

Moving to the Next Online System: Points to Consider

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The Prince William Public Library System, in northern Virginia, serves Prince William County and the cities of Manassas and Manassas Park. The library implemented its first integrated library system, the DataPhase ALIS II system, in 1981, with approximately forty terminals in two full-service libraries, for circulation, cataloging, and an online catalog function for staff. Between 1985 and 1987, six mini-libraries were opened. The lack of capacity to add terminals and degradation of response time made it apparent a new system would be needed. The OCLC LS/2000 system was selected and brought online in 1987, with fifty-three terminals for circulation, cataloging, and an online catalog for staff use. An additional thirty-five terminals were added in 1989 for the Online Public Access Catalog (OPAC). In November 1988, a bond referendum was passed, providing for construction of two regional libraries, to open by 1992. Plans call for building two additional full-service libraries, as well as renovation of some existing facilities before 1998. The LS/2000 system cannot be upgraded to handle projected system growth. Planning is currently underway to provide for the next integrated system. The new system will be implemented for circulation, cataloging, and OPAC initially, with optional capabilities for acquisitions, serials control, and materials booking. It will be required to support at least 250 terminals and projected annual circulation in excess of three million.

A library in the midst of planning and implementing its first online system is probably not spending a lot of time thinking about the next system, but it should certainly be aware that its dependence on automation will grow. Sooner or later that first system will no longer meet the needs of the library and an upgrade of that system or an entirely new system will become a necessity. The knowledge that there will eventually be a subsequent system should be kept in mind as decisions about any system are made. The implementation and formal acceptance of a system should not be viewed as an end to the process, but as a precursor to the next system. While the typical online system life span may be five to ten years, some libraries may need to begin actively working toward the next system even before the current one is fully operational.

Many libraries will be involved with one or more system upgrades before they are faced with obtaining a new system. Typically, a library may

add or change disk drives, add ports for additional terminals or upgrade the operating system or CPU. When a library upgrades its existing online system, the basic functions will usually stay the same and staff may feel fairly confident they will not be required to learn an entirely new set of procedures for working with the system.

At some point, however, even a system upgrade will not provide or restore adequate performance. The following circumstances usually require a library to obtain a new system:

1. System performance has never met contractual specifications and the vendor is not able to provide such performance.
2. Due to growth of the library system or an increase in the number of transactions, system performance no longer meets the library's needs and the vendor or other appropriate personnel cannot upgrade the system to support that growth.
3. The vendor, due to financial constraints or executive decision, will no longer support the current system.
4. Existing system functions, due to hardware or software constraints, have become static ones which can no longer be enhanced, while the library's needs continue to require improvements to such functions.
5. The current system provides a limited number of functions (such as circulation control only) and the library needs to add other functions (such as an online public access catalog, or OPAC).
6. The system itself is a constraint to the library's need to automate other functions. A library might, for example, need to interface its online system with a book or serial jobber's online system, yet the interface cannot be accomplished because the library's system does not have the capacity for such an interface.
7. The cost to upgrade the system would approach or exceed the cost to purchase a new system. While a major upgrade may cost up to half the original system purchase price, if such an upgrade is estimated to cost \$8,000 to \$9,000 per terminal, a new system would probably be more

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cost effective.

While the procurement process for the new system will probably be somewhat the same as for the initial system, a number of factors which were not issues with the original implementation must be considered with the new system.

Equipment Issues

Will the new computer be housed at the same site as the previous one? If so, that site may require an upgrade to the air-conditioning system or additional specialized electrical outlets in order to be adequate for the new equipment. The logistics of detaching terminals from the existing CPU, moving old hardware out and new hardware in, and connecting all peripherals, will not be insignificant. In order to decrease downtime required for the move, the library might wish to have the new hardware tested and the data base loaded at an external site.

Will any existing equipment be used on the new system? If existing terminals, scanners, printers or telecommunications modems or multiplexers are to be used, each item must be thoroughly tested to ensure total compatibility. Existing data cables may require different pin configurations or connectors (male vs. female or vice versa).

Will the new system require the same supplies? The new system may, for example, require data base copy from disk to tape, rather than disk to disk. Additional storage space for such supplies may also be required.

Data Base Conversion Issues

What information will be transferred? Almost certainly the bibliographic and item records will be transferred, and, for most institutions, existing patron information will also be loaded into the new system. The library may also wish to transfer current transactions (items in circulation, overdue items, fines and fees, etc.). If so, leased or purchased portable terminals or microcomputers may be required to store the most recent transactions so they can be loaded into the new system as closely as possible to "coming up." If current transactions are not transferred, the library will need to consider the status to be given to existing items (some vendors show all items as "available" at system start-up) and to work with the vendor to develop alternatives if that status is not acceptable.

How will the data base be transferred? The new data base may be created by using removable disk packs, by a system-produced tape utility, or

by tapes from an external source, such as OCLC. Producing tapes from the existing system may have a significant impact on current system use, since it may slow response time or require the system to be unavailable for patron and/or staff use during the process. The conversion of data from existing system format to new system format may require extensive "massaging" on the part of the vendor, especially if the data is being converted from non-MARC to MARC format or if the library has requested significant data base "clean-up" (such as correcting inconsistent call numbers) as part of the process. Conversion exception reports may require much staff time. All such factors may increase the time required for the data base conversion.

