing tools improve your ability to do your job as librarian? These and other questions indicate some fo the conflict and change that desktop publishing has brought to libraries. However, it is clear that desktop publishing plays an important role as another tool for librarians.

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Online-Assisted Collection Development in a Government Depository Library Collection

by *Stephen F. Palincsar*

Conference papers and professional journal articles discussing the design of computer programs tailored to an institution's specific needs often focus on large, complex applications—programs that prepare statistical reports, manage the workflow of an interlibrary loan department, track the expenditure of acquisitions

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```
10    ' A simple program to read GPO Item Numbers and write
20    ' DIALOG.select and print statements in BASICA/GW-BASIC
30    '
40    OPEN "ITEMS.LST" FOR INPUT AS #1        ' Open input
50    OPEN "SEARCH.66" FOR OUTPUT AS #2       ' and output files
60    '
70    BEGIN.FILE$ = "BEGIN 66"                ' The
80    SELECT.RN$  = "SELECT RN="              ' boilerplate
90    PRINT.IT$   = "PRINT 1/3/1-3 VIA DIALMAIL"  ' text
100   '
110   WHILE NOT EOF(1)                        ' While not at end of input file,
120      LINE INPUT #1, A$                    ' read an item number
130      PRINT #2, BEGIN.FILE$                ' write "BEGIN 66" to file SEARCH.66
140      PRINT #2, SELECT.RN$;                ' write "SELECT RN=" but don't end line
150      PRINT #2, A$                         ' now write the item number & end line
160      PRINT #2, PRINT.IT$                  ' write "print via dialmail" statement.
170   WEND                                    ' Now do it again.
180   '
190   PRINT #2, "LOGOFF"          ' Log off DIALOG
200   CLOSE #1, #2                ' Close both input & output files
210   SYSTEM                      ' Quit BASIC and return to DOS
```

Figure 1. A simple program written to run with the BASICA or GWBASIC interpreter supplied with most versions of MS-DOS/PC-DOS.

```
180-A
1000-B-2
9-A-12
99-B
```

Figure 2. These item numbers can be read by the program in Figure 1. Here they are called ITEMS.LST.

```
BEGIN 66
SELECT RN=180-A
PRINT 1/3/1-3 VIA DIALMAIL
BEGIN 66
SELECT RN=1000-B-2
PRINT 1/3/1-3 VIA DIALMAIL
BEGIN 66
SELECT RN=9-A-12
PRINT 1/3/1-3 VIA DIALMAIL
BEGIN 66
SELECT RN=99-B
PRINT 1/3/1-3 VIA DIALMAIL
LOGOFF
```

Figure 3. The program in Figure 1 can write select and print statements into an output file. The command here was SEARCH.66.

funds, or index a unique technical report collection. Erecting such edifices can be much like building bridges, involving detailed engineering studies, carefully planned acquisition of building materials, and a lengthy period of construction, producing glorious, indispensable artifacts intended to last for years of heavy use.

When computer resources were scarce and expensive, and automated solutions took years to develop, these were the only justifiable applications of automation. Today this is no longer the case. Personal computers have placed within the grasp of most librarians the tools to apply simple "throw-away" automated solutions to basic, small, and even non-recurring library problems.

The Technical Library of the U.S. General Accounting Office (GAO) is a depository library. In June 1988, the reference librarians in the Technical Library evaluated the library's despository profile, individually and meeting as a group. Over 250 item numbers were considered for either addition to, or deletion from, the profile.

Although there is no charge for publications distributed to depository libraries by the Superintendent of Documents, in no sense are those documents actually "free." The most costly resources in any library are likely to be personnel and shelf space, and even for libraries of executive departments and independent agencies of the Federal Government, which may dispose of unwanted publications after first offering them to the Library of Congress and the National Archives, careful selection is important.

However, the primary tools available for selection of depository materials—the *List of Classes of United States Government Publications Available for Selection by Depository Libraries* and the *Monthly Catalog*—have some significant limitations. Documents must be selected by class and item number, but class titles may give little indication of which publications are included in a particular class, how many are generally issued, or how frequently they are issued.

An answer to these problems may be found by using online bibliographic resources. The GPO monthly catalog online (file 66 in DIALOG) includes the item number as a searcheable field (RN). The number of postings retrieved by selecting an item number under consideration will indicate how many titles have been issued under that item number, and a display of the three most recent postings in a format including titles, subject headings, pagination, and publication dates would provide more satisfactory information on which to base a decision to select or drop an item number.

While entering a set of commands to select and print an item, such as

