

ATTACHMENT II

D A L N E T

SITE VISIT TEAM

REPORT

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DALNET SITE VISIT TEAM REPORT

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DALNET SITE VISIT TEAM

REPORT

The DALNET Site Visit Team made trips to two installations of each of the top vendors, i.e., GEAC and NOTIS. The schedule was:

December 6	Northwestern University Library Evanston, Illinois (NOTIS)
December 7	Tulsa City/County Public Library Tulsa, Oklahoma (NOTIS)
December 10	University of Maryland Libraries College Park, Maryland (GEAC)
December 11	Scarborough Public Library Scarborough, Ontario (GEAC)

and

GEAC Headquarters
Markham, Ontario

This report describes the sites visited, identifies critical issues addressed, summarizes the findings of the Team, and relates them to the automation consultant, Dick Boss's, evaluation and recommendations.

SITES VISITED

Northwestern University Library

Northwestern (NUL) was selected for a site visit because it is the largest NOTIS installation with the most components of the software demonstrable. Since the NOTIS software was developed at Northwestern, it is also the Headquarters of the software vendor.

Northwestern has 140 terminals operational at 5 libraries including the Law, Medical, and Garrett Seminary Libraries. Of these terminals, approximately 70 are currently being used for the online catalog, LUIS. The system runs on an IBM 4361 Group 4, "supermini-computer" housed in the library.

Software operational at NUL includes: the online catalog, acquisitions, serials control, and a punched-card version of circulation, which is no longer available.

Tulsa City/County Public Library

Tulsa Public was selected for a site visit because it is the alpha site for installation of the new online version of NOTIS circulation. Tulsa includes a Central Library and 20 branches within a 45 mile radius. They had 2 million circulation transactions last year with 215,000 patrons.

They are currently sharing an IBM 4341 with the County Data Processing Department. The system began to overload when circulation was brought up, using 45 terminals, averaging 40,000 transactions per day. They are in the process of acquiring a second 4341, to operate the NOTIS system with three other low volume County users.

University of Maryland Libraries

The University of Maryland was selected for a GEAC site visit because it is a very large university installation with all components of the integrated library system either in current use or in testing. The system is operational at 16 sites, one of which is 150 miles from the central site, with 138 terminals performing an average of 115,000 transactions per day.

Their system runs on two GEAC 8000's, plus one Boolean processor. It is linked to the campus IBM network using standard linkages via Gandalf equipment. Links are also established for tape transfers to the Hewlett Packard used by the Bursar's Office.

Scarborough Public Library

The Scarborough Public Library was selected for a GEAC site visit because it is a very large public library installation near the GEAC headquarters. The Library has 16 branches plus 1 bookmobile and shut-in service for a user population of 436,100.

One GEAC 8000 is handling their annual circulation of 4 million items using 37 terminals. They are currently experiencing a 12 hour overnight routine to manage their circulation database. Scarborough operates the circulation module only, not an integrated library system.

CRITICAL ISSUES ADDRESSED

The critical issues addressed by the Site Team during the visits included:

For NOTIS:

- Can the NOTIS software design be modified to meet the requirements of a multi-type network?

J. Burke has made a commitment in writing to re-design the NOTIS patron file structure to accommodate a single borrower's card useable at more than one institution. She also agreed to enable the notices and bills to be printed by institution, rather than all on one form.

A future enhancement will provide for Online Catalog Screen information displays to vary by institution. And a commitment has been made to modify Harvard's acquisitions enhancements for other users.

Unfortunately, there are no plans to re-design screens and messages to accommodate the less experienced users; to display more than two levels of locations, e.g., the network, the institution, and the building; to design a secondary loan capability for interlibrary loan within the network; to enable more than one vendor file; or to automatically maintain summary holdings of serials. The current Acquisition component would have to be tested for its networking capabilities.

Networking is basically untested in a NOTIS installation. This means there is no other group of users at a similar stage of development with whom we could work.

- What is the timetable for implementation of the complete NOTIS circulation module?

