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AN ONLINE CIRCULATION SYSTEM FOR WESTCHESTER LIBRARY SYSTEM

I wish to begin with a few happy announcements. First let me introduce Stanley Ploszaj, the new WLS Automated Systems Specialist. Stan was hired June 13th, and tentatively scheduled to begin work toward the end of July. Stan was most recently the sales representative for C L Systems Inc., CLSI, the world's largest turnkey circ system vendor. Prior to that he successfully managed the implementation of a CLSI system for the 10 state college libraries of New Jersey. Coupled with his outstanding technical services background, he provides WLS with the expertise and experience so crucial to the success of our automation effort. He has a bachelor's degree and a master's in history from Columbia University, and a library science degree from Rutgers University. Welcome to WLS Stan, and we are all deeply pleased that you are here.

The second announcement is that WLS has received approval of its preliminary proposal for retrospective conversion funds from the State of New York. With that approval WLS is being invited to submit a final application for an LSCA Title III grant of \$80,000. The approval of the preliminary application is a precedent three years in the making. Although there is no guarantee that the final application will be approved, it is noteworthy that the preliminary proposal has received the State's blessing.

These funds will be used to get more of the unconverted union catalog holdings into the WLS machine readable database. This work is crucial as it will limit the amount of inputting that will have to be done by the member libraries for the circulation system, thus reducing local library conversion costs. It was an uphill struggle to get these funds, and it is with great satisfaction that this first step toward ultimate success is reported tonight.

It should be noted as well that WLS has an application pending for additional retrospective conversion moneys with the METRO Region's database project. Perhaps lightning will strike twice.

Also WLS was the recipient in 1984 -- 1985 of a modest \$5,000 study grant from the above METRO Region database project. A study, the final report of which is imminent, has been completed which has given most valuable and statistically sound information about the accuracy of union and local catalog holdings. A methodology for learning about each library's holdings was included in the study, and it will provide a sound basis for future conversion cost estimates which heretofore have been hazy.

Lastly, WLS has arranged with UTLAS to begin training immediately for the member libraries' online use of the WLS and other online records. UTLAS has committed to training 10 libraries by September 1st assuming there are 10 libraries ready to begin training in the REFCATSS function. Note that REFCATSS permits author, title, subject, boolean combination and LC, ISBN and UTLAS RSN online searching of the entire database. This will have an appreciable impact on decreasing local cataloging costs for books not acquired through WLS. All WLS cataloging will be available online to the member libraries the instant it is completed. Those library directors who wish for their libraries to begin use of UTLAS in June, July or August should call Aline Locascio at the UTLAS office in White Plains to work out the arrangements.

That concludes the announcements.

June 20, 1985

THE CIRCULATION SYSTEM

There is much to be covered tonight, and there is a need for plenty of time for discussion. We also must have the same vocabulary and basic understanding for an informed discussion. Without belaboring the obvious, let us begin with what we are talking about when we are discussing a circulation control system.

There are three basic files of information which comprise the circulation system. First, there is the file of patrons, i.e. the names and addresses of the people who use the library. An unique number also is assigned to the patron so that the WLS patron records include name, address and this unique identification number. The system library card contains all of this data and also has a metal embossed slug with that number. Just look at your library card—if it is a system card—and that is what you will find there.

Second there is the file of book or item information. Each book has some means of identification which specifies the book's author, title and call number (if non-fiction) and some kind of copy or accession number if there is more than one copy of the book held by the library. In this way the specific copy of the book is uniquely identified. Typically this information is printed on a pocket glued into the back of a book, and on a book card which is inserted in that book's pocket.

The third file is the combination of the first two files, that is, the charging of a book links the patron record with the book record. When a book is returned, that link is broken and the book is available for the next borrower. A reserve is taken for a book when someone already has taken the book out; a record is established which will trap the book upon its return for the user who placed the reserve. Overdue notices are generated when the record of the patron link to the book continues a specified period after the date that link should have been broken. In other words a notice is sent if a person has the book out a specified number of days after it was due.

Delinquent files are kept at each library on those patrons who have accumulated an excessive amount of unpaid fines. Reserve files are those files kept at each library for the books which are sought by patrons but are in circulation.

