

INTEGRATED COMPUTER SUPPORT FOR  
THE UNIVERSITY OF FLORIDA LIBRARIES

PROPOSED SYSTEM PROCUREMENT

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## SECTION I Proposal

The University of Florida Libraries propose to purchase the library system software NOTIS-3, developed by the Northwestern University Libraries. This software has been operational for a number of years, supporting the library procedures of a large research library. The system would require relatively minor enhancements, compared to those which would be necessary with other systems.

The University Libraries have compared four MARC-based systems: CLASSIC, developed by Cincinnati Electronics; Automated Library Information System (ALIS), developed by Dataphase; DOBIS/LIBIS, developed at the University of Dortmund, Germany and the University of Leuven, Belgium and marketed by IBM; and the Northwestern Online Total Integrated System (NOTIS), third release, developed by Northwestern University Libraries. Several other systems were investigated but were eliminated due to a lack of MARC support and an incompatibility with the University of Florida computer communications network.

As the evaluation of the four systems demonstrates (See Section III), no single system being marketed today meets all the requirements of a total integrated system for the University of Florida Libraries. The Northwestern system comes closest and supports more of the complex functions than any other system (See Section II), making it the optimum system to serve as a base for the Libraries' computer support.

The system supports the national bibliographic communications standard, the MARC (machine-readable cataloging) formats. It also supports the full ALA MARC character set which includes several diacritics and non-standard characters.

The system allows both online and batch loading and updating of records for support of an online database of bibliographic and holdings records. Additional software must be developed for an OCLC interface and processing of transferred records.

The system can recognize records from multiple processing centers with support for the authority structures used to create existing catalogs. While handling the problems with different existing authorities, it also provides a mechanism for establishing a single, campus-wide authority for materials cataloged under the new cataloging code, AACR-2. The authority records are also in MARC format.

The integrated database will support an internal catalog to facilitate the acquisitions, circulation, and cataloging functions. The online public catalog supports the BRS extended search capabilities with appropriate prompts and screen displays.

The acquisitions module handles all the requirements for ordering and receiving of materials. Fund accounting is provided, however the system will need enhancements for UF invoice control.

The serials checkin module is the only MARC-based operational serials system in existence. It accommodates the irregular receipt patterns of serials and also allows online access to the holdings information of the Libraries.

The circulation module handles the basic circulation requirements but must be converted to read barcodes instead of punched cards. It must also be enhanced to support the reserve book room operations and the multiple circulation requirements of the different locations. These enhancements are the major change which must be effected for the system to support all library operations.

Sections II and III note the circulation, invoice control, and OCLC interface enhancements needed for the NOTIS system to meet all the University Libraries' requirements. The circulation enhancements seem to have two options: in-house development as an upgrade to the NOTIS circulation software, or conversion of the Cincinnati Electronics software for integration with the NOTIS system, (See Section VI).

The Northwestern system currently runs on an IBM 4331 under CICS/DOS. This means that the system must be converted to MVS to operate on the NERDC computer. (Section VI).

By operating under CICS on the NERDC computer, the database holdings will be accessible through the campus computer communications network. Terminals spread across the campus can be used for this purpose, not just terminals in libraries.

In relation to the public use of the system as an online catalog, the Libraries propose to purchase the BRS search software to provide broad search capabilities and access to the libraries' holdings information. The powerful search ability to search words in context, to manipulate fields using Boolean logic, and to specify positional logic provides access far beyond that possible with manual card catalogs. The BRS software currently runs on IBM equipment under CICS/OS. BRS has indicated a willingness to develop the interface to NOTIS-3 and to convert the software to MVS as conditions of purchase.

The following sections of the proposal detail the summarized information, further emphasizing the advantages of the NOTIS software for computerized support of the Libraries' operations. While the implementation of any system is arduous and complex, the improved services and internal operations make the change advantageous.

## SECTION II

### Summary Ranking Chart

The following chart summarizes the information comparing the four library systems. Each function is ranked according to the following values:

- 4 **Acceptable.**  
The system meets the requirements of the UF Libraries for this function. The capability currently exists, either at library installations or in the company office.
- 3 **Acceptable but not optimal.**  
The system satisfies the requirement, but it is not effected in the manner most desired. The Libraries can accept it, however, as a functional procedure.
- 2 **Minor modification required.**  
The system function would require minimal programming modifications in order to meet the Libraries' requirements. This is a modification to an existing function.
- 1 **Major modification required.**  
The system function would require major programming or system changes in order to meet the Libraries' requirements. This is a modification to an existing function.
- 0 **Function does not exist.**  
The system does not support the function or meet the Libraries' requirement for this aspect. It is possible that it could be added to the system, but it is not currently available.

The number of the function corresponds to the number of the paragraphs in Section III. The rating is based on the information which evaluates those capabilities; that evaluation should be considered when consulting this chart.