Scheduled for Phase 2 of Circulation are: fines history on patron records, blocks for accumulated fines, microcomputer backup, reserve room, and inventory control. No date has been established for these components, so it is assumed 1986 or later.

- What are the upper limits of the IBM 4381 and what options are there for expandability beyond those limits?

IBM has now given us some answers to these questions. The largest IBM 4381 Model 2 should be able to accommodate up to 1,000 terminals. We would then have to upgrade to a Model 3. The Model 3-IBM 4381 is like two Model 2's linked together. We would have to duplicate the operating system on the second half, so we would only have 1.7 times the power of a Model 2. The total number of terminals accommodated by a Model 3 is unknown, but not double those on a Model 2. The next option is to convert to an IBM 3083, which can theoretically handle 1,800 to 2,800 terminals. In order to operate either the 4381 or the 3083, we need the MVS version of NOTIS, a more expensive operating system and more staff than are needed for the 4361.

- What are Harvard's plans for the Acquisitions financial component and when will their enhancements be available to us?

While at Northwestern, we saw screen displays Harvard had already designed showing they were proceeding well on their schedule. Even when implemented, their enhancements would be first generation and would still leave the system without year-end routines or multiple fiscal years.

NOTIS is now scheduled to receive Harvard's code in April 1985. They anticipate 6 months to incorporate it into the standard NOTIS package, so it will not be available to be tested until Fall 1985. Jane suggested that we consider being their test site for the new acquisitions system.

- Why did the University of Cincinnati scrap the NOTIS system after more than a year's use for data base conversion?

Different sources offer two explanations:

- (1) that is all they bought NOTIS for and had no intention of using it as an integrated system.
- (2) NOTIS handles networking less well than they needed and there were problems with using the online catalog and authority structure for multi-agency input.

Cincinnati has purchased BLIS for their integrated library system.

- Why has it taken the University of Florida since April 1981 to implement NOTIS?

They now use the online catalog without authority control and the acquisitions components without complete serials check-in. Check-in records have been in the process of conversion for over 1 year.

The answer seems to be complex. Florida had to re-write the software to MVS, develop their own OCLC loader, and customize some reports. They also had to coordinate the policies of four separate processing centers on campus in order to implement the system. They are now in the process of expanding to operate separate NOTIS systems for the state universities throughout Florida. This expansion has resulted in implementation delays for circulation.

- How much support will the NOTIS staff be able to provide for data base loading, telecommunications network design, installation, and ongoing system management?

Since NOTIS is still a small organization, there are fewer staff currently available to assist, however, NOTIS is in the process of adding more staff. And since they sell supported software only, there are not many sources of revenue to support service staff. NOTIS will write data base loader programs for Wayne State, and will do so for other DALNET libraries for an additional fee. They will assist for a couple of days with installation. They will give advice on the rest as they are able. They do not have the depth or breadth of experience found in a larger vendor's organization. We found that purchasers of the software were largely on their own. This enabled them to enhance the software without waiting for NOTIS to do so.

- Why does the Tulsa Public Library not plan to use NOTIS for an online catalog for at least five years?

One reason is probably lack of money to buy terminals, although the microfiche catalog now being used could be discontinued. Another reason is that NOTIS is seen primarily as a staff, or behind the scenes, tool. It has been fitted well into their technical services and circulation workflows at the Central Library.

- When will IBM-PC's be useable for circulation backup and as terminals to access NOTIS?

There is no date for their use as circ backup, or for any other micro backup for circ, however IBM-PC's can already be used as terminals on the system.

For GEAC:

- What assurance can we have that the proposed H-buss needed to link more than 2 GEAC 8000's will be available when we need it?

It is already being used in the GEAC banking application and should be available for library applications by mid-1986.

- What guarantees will GEAC provide that the DALNET circulation overnight maintenance will meet our requirements?

GEAC described the two strategies they were using to solve the problem of excessive length for circ overnight processing. They are working with each customer to streamline procedures. And they are re-writing the software to reduce the overnight process with results expected in six months. This has been confirmed to us in writing by GEAC.

