Community Service and Small Computer Systems

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Within many public libraries, considerable attention is being given to efforts variously termed Community Information Services, Information and Referral (I&R) Services, and related activities. Under whatever name, the aim of these programs is to increase the library’s responsiveness to local community information needs. This trend is encouraging, because it forces the library to focus more on the local community’s needs, and this new focus can bring the library to the attention of a class of users which found the library’s other services irrelevant to their needs.

In some ways, the public library is a social organization similar to a local newspaper. The paper is “plugged in” to elaborate information gathering and distribution networks, such as the AP and UPI news-wires, the wire-photo services, the syndicated columnists, and many others. These networks provide far more information than any one person, or community, can possibly absorb. The local paper is structured to select from this over-abundance only those items which are of some relevance to the community for whom the paper is intended. In addition, the paper has a staff of local reporters, whose job is to cover news stories in the community itself. Editors of local papers know that their job is to present both world news and local news, but they are also aware that they will stand or fall pretty much on the quality of their local news coverage. Small papers do not attempt to be the New York Times or the Washington Post. Not only do they lack the resources, they would probably lose subscribers. To the smaller papers, what’s going on in town is as least as important as what’s going on in Washington. It is

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the editor’s aim to produce a satisfactory “information package” acceptable to the local subscribers by an appropriate blend of both world and local news and feature stories.

The library’s task can be seen in a very similar light. Its job can be described as that of both selecting appropriate items from the entire universe of potentially useful items, and the gathering of specific local data, with the aim of providing a blend of both “world” and local information which meets the needs of the users. Obviously, the library produces a much more specific service than the paper; one aimed at particular users or user groups, rather than at the community at large, but the over-all tasks of the two are in many respects similar.

Like the paper, the library is “plugged in” to a wide range of external sources; theoretically, to the bibliographic resources of the entire world, though most of these resources are of no interest whatsoever to the library’s users. Libraries, by and large, can do a good job of accessing these records, but only if they exist as books, or some other form of graphic record which the library can buy or borrow. Libraries have not been so adept if the information does not exist in some neat “acquisitionable” package.

Unfortunately, much of the local information which the library needs to provide I&R and similar services is of this untidy form. There is no place from which to buy or borrow the needed data. The library must create this information package—in effect, nearly become a publisher. “Nearly” is the operative word here, and a problem. All publishers know that most of the expense of any publication is in the “first-copy” costs. Once a manuscript is in press-ready, or camera-ready, form, the rest is relatively inexpensive. Second and subsequent copies are cheap. It is just a matter of letting the presses roll a bit longer. The real cost is in getting everything organized to produce that first copy. If the library is to compile a directory, a card file, or some other systematic means of access to local community information, it must absorb all the first copy costs of the publisher, but with little hope of recovering them thru the sale of second and subsequent copies. Even if the information is produced in book form by the library, the potential market is so small that there is little hope of breaking even on the expenses.

Meeting the need for community information services thus
presents some new challenges to librarians. If the services are to be provided, the costs must be absorbed in some manner. It is expensive in staff time to ferret out the sources, organize the data and keep it current. The staff must become "local reporters"; someone must also be "the editor", responsible for the organization and management of this data. In addition to the cost, there is somewhat of a job-shift involved. Librarians are not used to thinking of themselves as publishers. It requires, if not new skills, at least a somewhat different view of a librarian's job to shift from being a "collector" to being a "producer" of information resources.

One of the most troublesome aspects of this local publishing effort is that it is never-ending. No I&R directory or Community Service Guide is useful if it is obsolete. Many libraries have published such guides, or perhaps a listing of journals at main and branch libraries, or some similar local access tool, only to find that somehow there is never enough time for a second edition. Another edition requires not only the re-validation of the old data, but the gathering of new data, followed by re-typing, re-proofreading and correction of the entire publication. Typically this is not a task that would be viewed with much enthusiasm by an already busy reference department.

The recent advent of on-line search systems and bibliographic networks has produced a great improvement in our ability to get at the world's "records". Even more recent improvements have made it easier to obtain a copy of many of these records. It is clear that large scale computer systems and telecommunication systems are having a major impact on the way in which one can identify and locate such items. However, these computer systems have been of no use at all in the "local news" environment. Library directors see these systems, such as OCLC, RLIN, WLN, and the various commercial data-base vendors providing rapid and cost effective access to millions of references, most of which are of no local interest at all. But they see no help for their immediate community information needs from the large international systems.