Note that when the book is charged to the patron, some form of date due notice is given. In some libraries it is a card with the date stamped on it. In others it is a slip or card upon which the date has been stamped, but the slip or card also contains an unique transaction number. This latter form of date due notice, the one with the unique number on it, is called a transaction or T slip.

These various categories of data are not unknown to the lay public. What is not generally known is the complicated set of procedures by which these circulation activities are carried out by the local library.

What will be shown in the slides which follow are three different ways WLS member libraries circulate books, take reserves, send overdue notices, check for delinquent borrowers, collect fines, etc. The first system is totally manual, and is usually called the Gaylord system, after the company which makes the machine on which it operates. The second and third systems are photocharge systems.

After these systems are demonstrated, a brief look will be taken at two online circulation system implementations. One in a medium sized library, and one in one of the nation's great library systems.

SLIDE SHOW

1. Manual charge system
2. Photocharge system—Brodac
3. Photocharge system—Microfilm and computer assisted
4. Online circulation system in medium sized library
5. Online circulation system in major public library

We will now take a brief standing in place break.

The slide show should have made it abundantly clear why an online circulation system is the highest priority of the member library directors. This has been their number one priority for at least the three years since I have been employed by WLS; and the circulation system escrow fund established by the Public Library Directors' Association (PLDA) prior to 1982 indicates an even longer commitment. It is hoped that the improvements in service, productivity and overall cost-efficiency of an online circulation control system have been demonstrated by the show; what we will talk about now are the issues with which we must deal if WLS's member libraries will have a system which meets the needs of their respective staffs and users.

Recently a "Questions and Answers" paper was distributed to the WLS trustees and to the member library directors. For those of you who did not get to see it, a copy of it, along with two other documents, will be available outside this room when you leave. One of the other two documents is a selection of excerpts of publications which specifically speak to the benefits of online circulation systems, and the other is an article on circulation systems past and present which treats in more depth, the kinds of systems shown in the slide show. I am also leaving you with a copy of this talk.

COSTS AND TIME FRAME

The two major areas not covered by the Questions and Answers document are the cost of a system and the time frame for the installation of a system. Let's discuss these first and update some of the related questions afterward.

ASSUMPTIONS

Let us note the assumptions under which we are working. It is assumed that WLS will procure a turnkey circulation system, that is, one which includes all necessary hardware, software and maintenance support for the full use of the system on an ongoing basis. It is assumed also that the system will be based at WLS as the central site location for the computing and data storage equipment which will be connected via phone lines to the member libraries. Lastly, it is

assumed that all thirty-eight (38) member libraries will participate in the system to one extent or another.

CAPITAL COSTS

Thus, what we are talking about for WLS is the following:

1. Central site computer equipment and all requisite software.
2. Sufficient terminals at the member libraries so that all circulation activity is adequately handled, as well as reference inquiries by library staff as appropriate.
3. Communications equipment which will enable the online interconnection between those terminals and the central site computer installation.

The above equipment represents the largest portion of the capital investment. The other areas of start-up costs are as follow.

4. The construction of a computer room adequate to meet the needs of the central site envisioned, above.
5. The purchase of specially prepared bar code labels in member library and shelf order to facilitate the entry of the library materials into the system. This also includes the cost of all other labels, as well as getting from UTLAS a tape of all of the WLS member library holdings.

These five items constitute the capital costs associated with acquiring an online circulation control system.

Estimated capital costs were arrived at by inviting discussions with representatives of the two leading circulation system turnkey vendors. It should be understood and underscored that all qualified vendors will be given ample opportunity to compete for WLS's business, but practicality dictated that these preliminary discussions be limited to these two, C L Systems Inc., just bought by the international conglomerate, TBG; and the circulation system sold under the name ALIS III, formerly owned by Data Phase Systems Inc., but just acquired by UTLAS Corp., WLS's catalog utility.

Representatives from both of these companies met with me and we determined that the single largest capital expense, items 1-3, the hardware and software for a non-stop or fail-soft system supporting the

circulation and reference needs of the 38 member libraries would cost under \$1,500,000.