This maintenance problem occurs when circ systems are being used to store large bibliographic records in lieu of having the MARC Records Management data base.

- What can be done to make GEAC database maintenance less cumbersome for technical services staff?

The MARC Records Management System is being enhanced to enable better screen edit capabilities. A commitment has been made to make the OCLC transfer operate in "real time" rather than batch overnight. GEAC is also considering enabling multiple subject authority lists to be used. There are as yet no dates established for availability of these enhancements, so it is assumed 1986 or later.

- Why is the University of Michigan considering scrapping their GEAC circulation system rather than expanding it to an integrated library system?

Again, the answer is complex. One large factor has been their deteriorating relationship with GEAC's representatives. An error made in designing their indexes caused serious response time problems and continued much too long before it was diagnosed and fixed. Whose fault that was is unclear. Like other circ-system-only GEAC users, they are storing large bibliographic records in their Circ database, which then increases their Circ database maintenance load.

- What support will GEAC provide for database loading, telecommunications system design, installation, and ongoing system management?

The Team met many GEAC staff members who can provide in-depth help in all areas. They have much experience with large single and multi-institution installations. GEAC is willing to assign a local hardware service person to this installation. They are also willing to assign a full-time Project Manager to the DALNET project.

- What are GEAC's plans for changing to a standard operating system and programming language?

In a "confidential" document distributed to Directors of GEAC Libraries at ALA Midwinter in January, GEAC makes a long range commitment to these new standards:

- (1) ISO Reference Model for Open Systems Interconnection (ISO/OSI) -- to govern internal and external communications;
- (2) UNIX as a standard operating system;
- (3) "C" the standard language in which UNIX is written.

These will be phased in over 5 years, with a "migration path" for existing customers.

- What is the upper limit on expandability of the GEAC hardware configuration proposed?

The maximum number of terminals for the configuration proposed by GEAC is 1,000 to 1,200. With the current DALNET libraries, there are plans for over 700 terminals over 5 or more years. That leaves room for 300 to 500 more terminals on the configuration bid.

- When will IBM-PC's be useable for circulation backup and as terminals to access GEAC?

Circulation backup using IBM (and other) PC's is now being tested, so should be available in a few months. IBM-PC's can already be used as GEAC terminals with the purchase of a \$149 enhancement.

- What evidence is there that GEAC will not fall behind in its delivery of the system proposed, as it has been doing with other customers in the past year?

None. It is expected that their delivery dates will be overly optimistic. This would have to be taken into account during contract negotiation as recommended by Dick Boss.

COMPLIANCE WITH FUNCTIONAL SPECIFICATIONS

A. OVERALL

The GEAC system meets many more of DALNET's functional requirements with software that is now operational in large single institution and network installations than any of the other systems. While it is continuously being enhanced, the enhancements are not being made to a "first generation" system. Networking using GEAC is a reality, albeit with problems.

The GEAC system is definitely the easiest of the two for library staff and patron use in public services. The Site Visit Team found it fun and exciting to use, and very easy to learn. It would be well received by all types of users, old and young, experienced and novice.

The NOTIS system, on the other hand, lacks several major functional components at this time, including circulation financial and backup components, interlibrary loan and materials booking, as well as the financial components of acquisitions and serials control. It is not yet tested in a networking environment.

To make up for these lacks in the NOTIS system, we will have to either wait for Northwestern and other libraries, e.g., Harvard, to provide the enhancements, or proceed to hire programmers and analysts to do them on our own. We can purchase the separate booking system recommended by NOTIS.

The NOTIS system is best described at this time as a staff tool, with automated manual files, rather than as a forward looking system designed for the library user.

B. ONLINE PUBLIC CATALOG (OPAC)

GEAC

1. Ease of use

Very user friendly; easy to learn, useful error messages and prompts; screen easy to read; minimal reference help needed for patrons.

NOTIS

More difficult to use; screens cluttered, only 2 error messages; instructions at the bottom of a full screen; need more reference help to use; traditional card catalog format.