GENERAL	C.E.	DATAPHASE	DCBIS	NOTIS
Online catalog maintenance	3	3	3	4
Online authority control	0	0	1	4
Online circulation control	4	4	1	1
Online reserve room control	2	2	0	0
Online acquisitions control	0	0	1	3
Online serials checkin	0	0	0	4
Online public catalog	0	0	1	4
UF communications compatibility	1	0	4	4

CATALOG DATABASE				
Direct database maintenance	3	3	3	4
MARC support	4	4	2	4
OCLC interface	3	4	0	0
Database input processing	0	0	0	0
Union and individual catalog support	3	0	1	4
Addition of SFCC, UNF	3	0	3	4
Existing installations	N.A.	N.A.	N.A.	N.A.
Title/item level records	4	4	2	4
ALA MARC Character set	0	0	4	4
Provisional records	0	0	0	4
Searchable fields	4	4	4	4
MARC formatted authorities	0	0	0	4
Multiple sets of authorities	0	0	1	4
Single AACR-2 authorities	0	0	1	2
Name, subject, series authorities	0	0	1	4
User prompts	0	0	1	4

ACQUISITIONS CONTROL	C.E.	DATAPHASE	DOBIS	NOTIS
5. Online acquisitions control	0	0	1	3
6. Order records	0	0	4	4
7. Common order file	0	0	1	4
8. Order record content	0	0	4	4
9. Order record security	0	0	4	4
0. Multiple budgetary units	0	0	1	4
1. Source of funds	0	0	4	4
2. Fund accounting	0	0	2	2
3. Standing orders	0	0	0	4
4. Invoice control	0	0	0	0
5. Fund accounting update	0	0	4	4
6. Multi/single-title orders	0	0	1	2
7. Payment w/o bibliographic rec	0	0	4	4
8. Pseudo-bibliographic records	0	0	3	4
9. Deposit accounts	0	0	0	3
0. Gifts & exchange program	0	0	4	4
1. Partial receipts	0	0	0	4
2. Replacement quotations	0	0	4	4
3. Claims	0	0	3	4
4. Prepayment	0	0	4	4
5. Reports	0	0	0	2
6. Vendor files	0	0	4	4
7. Online serial checkin	0	0	0	4
8. Binding control	0	0	0	0
9. Binding piece	0	0	0	0

CIRCULATION CONTROL	C.E.	DATAPHASE	DOBIS	NOTIS
0. Charge/discharge	4	4	3	3
1. Hold requests	4	3	3	1
2. Recall requests	4	4	4	4
3. Loan/fine rules	4	4	4	4
4. Fines accounting	4	4	2	1
5. Patron information security	4	4	4	4
5. Transaction record security	4	4	4	0
7. Hourly loans	4	3	0	0
8. Collection transfer	4	4	0	0
9. Physical vs. bibliographic piece	3	3	3	3
0. Patron record	4	4	4	4
1. Patron record update via tape	3	3	0	3
2. Patron fine record	4	2	4	1
3. Codabar barcodes	4	4	1	1
	<u>4</u> 54	<u>4</u> 50	<u>1</u> 36	<u>1</u> 29
	88	78	122	183



### SECTION III

#### Functional Evaluation of Systems

An evaluation of the following library systems:

CLASSIC from Cincinnati Electronics

ALIS from Dataphase

DOBIS/LIBIS from IBM

NOTIS from Northwestern University

The evaluation details the functions described in the long-range planning document, "Integrated Computer Support Plans for the University of Florida Libraries".

The evaluation includes the four systems which are MARC-based, integrated systems. No single system meets all the automation requirements of the UF Libraries, as the evaluation shows.

Other systems are available which address some aspects better than any of the ones evaluated. However, due to not being MARC-based or compatible with the campus communications network, they were eliminated as potential systems.

The evaluation does not present the full level of detail which would be covered by final system specifications. However, the major issues are presented and the rating considers many of those support details.

The evaluation document is preceded by a Summary Chart in Section II.

## I. GENERAL

1. The system must support an online database for internal maintenance of bibliographic records.

C.E. Yes

DATAPHASE Yes

DOBIS/LIBIS Yes

NOTIS Yes

2. The system must support online authority control.

C.E. No

DATAPHASE No

DOBIS No, although the indexes simulate some aspects of authority control.

NOTIS Yes

3. The system must support online circulation control.

C.E. Yes

DATAPHASE Yes

DOBIS Yes. However, the final aspects of the LIBIS circulation software has to be programmed. This allows further customization of the system, but means additional programming before ready for use.

NOTIS Yes. However, the circulation functions are limited and will have to be expanded for use by the UF Libraries.