In attempt to determine whether some of the problems of local information access could be alleviated by a small and "local" computer system, the Indiana University Graduate Library School (GLS) has obtained such a system, and is engaged in various experi-
ments with it. One of the things that has been discovered is that no such system is available "off-the-shelf" today. Certainly there is no system in the sense that there are computer circulation control systems available from various vendors, or acquisitions control systems from book and periodical jobbers.

The computer system at the GLS is one of those known in the computer business as a "micro-computer" or more briefly, as a "micro", which places it near the least expensive end of the price scale. The over-all computer market today can be conveniently, if roughly, broken down into four classes by price:

<table>
<thead>
<tr>
<th>Price Range</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $1,000</td>
<td>Home/hobby/personal computers</td>
</tr>
<tr>
<td>$1,000–$10,000</td>
<td>Micro-computers</td>
</tr>
<tr>
<td>$10,000–$100,000</td>
<td>Mini-computers</td>
</tr>
<tr>
<td>$100,000 up</td>
<td>Large computers</td>
</tr>
</tbody>
</table>

These boundaries are not hard and fast, but are reasonable approximations. One might consider computers in terms of an automotive analogy. The smallest systems are equivalent to one's own personal car. The micros are in the "pick-up truck" class; the minis are perhaps 16 to 18 foot cargo trucks; the large systems are semi-trailers. Keeping in mind that a micro is in the pick-up truck class, we have found that there are a number of useful tasks that can be done in a small-library environment.

Many of the information requirements of a reference staff are variations on a single theme. Typically there is an aggregation of separate items of information about many discrete entities; local social welfare agencies, day care centers, elected and appointed officials, service clubs, churches, and many other diverse groups. The problem is 1) to keep the specific data about each group current and 2) get reasonably fast access to the data from several different points of view. These might be subject, personal name, agency name, date, classification, or any other characteristic of interest. Essentially, it is a "main-entry" file, with a variety of indexes.

A library may also maintain a list of names and addresses of agencies to whom it sends program announcements and similar material. This is fundamentally of the same form as the directory data. Also, libraries often require such things as periodicals holdings lists,
selective bibliographies and local resource directories. These, though functionally quite different than an agency directory, are structurally similar.

One illustration of the use of a micro in this area is shown in Figures 1 and 2, which are reproductions of an experimental Community Service Directory. Figure 1 is a portion of the alphabetical listing by organization; Figure 2 is a portion of the subject listing.

Though the directory, by agency and subject, may be the public product of this micro-computer, the printed version is not the most difficult part. The real problem, as anyone who has worked in this area can attest, is in keeping the information current and accurate. The system which produced the sample directory is designed so that the record for any agency can be located and updated or corrected with minimal effort. It is possible for the librarian to find any agency by name, by subject, or any other element and examine that record on the display screen. The agency can then be telephoned to validate the data, changes made directly, and the changed record restored in the system at once.

Given that a library might consider using a microcomputer to help provide access to community information, what is required? The first requirement is that the library leadership be committed to the effective use of such a system. Without this commitment, no amount of hardware will be of any use. The initial investment in a system of this sort is less than $10,000. However the hardware is not the most important feature. Because one is now dealing with a computer system in-house, it is essential that some staff member have the ability to understand the system and use it, and enough time to do so. No longer can the library staff simply describe its requirements to a data processing staff elsewhere, at the city or the county DP center. Someone in the library will have to know the system. There is little alternative today to having a library staff member or two also qualified to write programs for the system. This does not mean that the programmer is the only person on the staff who can use the micro. It should be the programmer's job to design systems which can be used by any member of the staff.

Thus, if a library wishes to work in this area, it will be a pioneer. Fortunately, the cost of pioneering in this area is not nearly as great as in earlier computer projects. Not only is the equipment itself
much less costly, it is easier to use. Such small systems are not nearly as remote as earlier ones, in both a literal and a figurative sense. The computer is right there in the library, accessible and usable at any time. There is no time-sharing, or complex accounting system, or elaborate operating system between the programmer, or user, and the system itself. An important advantage in having a librarian/programmer is that programs can be modified, adapted and changed to meet new requirements far more quickly, accurately, and cheaply than is otherwise possible.