IMPACT:

Requires local staff re-design of screens, messages, etc.; requires more reference assistance to users.

Cost: _____?

2. Searching

Keyword and Boolean operational; excellent response time; browsing operational.

Limited keyword and Boolean available in Fall 1985; no backwards browsing; excellent response time.

IMPACT:

More reliance on traditional access points and record accuracy.

3. Location info

Circulation status displays in OPAC; three levels of location display available now.

Circulation status displays in OPAC: only union catalog level of display currently available; second level available in Fall 1985.

IMPACT:

Staff must mediate use.

Cost to develop third level of display _____?

4. Database creation

Excellent support available with much staff expertise for database creation; OCLC interface operational, but is a batch overnight process.

Vendor has very little experience with database loading; OCLC interface operational, but cumbersome.

IMPACT:

We would essentially be on our own for database loading, so it would require more local staff and time.

GEAC

5. Database management One duplicate of the OPAC database would have to be maintained for every 100 OPAC terminals; record editing is cumbersome; multi-institution database management is being designed for the Smithsonian contract.

IMPACT:

Database management would be more work for staff than with NOTIS; more disk space would be required for the OPAC.

Cost _____?

6. Authority

Available Spring 1985; OCLC transfer needs to be designed; only a single authority system for subjects can now be accommodated.

Available Fall 1985; OCLC transfer being developed by Central State; four authority systems for subjects can now be accommodated with minor customization.

IMPACT:

Requires extra work to maintain LC, MESH, and LC Juvenile subject headings in a single subject authority file; subject authority implementation may be delayed into 1986.

Cost: _____?

IMPACT:

Minimal local programming required to customize subject displays.

7. MARC output on tape

Now available.

Boss's comments:

Boss considered significant GEAC's inability to separately accommodate MESH headings and the need to split the database. GEAC has since re-configured the DALNET database so that it would be a union online catalog, and has acknowledged the need to accommodate more than one subject heading list.

Summary:

The GEAC OPAC is the best of the two for the public; it is easier to learn, exciting to use, and has more searching capability now available. The NOTIS GEAC is the best of the two for staff database management; it has the best subject heading authority control and screen editing features. Both were designed at large academic libraries; however, the GEAC OPAC is now operational at both large academic and large public libraries. The NOTIS OPAC is only operational at academic libraries.

NOTIS

Database management would be easier than with the GEAC system; input workforms need to be designed.

C. CIRCULATION

GEAC

1. Patron file

Requires two patron files -- one for DPL and one for the other DALNET libraries; enables use of a single patron ID card system-wide, as well as other GEAC, CLSI, or similar ID cards in the metro area.

2. Fines/fees

Well developed.

3. Micro backup

Being tested now in a library.

4. Circulation database maintenance

Overnight maintenance is currently a serious problem for large circulation installations.

IMPACT:

If GEAC did not meet its commitment to re-design circulation database management by Fall, 1985, we would have to use the micro computer backup if the overnight maintenance took too long.

NOTIS

Enables a single patron file, but requires separate ID cards for users in each institution. To enable use of a single patron ID card system-wide would require a file re-design which NOTIS has agreed to do for us.

Calculates fines at discharge but does not cumulate fine history on a patron record; available in 1986 or later; no patron blocks for accumulated fines.

IMPACT:

Would have to keep manual system of fines until programmed either by NUL or us.

Cost: _____?

To be developed in 1986 or later.

IMPACT:

We would use manual checkout as the backup.

This would be no problem with NOTIS.

GEAC

NOTIS

5. Printing notices

Can be easily distributed to each DALNET institution's printer.

Needs to be "fixed" to enable printing notices for each institution, now prints one "union" notice. NOTIS has agreed to change this for us.

6. Reserve Room

Now available.

Can check out by the hour; professor and course data to be added in 186 or later.

IMPACT:

We would have to maintain current course reserves systems except for check out.

Cost: _____?

7. Materials Booking

Now available, without fees or billing capability.

