A library building consultant discusses ways in which public libraries can plan for the participation of their libraries in the National Information Infrastructure (NII). With participants ranging from schools to agencies of local government, large volumes of information will be passing through the NII network. Public libraries will be engaged in handling demands from users. Some users will make their demand for information exclusively from homes and offices, while others will continue to visit the library, possibly in increasing numbers. Public libraries will need far more power and telecommunications capability that ever before. The guide distinguishes between libraries less than 30,000 square feet in size and those of larger size, and discusses related concerns. Outreach services and more space requirements for staff functions are also addressed. For the larger library, employing a telecommunications consultant is recommended. This is especially important for the headquarters or central library which may be supporting several branches or affiliated libraries. Cautions are expressed against under-planning staff and public workspace. In conclusion, erring on the side of growth is proposed when planning space for both public and staff. (Contains four references.)
The Public Library Building and Information Services
Gerard B. McCabe

Introduction: The Public Library and the National Information Infrastructure

The federal government's proposal for a National Information Infrastructure (NII) linking libraries, schools, local governments, hospitals, public safety departments, and other agencies will have far reaching effects upon public libraries. The concept of these entities interconnected into a giant information network and the extraordinary level of information exchange it will generate appears almost incredible. Yet, it is entirely feasible. The level of funding proposed by the federal government, about $100 million for 1995 alone indicates the seriousness of this endeavor. (American Libraries 1994: 296)

Clearly, the federal government intends the inclusion of every public library and every school into the network. What will happen? Demands for information and reference service will increase to unusually high proportions; information will be of several grades ranging from very specialized data to the casually informal. Current experience with the Internet makes this apparent. Managing the flow of information and the service demands will consume considerable staff time, but advance planning for this within the library building will help ease the difficulties.

Public librarians will consider where the public library fits into the scheme, what changes may be coming in services and in space requirements, and plan to connect to the network. In this paper, ideas and suggestions for consideration are discussed.

Configuring the building:

The first consideration is for possible increases in entry traffic. Although this is difficult to predict, current indications are for increases in the volume of outreach activity. Public librarians will be helping patrons learn to use the network, possibly one on one or in classes. The conference room or the multi-purpose room, even both depending upon the number of patrons that can be anticipated to want training, should have a communication terminal with the network connection. With the regional telephone and cable companies vying for the home market, emphasis may very well be on home use. Patrons will come to the library first for training and then access the library from home and through it the network. Eventually, the network will reach into almost every home, and this combined with the information demands from the other interconnected public agencies will push activity to very high levels. The major planning effort should be directed at servicing this activity.
For a new building, it is simple enough to describe the need for power and telecommunication lines and the means of managing for them. The typical public library will need much more power and communications capability than may have been required in the past. New construction should provide for these lines to be carried to most if not all of the user seating. Typically, all power lines enter a building through one access point and are organized in a utility closet where the circuits are established and identified. Telephone lines may do the same, and the telephone control box may be in the same closet or a separate space. From this space or spaces, the lines are carried to service and work locations through conduits or ducts placed in ceilings, floors, and walls.

In planning for the power supply, several incoming lines probably will be necessary, the number depending upon the size of the building. Circuits should be used generously, and an alternative power supply should be planned against the eventuality of outages. In another paper on academic libraries, this question also is discussed. The point of having some relief from power outages is to prevent loss of work at the computer workstations which the library is supporting. With the introduction of high levels of information exchange activity comes the responsibility to safeguard communication and preservation of the information for the well-being of users. An uninterruptible power supply may be in the form of a storage battery system, or an instant on fuel operated generator. In high sunshine climes a small library may be well advised to consider supplemental solar power. New developments in the latter industry may be worth exploring.

The introduction of the NII brings another communication medium into play and that is fiber optic cabling for the network. This is used to bring the communication lines to the library where the fiber optic cables can be connected to category 5 high speed copper wiring which will interconnect the microcomputer terminals. In the other paper mentioned earlier, reference was made to the Sweets Catalog 1994 with entries beginning at number 10270 for equipment that will do this. This is mentioned by way of example and the reader may realize that other means of so doing may be in or come into existence.

For the older library building, if ducts and conduits are in short supply, the plan for introducing network access may require significant alterations. The important changes will be in the power supply, the introduction of an alternative power source, and increased communications including telephone, high speed copper wiring, and fiber optic lines and cables.