The cost of building the computer room and furnishing it appropriately, including the necessary redundant air-conditioning, raised floors, and, where necessary, dropped ceilings, will not exceed \$125,000.

Lastly the label and tape products will not exceed \$125,000. Note this includes labels for over 4,000,000 items as well as the tapes from UTLAS for over 300,000 machine readable catalog records.

To summarize, the capital costs will not exceed \$1,750,000. It is expected that the competitive situation will yield the same goods and services for less than \$1,500,000. Each company's figures were based on their standard price lists, so the reduction of \$250,000 is conservative and not overly optimistic.

Hardware and software:	\$1,500,000
Construction of central site:	125,000
Label and tape processing and products:	125,000
Total (not to exceed):	\$1,750,000

ONGOING COSTS

The next question is what will the system cost on an ongoing basis?

The annual maintenance charges for the hardware and the software varied between \$145,000 and \$178,000. The other two major costs are for central site computer operators, three full time people because of the extensive 7 day schedule maintained by the WLS libraries; and secondly, supplies and other expendables. These costs are estimated at \$60,000 per year for staff including benefits and \$20,000 for supplies, annually.

1. Maintenance for hardware and software	\$162,000
2. Computer operators:	60,000
3. Supplies:	20,000
Total Annual Operating Costs:	\$242,000

Not included are telephone line charges because of the detailed data required for making estimates. The phone company charges by the quarter of a mile for the first seven miles of distance a library is from the central phone station; without, knowing each library's distance, specific charges are not knowable.

There are different ways to configure phone lines so as to reduce costs, which also leaves the problem of figuring precise costs a most difficult one.

Some very crude estimates place these line charges between \$50 and \$100 per month per library (not per terminal), or \$600 to \$1,200 per year.

Local Conversion Costs

The last area of expense is labeling the materials in each library's collection, and connecting the materials with the records in the computer. This activity gets the name "conversion" because the manual records for each book or item get converted to machine-readable records entered in the circulation system. This can be labor intensive activity, but highly skilled labor is not usually required. This is a wholly local cost, but it can be reduced to the extent that WLS gets as much of the retrospective union catalog converted. No specific local costs are offered because there are too many variables which are unknown at this time.

TIME FRAME

The earliest equipment will be installed will be September, 1986. An enormous amount of work must be completed between now and then, including analysis of needs, specification of requirements, the design of a system, negotiation with qualified vendors, site preparation and implementation.

Stan Ploszaj will be spending a great deal of time with the member libraries getting such fundamental data as peak transaction loads, service requirements, and overall transaction activity. The idiosyncrasies and variability which characterize a cooperative library system will have to be analyzed and framed into a coherent set of

requirements which can be made to work in an online circulation system environment. Lastly how will the data base be built, and how will local retrospective cataloging get into the computer in a way that is consistent with the fine database already developed?

It is difficult to be more specific as regards timing because of how much more needs to be known about individual library participation. It is believed that the estimate is accurate that all of the participating libraries will enter the system in the space of three to five years from the initial date of implementation.

WHERE WILL THE MONEY COME FROM?

It is clear from the Fundraising Feasibility Study contracted for by WLS that it will be more than an uphill battle to raise the funds required to pay for this system in its entirety. There was not the leadership present to readily raise from corporate, foundation or private sources the funding needed. It was believed that local, county and state public sources, coupled with some philanthropic activity, should be able to raise the moneys needed for each library's entry into the system.

Some directors already believe that their towns will support their participation in the system. Some individuals interviewed during the study indicated that they will work within their community to raise whatever funds are needed for their library's participation. And during a recent visit to a Friends of a library group, these Friends committed to raising whatever funds were necessary for their library. It is clear that much support is already out there.

For estimation purposes, it is suggested that libraries work on the basis of \$10,000 to \$12,000 per terminal required as the method of figuring out the cost of the system. For example if a library has two charge stations, and wishes to have a reference (or inquiry) terminal at a reference desk and in the children's room, a total of four terminals would be required. The cost to that library would be \$40,000 to \$48,000, depending on the configuration and attendant cost of the total system.