Not available from NOTIS.

IMPACT:

We would have to maintain current billing systems.

Cost: _____?

IMPACT:

We would have to buy a separate package and integrate ourselves or contract with NOTIS to integrate; this would delay implementation of booking.

8. Inter-library loan

Generally strong; needs electronic mail and fees capability.

Must design our own system or "rig" ILL messaging method as done by Florida; no plans for a secondary loan capability.

9. Reports/statistics

Weak, especially for networking.

Inadequate; need to buy a report writer ourselves.

10. Inventory control

Weak.

Nonexistent; NOTIS promised to include us in the design of this function for the future.

GEAC

NOTIS

11. Staff response Very enthusiastic, except for overnight processing; excellent response time. Positive; excellent response time.

Boss's comments:

Boss lists negative responses made by GEAC and NOTIS to our RFP specifications. He details 22 capabilities missing from GEAC and only 2 missing from NOTIS. There are in fact 12 "no's" in the NOTIS Circ section, if you do not count the entire Booking component. He suggest that "if the libraries select [NOTIS] for negotiation, emphasis should be placed on integrating the booking module into the system." He expresses no concern over the fines'fees, interlibrary loan, micro backup, reserve room, or inventory control functions that are future enhancements.

Summary:

GEAC offers a well established circulation module that has been operational for many years in a network environment. It needs enhancement, but is far from its first generation. NOTIS, on the other hand, is offering the first generation online circulation system that was based on a punched card operation. We would have to wait for, design ourselves, or purchase separately and integrate, some major components, including booking, interlibrary loan, reserve room, inventory control, and fines/fees history.

D. ACQUISITIONS

GEAC

1. Ordering Currently available; no separate bill-to address.

2. Receiving Separated from payment as needed for auditors; networking aspects in place; libraries cannot receive on one another's records.

3. Financial control Excellent, including encumbrances, expenditures, blocks, invoice processing, link to parent institution allocation, audit trail.

4. Passwords/security Very strong; good password system.

5. Networking Working well, with separate vendor files, funds, and ordering now operational.

NOTIS

Currently available, problems with ordering multiple copies for multiple locations; have to maintain a manual kardex for inclusive orders like memberships, blankets, networking untested.

Receiving and payment intertwined and complex to separate; libraries are able to receive on one another's records.

IMPACT:

Would have to "right" methods to receive without invoice, prepay, etc., also put in controls and monitor networking problems.

Encumbers and pays only; no invoice reconciliation, no fund records, little payment history, no year end. All are being designed by Harvard

IMPACT:

We would have to maintain current financial accounting systems until Harvard's enhancements were available and improved, FY 1986 or later. NOTIS suggested we be the alpha site for testing which is where Wayne was 4 years ago with the Nonesuch Acquisitions System.

Weak; may be improved by Harvard.

Not existing or untested except for payments.

IMPACT:

We would have to design and test networking capabilities and could not use initially for more than one institution.

GEAC

6. Vendor file Complete; integrated with orders and vouchers; separate vendor files could be maintained for each institution.

Good, with provision for temporary vendors; however, would have to maintain 1 central file for all institutions.

7. OCLC Interface Needs to be developed.

Functional, though cumbersome.

8. Ease of use Enthusiastic staff response.

Cluttered screens do not get in the way as much as expected.

9. Links to OPAC Status now displays in OPAC, if desired.

Status now always displays in OPAC.

Boss's comments:

Boss identified 17 defects in the GEAC Acquisitions module, many of which we consider minor. He did point out the lack of a bill-to address, no separate cancellation list, and weak year-end procedures. For NOTIS, he failed to identify a single weakness in the acquisitions module, in spite of the fact that there is no fund record, no invoice reconciliation, no budgets or year-end, and that many answers were based on expected enhancements from Harvard.

Overall:

GEAC offers the strongest acquisitions system by far, especially in the financial components and networking. It offers all the basic functions, as well as separate acquisitions processing files with a joint OPAC. It requires little enhancement, and is overall already much more advanced than NOTIS.