Will new system records contain additional information? The library may wish to add information to patron records, for example, and will need to determine whether the new information will be added manually or in some automated manner. There may be changes to the way in which certain MARC tags are used or previously unused tags may now be designated for use.

Some libraries may need to begin actively working toward the next system even before the current one is fully operational.

Implementation Issues

Will the new system be phased in or will the changeover be done as a single step? If the new system is implemented all at once, the staff will need to be "experts" on the existing system on Sunday night and "experts" on the new system on Monday morning (although actual downtime may range from a few hours to a number of weeks or more, depending on system size and conversion complexity). If the new system is phased in while the existing one is phased out, the library will obviously be running parallel systems for a time. Some transactions will be duplicated, but staff will have more time to become comfortable with the new system.

Will there be additional functions available on the new system? The library may wish to implement the new system with all functions, or to implement only those functions present on the previous system, and add other functions at a later time. It is certainly easier on the staff to implement in the latter manner, since it provides

time for them to become comfortable using the new system for familiar functions before they are required to master procedures for entirely new functions.

The implementation and formal acceptance of a system should not be viewed as an end to the process, but as a precursor to the next system.

Staff Issues

How will the new system affect the staff? Just as with the original implementation, staff may need to be assured the new system will not replace them. There may be resistance to the change and there will certainly be concern as to how it will affect day-to-day operations, since they will be moving from a system which is fairly stable and at least familiar, to a system which is new and unknown and may require some "fine-tuning" during the first few days or weeks of use. It is still critical to keep staff informed and involved as much as possible during planning and transition. Let them know who is on the automation committee and encourage them to ask questions and to offer suggestions. Keep them aware of the current status of the project via regular updates from the committee and by any other means possible. While the staff will be more computer literate and sophisticated about automation, training will continue to have a high priority, and both vendor-supplied and in-house training should be geared toward helping staff feel comfortable with the new system before they are required to use it for the public. It may even be possible to offer staff a chance to use the system in ways they have not previously used it, such as allowing circulation or technical services staff help to train patrons to use the online public access catalog (OPAC).

Won't the new system solve all our problems?

Online system vendors are moving toward making systems more modular and more flexible to meet the needs of a wide variety of user libraries, so the systems can be extremely complex. Each system has specific hardware and software constraints and they all work differently. There will be unforeseeable issues which arise, or functions which work differently in reality from the way they were explained or perceived as working. While obtaining a new system can be an opportunity to overcome weaknesses of the current system, staff should not assume the new system will

solve all problems. A "perfect" system simply does not exist. It is an interesting exercise to have staff write down all they like and dislike about the existing system before they discontinue using it. Have them set aside those lists, then reread them six months to a year after implementation of the new system. They may be quite surprised at their memories of how good (or bad) the "old" one was.

Public Issues

What about the public? Just as with staff, it is vital to keep the public aware and involved, especially if they have been using the system as end users on an OPAC and/or will be doing so with the new system. They, too, may have some resistance to the idea of a change. Keeping them involved in the process can help allay their fears about learning to use the new system and give them more of an understanding about changes with which the staff will be dealing.

Policy and Procedural Issues

Will the new system affect policy? Identify any current library policies which might be affected by the new system, or ones which staff have wanted or needed to have changed in the past, but were unable to change due to system constraints. The desired changes may now be possible.

Which procedures will change? Don't assume functions on the new system will operate the same way they did with the previous system, even though they may have the same name. System prompts will change, as will sign-on and sign-off procedures. There may be changes in the way bibliographic, item and patron records are entered, edited, or deleted. The new system may have new terminology: "checkin" and "checkout" may now be "discharge" and "charge;" "reserves" may now be "holds." It may be helpful to provide staff (and patrons) with a cross-reference glossary of the old and new terms. Changes in functions may impact on the information which is available on reports, or the manner in which that information is organized. The names of available reports may change and even reports with the same or similar names may not provide the same information as before. New terminals may have different keyboards; the same key on two different keyboards may not provide the same result. Function key set-ups may not be the same for the new system. New scanners may not work the same as the old ones in reading barcode or OCR labels. Notice formats may change, requiring changes in printed forms used, postage costs, and possibly in produc-

tion schedules.

"Behind the Scenes" Issues

Will access to parameters/profile information change? Computer operations staff may be responsible for new or different functions on the new system. Their procedures will be new and may, for a time, require slightly more time for problem resolution.

How will offline activities differ? Data base copying and the running of batch programs or other required offline activities (checking the integrity of the data base, running transaction

purges, or monitoring available space capabilities) may be required at different frequencies from before and may take more or less time than on the previous system. These activities may impact differently on public service hours and on staffing patterns.

This article contains only a sample of the factors involved in moving from one online system to another, and is certainly not a complete list. The issues and problems faced by any one library may vary greatly from those faced by other libraries, with one exception: they must all be aware they will at some point go through the process again ...and again.



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