It is my belief that these figures are conservative and that the per terminal costs might well be under \$10,000. The lower unit price can only be achieved if there is wide participation.

As to maintenance costs, a conservative estimate would be 10% to 12% per year per terminal of the capital cost of the terminal(s), plus the line charges of \$600 to \$1,200 already noted. It is hoped that a combination of factors will keep down the local contribution to the \$60,000 per year of salaries for the computer operators and \$20,000 per year of supplies. Thus if the library bought 2 terminals at \$11,000, the maintenance charges for the hardware and software--at 12%--would be \$2,640 per year. These numbers are only guesstimates at this time and are provided so that some planning can proceed.

Greater specificity is impossible at this time because it is not known how many libraries will participate and when. It is my hope that all of the libraries will come into the system in , less than three years and no more than five years.

The circulation vendors are very creative when it comes to getting paid, and a number of possibilities exist. For those libraries which find a capital expenditure wholly impractical it might be useful to look at a payout of the capital expense over a 2 to 4 year period.

POTENTIAL FUNDING SOURCES

STATE AID TO LIBRARIES: If there is a public library bill or an increase in state aid in 1986, undoubtedly some of the increase can be set aside for the support of the online circulation system.

SPECIAL STATE LEGISLATION: A letter was sent to the Westchester County State Legislative Delegation requesting support for this system. Copies of this letter have been distributed to each director, and it can serve as a model for individual lobbying efforts for this support. It is not too soon to start hammering away for this special legislation. A total of \$500,000 was requested.

SPECIAL COUNTY LEGISLATION: Preliminary discussions were begun with the County to get funding support in an equal amount to that requested of the State. It was suggested by the County Budget Officer we seek the funding in two equal annual appropriations of \$250,000

because it was more likely to be approved than a single request for \$500,000.

LOCAL COMMUNITIES: This is the heart of the funding. If each local community can begin work with their government officials, Friends groups, local philanthropists, etc. the needed funds can be found.

CONCLUSION

Rather than conclude with a money discussion, let us review what it is that the library directors want and why it makes sense. An online circulation control system will improve the quality of library service and at the same time control rising operating costs. It is beyond dispute that capital costs are increasing far less sharply than personnel costs, hence the claim that there will be better control of costs.

All of the studies consulted show that books will circulate more frequently, more fines will be collected, the patrons will get appreciably better service, and staff productivity will increase. Rather than spend so much time working on overdues and checking on reserves, staff will be able to spend more time with the public and doing those tasks not amenable to automation.

All of the holdings in the County's 38 public libraries will be available at an instant at any terminal, and one will know if the item is available or not. If it is not available, a reserve will be placed and the first available copy will be caught by the computer and routed to the user who reserved it.

The delinquent borrowers who have long been abusing the public libraries will no longer be able to do so. Once someone becomes a delinquent at any library, the person is a delinquent throughout the entire system and will not be able to use any library until his or her account is settled. The system will stop the person if he or she tries to use it.

Overdue notices will be sent as frequently as necessary, and not as staffing and convenience have dictated. Books will be returned more promptly, more fines will be collected albeit less per book, and the patron will feel much better about using the library. The incredibly

time consuming and almost futile overdue practices of the current system will be eliminated for good.

The laboriously maintained registration and delinquent files will be permanently eliminated. All of the information will be stored and available online.

Greater standardization will be achieved, despite local practice and idiosyncrasies, because the computer will have the flexibility, storage capacity and speed to accommodate and serve the varied needs of the different libraries. It is hoped that only a single card will be used by all libraries in the new system.

An online system will replace, in many cases, local manual or electromechanical equipment which is literally falling apart. The Brodac system is no longer maintained by the company that built and sold it, and much of the equipment in WLS libraries is very tired. Rather than replace this equipment and these systems wiudy ther non-automated equipment, the time is right to invest in an online circulation control system.

Undoubtedly other reasons can be offered, but let us stop here and entertain questions. I hope this information has been helpful.

Joan Silverstein, a WLS Trustee, member of the New Rochelle Board of Trustees, and formerly the New Rochelle Board's President, will join me for this question and answer period.

Thank you for your patience and attention. Please remember to pick up the handouts when you leave.