NOTIS offers an acquisitions module with financial components in the elementary stages of design. We could end up being an alpha test site in FY 86 or later for this module. We would be dependent on Harvard to design and program the financial components, which NOTIS would then have to incorporate into the "standard" version before they were available. Harvard is using a 1.5 million dollar grant to do this work; it is not something we could attempt on our own.

NOTIS

E. SERIALS CONTROL

GEAC

1. Check-in
Fast and easy to use; command driven and predictive.
2. Binding
To be developed by July 1986; can check out to Bindery via Circ module.
3. Routing
No plans to develop.
4. Financial control
Well integrated with acquisitions financial component.
5. Networking
Can look at another institution's record, if desired, but cannot use it for check-in.
6. Links to OPAC
Have to separately maintain summary holdings to display in OPAC.
7. Loading
More work than NOTIS because predictive.
8. Claiming
Triggered by predicted date, on demand or batch.

Boss's comments:

Boss details 13 missing components of the GEAC serials module and 6 missing components of the NOTIS serials module. He notes that it would be important to get a commitment from NOTIS for the routing capability, but fails to note NOTIS' need to develop bindery control, distributed check-in, update of summary holdings, and a link to the forthcoming financial component.

Overall:

Both serials control system, NOTIS and GEAC, were designed and are being used at large academic libraries with integrated library systems. The networking capabilities and integration with an acquisitions financial component give the GEAC system a significant advantage over NOTIS.

NOTIS

- Fast; harder to learn; not predictive; some manual files still need to be maintained for inclusives, e.g., memberships.
- Needs to be developed; can check out to Bindery via Circ module.
- Not available.
- Minimal acquisitions financial component.
- Difficult to block a library from checking in on another's record.
- Have to separately maintain summary holdings to display in OPAC.
- Lots of work.
- Two passes necessary:
- o Review exceptional conditions report
 - o Key code to generate correspondence.

HARDWARE

GEAC

1. Expandability

The GEAC can be expanded to a maximum of 1,000 - 1,200 terminals by linking CPU's. Newer technology will expand this limit. An H-buss is required to link more than 2 8000 CPU's, and is proven only in a banking application. Expansion can be done in small increments, e.g., an 8000 costs \$97,800.00 and will accommodate at least 100 terminals.

NOTIS

The NOTIS configurations recommended turned out to be incorrect. Upon consultation with IBM, our options are:

- Begin with a 4361 and the SSX/VSE version, which will handle up to 450 CRT's. Then convert to a 4381 and the MVS version, which may take us to 1500 or more CRT's.
- Begin with the 4381 and the MVS version.
- Convert the 4381 to a 3083, still using the MVS version, to handle 1800 to 2800 CRT's.

Changing hardware and software is very expensive.

Boss's comments:

Boss compares the GEAC 8000 to the DEC VAX 780 in processing capacity, but says the hardware would "require a very large computer room." In our estimates from the architects, the maximum DALNET GEAC configuration proposed requires about 600 more square feet of space than the proposed IBM configuration.

Boss says the NOTIS "hardware description is sketchy. It is, therefore, not possible to determine whether sufficient primary memory has been provided." He has, in fact, misinterpreted their proposal, assuming they recommend that both a 4361 and a 4381 CPU are needed. NOTIS's proposal is to exchange the 4361 for a 4381 in order to accommodate DALNET.

Overall:

Both systems are expandable. It may be the wisest course to start the NOTIS system with a 4381 CPU rather than a 4361, since converting from one to the other is very expensive. The GEAC system can be expanded in smaller increments. GEAC has a short range plan to introduce a new communications controller based on their Concept 9000 as a front-end. This will immediately increase the system's terminal capacity beyond known limits. We have to assume that given the speed of new technological development, there will be additional hardware options open to us on either system by the time we reach 1000 terminals.

GEAC

2. Interfaces with other systems
The GEAC system has been successfully interfaced with vendors, e.g., Faxon, and with local computing, e.g., IBM at University of Maryland. GEAC is committed to the OSI model.