There has not been a great deal published on this subject as yet, though a few articles regarding microcomputers have appeared in the literature. In addition, the MITRE Corporation has published two excellent reports on the subject. The first of these, Simpson’s *Microcomputers in Library Automation* addresses this matter directly. The second, Toohill’s *Guide to Library Automation* does not deal specifically with micros, but is nevertheless valuable, as the important management and administrative considerations are much the same regardless of the size of the computer used. The same is true regarding *Introduction to Minicomputers in Federal Libraries*. The important points are the same, regardless of whether one is concerned with a federal library or not. None of these references deal with the process of designing and programming a particular application however. In fact, nothing has been published which would aid in the creation of “library-like” programs. There is surely no lack of programming texts for micros, but they invariably emphasize the numerical and computational aspects heavily, with very little consideration to the problems of data files and the manipulation of strings of text. Two works which should be a part of every programmer’s library however are Nevison’s *Little Book of Basic Style* and Bruce’s *Software Debugging for Microcomputers*. These two volumes offer valuable assistance in the creation of clear, rationally organized programs and in the detection and correction of the inevitable errors which occur in program development.

Librarians have become accustomed, over the past decades, to film and projectors, to records and stereo equipment, to TV cameras and broadcasting, to OCLC terminals and on-line data base systems. They have learned elaborate procedural rules for using these systems, and many have become quite adept at interacting
with these systems. Learning to program a micro-computer is at about the same level of complexity. Not everyone on a library staff can, or wants to, use DIALOG or OCLC, but quite likely two or three persons can. Similarly, it has become feasible for two or three people on the staff to be able to program a micro, writing programs and system which meet local and immediate needs, thus permitting the library to provide new, or at least much improved services to its users.

References


Figure 1

Sample Listing of Community Service Groups

Audubon Society - Indiana Sassafras Chapter
John (Abe) Eyed
RR 1 Box 375
Nashville IN 47448
988-2359

Bloomington Township Fire Dept
5081 N. Old St. Rd. 37
Bloomington IN 47401
339-1114
Community Service and Small Computer Systems

Citizens Participation Council of Monroe Co.
William Lloyd, Pres
4760 W. Woodland Dr.
Bloomington IN 47401
332-2133 (w), 876-2150 (h)

Employment Security Division
Steven Miller, Asst. Manager
450 N College Ave.
Bloomington IN 47401
336-6877

Fire Dept, Bloomington Township
5081 N. Old St. Rd. 37
Bloomington IN 47401
339-1114

Indiana University, Womens Studies Program
Jean C. Robinson, Coordinator
Memorial Hall
Bloomington IN 47405
337-0101 (w), 334-0175 (h): 4303 Trailridge Rd

Steven Miller, Asst. Manager
450 N College Ave.
Bloomington IN 47401
336-6877

Monroe County, Bloomington Township Fire Dep.
5081 N. Old St. Rd. 37
Bloomington IN 47401
339-1114

Figure 2
Subject Listing of Community Service Groups

Clubs—4-H
Thrift4 Toilers
Peg LaVora, 4-H leader
1404 Claremont
Bloomington IN 47401
336-6211
Clubs—Homemakers
   South Union Co-Workers
   Mrs. Alma Long, Pres.
   315 Kimble Drive
   Bloomington, IN 47401
   334-5678

Clubs—Special Interest
   Audubon Society — Indiana Sassafras Chapter
   John (Abe) Eyed
   RR 1 Box 375
   Nashville IN 47448
   988-2359

   Sycamore Valley Gun Club
   Dr. Charles Schick, Pres
   985 Woodland Dr.
   Bloomington IN 47401
   336-1125 (w), 876-1499 (h)

Education—Schools
   Stone Belt Center for Retarded Citizens, Inc.
   Joan Burton, Exec. Director
   2815 E. 10th St
   Bloomington IN 47401
   332-2168

   Templeton Elementary School
   Edwin Smith, Principal
   1400 S. Park
   Bloomington IN 47401
   332-3407

Emergency Services
   Monroe County, Bloomington Township Fire Dept.
   5081 N. Old St. Rd. 37
   Bloomington IN 47401
   339-1114