Space:

The smaller public library, up to 30,000 square feet

This paper foresees changes in space allocations for information services in most small libraries ranging from modest to significant. The major change will be in the equipment introduced to
handle the higher volume of information service, and either additional space or space reallocations will be required in both public and staff areas. Especially important will be space for outreach service touched upon by David Kaser in a 1991 presentation. (1992: 32) The library will load commercial, local governmental, and its own self produced databases on its local network for access by the public at home, or business and industry. What is recommended is that work space for staff receive more consideration and provision for this equipment be made in that space. David Smith comments on the need for staff work space, often very tight and advises consideration of staff needs.(1992: 12) Users within the library also will access the same sources online, but may not have the communication equipment physically present in user space, rather it will be in a staff workroom. Further, an increase in telephone or e-mail inquiries may occur, because users at home may need occasional interpretative assistance with an online database. Work space for a staff librarian who provides telephone and e-mail service only, possibly during evenings, may be necessary.

The larger multi-level library:

In configuring space for information services for the central city or large suburban public library, the library’s role in outreach to satellite libraries as well as to the general public must be considered. If the library’s mission includes information services to branch libraries or to distant rural libraries then space factors for staff and equipment require more consideration. Power supply and communications ability require ample discussion and considerable thinking. Other forms of communication such as microwave transmission may require consideration. Advice should be sought on communication systems, or a communications consultant employed, before any space allocations are forecast in new construction. For existing buildings substantial modifications may be required and some sacrifices necessary particularly if expansion is not feasible. For the downtown central library this can be serious; exterior expansion space may be limited or non-existent. Placement of both inhouse auxiliary and outreach service equipment in public areas may not be practical. The former may be be best served by having auxiliary equipment in staff only areas and linked to external machines. The staff time needed for servicing machines economically is a factor requiring a decision on location. The additional workload caused by outreach services also will require more work space.

In calculating the square footage required, the margin of error for planning too little could be high. If using standard formulas for staff workspace, adding in a factor of 20% or even 40% may help arrive at the correct size. Smith’s caveat about overly adhering to standard space formulas is well worth heeding.(1992:5) Good judgment is essential and the primary consideration must be given to the nature of the work to be done, then adequate space needs can be determined. Thirty years ago, 125 square feet for a staff work space was considered adequate if not generous. Adding 20% or 40% or 25 or 50 additional square feet would produce spaces of 150 or 175
square feet. Either one may not be unreasonable if the work station is designed for a high volume of activity with several pieces of equipment involved, and space for the workstation should be programmed into an open work area or large room, not a private office. Referring again to Smith’s warning about excessively small staff spaces, it is inconceivable that the space will remain underutilized given the circumstances of the large public library and the tendency for volume of work to increase. (1992:12)

The Workstation:

Until recently the concern in public libraries was for reader seating, some of which had power supply for listening purposes, use of simple machines, or supplemental lighting. With the introduction of microcomputers the need for power supply to even more seating became evident, and networking brings the need for improved communications. The term workstation is defined as an accommodation with a terminal which functions only online, or a microcomputer which can function both as an online terminal and as an information processor. The simple workstation may provide for users or for staff. Planning for more complex workstations requires an understanding of the type and extent of work to be supported. In addition to a terminal, will a workstation include auxiliary equipment such as a printer, a hard disk, a supporting disk drive? Currently, the recommended minimal space for a public workstation is 45 square feet including the terminal and its stand, chair, and printer space. Referring back to Smith’s caveat on formulas, use caution against a fixed estimate applied to all workstations. (1992:5) In planning for workstations, decisions on the handling of auxiliary equipment should be made. In public areas should terminals, for example, be daisy-chained to a printer or cable-linked to a printer in a closed room? Similarly in staff work areas, additional space is required, perhaps, for library materials in process, a telephone, file cabinets, and the like. For the smaller public library with a limited mission, the space need not seem excessive, but it should be sufficient to do the necessary work without undue strain on staff.

Conclusion:

The new and greater involvement in meeting community service needs through the National Information Infrastructure makes new space configurations for both inhouse and outreach services necessary for public libraries. For existing buildings, either some expansion or internal reallocations will help provide means for meeting higher levels of activity. For new buildings, work and user spaces can be planned, estimates may be made for numbers of public workstations and size of staff workspaces, but the cautious planner will allow an overage for future growth. Erring on the side of flexibility may pay future dividends.
References:


The National Information Infrastructure
What it may look like

Your Library

Schools

Local gov't

Gen'l public

Hospitals

Bus. Industry

Public Safety

Police/Fire

Library of Congress
Large Public Libraries
Academic Libraries