NOTIS

The NOTIS system can obviously interface with IBM equipment. NOTIS is also committed to the OSI model for the Linked Systems Project.

Boss's comment:

Boss sees the need to contractually commit NOTIS to the OSI Reference Model. He comments that GEAC's unique terminal design would add to the cost of using their terminals to dial into other systems. He is unaware of GEAC's commitment to the OSI model.

Overall:

Both systems allow dial-in access. Both can be linked to campus IBM networks to receive inquiries from terminals all over campus. The GEAC is weaker in that GEAC terminals cannot easily be used for direct access to computers other than GEAC's. Both systems now allow the use of an IBM-PC as a terminal, which could be used to access other computers. It is anticipated that most library system terminals will be dedicated to library applications.

3. Disk capacity

GEAC requires more disk capacity to store copies of the OPAC. Smaller disk drives are bid.

Very large disk drives were recommended for the 4381 configuration. Due to errors in the bid, disk space required had to be recalculated and additional drives added to the estimate.

4. Purchase, Installation and Maintenance

All hardware comes from GEAC except telecommunications equipment. GEAC manufactures its own CPU's and CRT's; the rest they buy, largely from American companies. They would have a full-time service person available to DALNET. Hardware prices are marked up by GEAC to provide a source of revenue. Some hardware can be purchased on our own, if desired.

NOTIS provides no hardware. DALNET would have to contract with multiple vendors for purchase, installation, and maintenance. DALNET could take advantage of IBM discounts to WSU.

GEAC

NOTIS

5. Operation

System operation is well established. The vendor offers advice and support to get the most efficient operation. Operation requires attendance approximately 18 hours a day. The GEAC system operates more in batch mode than does NOTIS.

System operation is well established. The vendor offers minimal support. Operation requires attendance approximately 18 hours a day. NOTIS operates more online and less in batch mode.

SOFTWARE

1. Flexibility

The GEAC system is now in use by other networks. Problem areas we foresee include: multiple subject heading systems and multiple OPAC inputting agencies.

Flexibility for a network has not really been tested yet. Problem areas we foresee include: patron ID card sharing, institution notices, independent acquisitions and serials control, multiple OPAC inputting agencies.

Boss's comments:

6

GEAC has installed shared systems for several libraries which have been in operation more than three years. The system's flexibility has been demonstrated. NOTIS claims flexibility, but since it has not installed a shared system, the capability cannot be confirmed.

Overall:

The proven flexibility to handle a network is critical to the system DALNET selects. GEAC's having demonstrated the capability makes it more likely to succeed.

GEAC

NOTIS

2. Transportability

GEAC's software currently can only run on GEAC hardware. Not only the applications programs, but also the operating system are proprietary. Future plans for GEAC include a change to standard operating system UNIX and the language "C".

The database created on a GEAC system can now be off-loaded to tape in a MARC format.

NOTIS's software uses either SSX/VSE or MVS, operating systems with CICS for telecommunications control. Languages used are Assembler and PLI. Versions of the software can now run on any IBM 370 compatible CPU. To be transportable to a 4381 CPU, DALNET should buy the MVS version of NOTIS and CICS.

The database created on NOTIS can be off-loaded to tape in a MARC format.

Boss's comments:

Boss notes that for GEAC "the Libraries will be extremely dependent on continued support from the vendor." However, there is no reason to believe that GEAC would discontinue the manufacture of its CPU's. Northwestern offers excellent transportability.

Overall:

While transportability of the software is important because hardware is theoretically out-dated in five to seven years, transportability of the database seems even more crucial. Not only does hardware become outdated, but also software. If we want to change systems in five to seven years, the database is the asset we want to be able to transport. In discussions with other libraries, we have found some that have changed or added systems, but none that have changed hardware alone.

3. Integration

All software, applications and operating system, are integrated by the vendor into one system.