```
BEGIN 66
S RN = 1008-C
PRINT 1/3/1-3 VIA DIALMAIL
```

is easy enough to do once, entering several hundred such sets of statements will be tedious, difficult, highly prone to error, and slow. However, of the 45 characters that make up the three commands in the example, only six actually represent information that will change: the item number. All the rest will be repeated exactly, time after time, as many times as there are item numbers to examine.

A simple program such as that shown in Figure 1 (written to be run with the BASICA or GWBASIC interpreter supplied with most versions of MS-DOS/PC-DOS) will read item numbers from a file (here called ITEMS.LST, Figure 2) and write select and print statements into an output file (SEARCH.66, Figure 3) as long as there are item numbers. When the list of numbers has been exhausted, the program will write a logoff statement, close the files, and finish. The resulting file, SEARCH.66, may be uploaded to DIALOG with any satisfactory communications program.

Once the search results have been downloaded from DIALMAIL it is an equally simple matter to use the computer to format the data to facilitate study. For example, the reference librarians in GAO's Technical

Library found that our list was easier to work with when the pages were numbered, each item number began at the head of a page, and unnecessary prompts and messages were eliminated. Printing the list with a letter-quality printer also enhanced readability.

Additional editing tasks, such as the insertion of form feeds at the start of each search history display, and the elimination of unnecessary message prompts, can also be performed with the aid of a simple program.

The Inhouse Expert: The Role of the Systems Librarian

by Carol A. Parkhurst

The systems librarian's job of managing automated library systems is a specialization that has become common in libraries only within the last 10 years. Most libraries with microcomputer or mainframe-based inhouse library systems have at least one staff member functioning part-time or full-time as a "systems librarian," even if the title is not used.

Systems librarians rarely spring fully formed from library school. Most have acquired knowledge on the job, through trial and error, from formal courses and continuing education, from vendors and data-processing professionals, and from other systems librarians. A systems librarian should first and foremost be a *librarian*, and only secondarily a computer expert. A systems librarian needs the general ability to think and analyze in a rigorously objective and logical manner, but there is usually no need to be an expert programmer. Technical knowledge and programming ability can actually be disadvantages, if misapplied. More important is a solid understanding of library operations and of the needs of the library and its clientele.

A systems librarian has to deal as much with people as with machines, and must have good communication skills combined with patience, tact, and understanding. An ability to see the "big picture" as well as to pay close attention to detail is required. Systems librarians operate at many levels, from policy making, to contract negotiation, to making data cables.

In a study of organization charts done by the Association of Research Libraries (SPEC Kit 129), all but seven of 86 academic libraries reviewed had some type of unit to deal with automation. The administrative location of that unit varied tremendously, but slightly over half reported to the Director.

The functions performed by a systems librarian in managing automated projects vary depending on the size and type of institution, but may encompass some or all of the following tasks:

- project planning
- justification
- budget preparation
- development of specifications and requests for proposal
- selection of equipment, software, and vendor
- contract negotiation
- project implementation
- coordination of acceptance testing
- contract management
- coordination of training
- documentation
- maintenance of effective relationships with vendors
- monitoring of daily operations
- problem solving
- coordination of maintenance of equipment and software
- assisting of library departments and branches in implementing systems and developing policies, procedures, and user documentation

Systems librarians are often responsible for developing long-range plans for automation in their libraries. They communicate with library administrators and all units of the library on issues related to automation. In addition, they may coordinate with other libraries in a network or a state university system. Where automated systems are run by external data processing centers, the systems librarian serves as the primary liaison to data processing personnel. A systems librarian may have ongoing support staff or may draw upon other library staff as needed for assistance.

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