NOTIS supplies some of the application software, integrating enhancements made by them and other users. They function as a software clearinghouse. We would buy separately and integrate ourselves the booking module, electronic mail, and report writer.

GEAC

4. Research and development GEAC requires minimal customization to be operational immediately.

GEAC has a well-funded R & D department.

Locally, DALNET could have a programmer trained by GEAC to design customized output, but could make no other changes to the software.

As GEAC provides new releases, which happens about twice a year, the system has to be taken down for several days to install them.

5. Maintenance One programmer would be useful to DALNET to design output and help trouble-shoot software bugs, especially during testing.

VENDOR VIABILITY AND PERFORMANCE

1. Delivery schedule GEAC has a history of being overly optimistic in their delivery schedules. We would have to contract carefully with them.

Boss's comments:

Boss notes GEAC's late delivery on some contracts last year, although they have previously delivered large systems on time. He suggests remedies in the GEAC contract for late delivery. For NOTIS he rates their proposed delivery schedule as poor.

Overall:

Our client checks for GEAC indicate that they have indeed been behind in their delivery schedules. NOTIS, on the other hand, has been prompt. NOTIS has not been managing the hardware installations however.

NOTIS

NOTIS requires more customization to be operational.

NOTIS does some R & D, but is dependent on others for major contributions, e.g., Harvard.

Locally, DALNET could fund its own R & D program to enhance the NOTIS software. However, as new versions of NOTIS were released, we would have to re-incorporate our local enhancements into them.

New releases would not require that the system be shut down to install them.

A programmer and an analyst, and possibly a second programmer, would be required to install and maintain all the pieces of software, especially with the MVS version.

NOTIS's schedule is sketchy, with delivery of circulation 12 months after contracting. We would have to contract carefully with them.

2. Vendor guarantees GEAC guarantees system response time, but does not guarantee disk capacity. NOTIS offers a limited guarantee of response time provided the system is operated according to their recommendations.
3. Viability The vendor realized a \$3 million dollar profit in 1983 and \$6 million in 1984. They have an excellent record. There is no evidence that the 1984 NOTIS budget is supported by its income. The University has extended NOTIS a \$200,000 line of credit.

Boss's comments:

Boss rates GEAC's viability as very good and Northwestern as good.

Overall:

Northwestern University is committed to supporting NOTIS marketing at this time. If the marketing effort is not able to be self-supporting, there would still be a group of 15 to 20 users to help one another maintain the system. And Northwestern would still be a user.

GEAC is a solid corporation. In the worst case, if it failed, there would be a group of over 70 users, several in Michigan, to help one another maintain the system.

4. Vendor support GEAC has a staff to help with installation, data base loading, telecommunications network design, training, daily operation, and maintenance. The system is totally vendor supported. NOTIS staff can provide limited support and training. DALNET would need a larger local training team and would coordinate more pieces itself.

DALNET Site Visit Team Recommendation

The Site Visit Team began its visits to the GEAC sites with very positive attitudes toward the functions of the system and serious concerns about the capacity of the hardware. These concerns, particularly about the delivery of the H-buss to link more than two CPU's and the unacceptably long circulation database overnight maintenance, caused the Team to require substantial evidence that GEAC could meet our needs.

On the other hand, the Team expected to find evidence at the NOTIS sites to reinforce the obvious strengths of the IBM hardware and to allay our very serious concerns about the design and function of the software for network needs.

What we found increased our concerns about NOTIS's ability to meet our functional requirements and raised concerns about the expandability of the recommended IBM equipment to handle the DALNET installation.

The GEAC installations we saw increased our enthusiasm for the GEAC software. And the GEAC staff with whom we met produced the evidence we required to feel confident that GEAC could make the DALNET installation work.

Therefore, the DALNET Site Visit Team unanimously recommends the GEAC system for DALNET. It is by far more user friendly. It has more software now functional in large single and network installations. The company and customer base have more depth and experience upon which we could rely in our pioneering project. The GEAC system is the most totally integrated package in all aspects, both hardware and software. And we feel confident that GEAC will make the DALNET installation a model!