4. The system must support online reserve book room control.

C.E. The reserve book room function is designed and programmed but not totally debugged. It will be installed in the Wyoming installation later 1980. The Reserve function is not available for demonstration as of May 1980.

DATAPHASE It is installed at Oral Roberts but does not meet our needs. An updated version is being installed at Nebraska and will meet most of our requirements.

DOBIS No. The hooks are there for adding the reserve book room functions to the LIBIS circulation package.

NOTIS No. The hooks are there for adding the reserve book functions to the NOTIS circulation module.

5. The system must support online acquisitions control.

C.E. No. They plan to enhance the system developed by Duke University Library and integrate it into the CLASSIC system. The Duke system is not satisfactory as it is currently used there. However, it is an online dynamic system which could probably be enhanced. There are no definite specifications, however, to indicate the amount or degree of enhancements which C.E. will make.

DATAPHASE No. It is in the design stage.

DOBIS The system supports an online acquisitions module. However, considerable customizing must be done. It is not a complete programmed module. (Later questions dealing specifically with acquisitions issues will illustrate this in detail.)

NOTIS Yes. The system is a comprehensive acquisitions system handling the acquisitions processing of most Northwestern materials for the last eight years. The current release of NOTIS was implemented in 1978. Minor modifications would be needed to add invoice controls which are not currently defined to the level required by the University of Florida.

6. The system must support online serials checkin control.

C.E. No. No commitment to develop it in the near future.

DATAPHASE No. No commitment to develop in the near future.

DOBIS No. Discussions with the McAllisters during the Toronto meeting indicated that they are interested in adding this module. Contractual arrangements would have to be made with IBM Germany. Caryl explained that she would only agree to programming the module after determining how she wanted it done; if that did not meet all our requirements, further customization might be contracted. Possibly, IBM would then be willing to buy the marketing rights to the module, but not for the amount of money which we would have to pay for it to be programmed.

NOTIS Yes. The system does support full serials checkin control. It has been operational at Northwestern for several years, with the latest release implemented in 1978. It is the only MARC-based serials checkin system available.



7. The system must support a public catalog interface.

C.E. Not totally. The system does support a query module which could be available to the public, but user prompts must be developed. Each field must be searched exactly as it appears in the database. Search arguments can be truncated.

The Library may define which fields are indexed.

The system supports keyword-in-context searching (referred to generically as "subject search" by C.E.).

DATAPHASE

The system can be used for public query, but the search prompts need to be refined. Each field must be searched (entered) exactly as it appears in the database. Search arguments can be truncated.

DOBIS

The system does support a public query mode, but user prompts must be developed. The system is quite good for some aspect of leading the searcher on a step-by-step basis, but refinements are needed for leading the searcher from the bibliographic record to a locally modified record and then to holdings information.

The Library may define which fields are indexed.

The system supports permuted author and title indexes.

NOTIS

Yes. The system does support a public query mode. The public use module is available to the public in test, with final revisions to be finished by January 1981. The system has prompts which lead the user from one step to another, and screen displays are reformatted specifically for the user. Technical service record tags are not displayed.

The system supports a search strategy for corporate authors which is unique to that system. The highest and lowest levels of the corporate author are entered to identify the unique title(s) desired.

8. The system must be compatible with the University of Florida's computer communications network for the campus. This would allow terminals around campus to query the library holdings database.

C.E. The system runs under TOTAL on Sperry Univac V7. The software is written in FORTRAN. An interface would require programming a HASP interface. The software could also be converted to operate on IBM or IBM compatible equipment; TOTAL is IBM compatible.

- DATAPHASE** This would not be possible unless a HASP interface could be developed. Dataphase operates on MIIS (a revision of MUMPS), which is not IBM compatible. The system uses both MIIS language and operating system.
- DOBIS** The system is CICS/OS, meaning it could be converted to MVS and loaded on the NERDC computer, or if on a stand-alone computer (e.g. 4341) it could interface to the NERDC computer. In either case, it could utilize the campus communications network.
- NOTIS** The system is CICS/DOS, written in assembler. It could run on the NERDC computer or a stand-alone (e.g. 4331) and interface to the NERDC. It could thus use the campus network.

## II. DATABASE MAINTENANCE

9. The online database must allow for direct database maintenance via the keyboard. This can take the form of adding new records, updating existing records, adding or deleting holdings information, and deleting entire bibliographic records.

C.E. Yes. The system supports this function. The system allows for viewing the entire record, with MARC tagging, in 1 to 3 screens, depending upon record length.

DATAPHASE Yes. The system supports this function. The system allows for viewing the entire record, with MARC tagging, in 1 to 3 screens, depending upon the record length.

The record field can be modified without re-entering the entire field again. However, it acts as a text editor, requiring that a unique character string be identified and then replaced with another value. It does not allow cursor positioning for inserting or deleting characters.

DOBIS Yes. The system supports this function. The system does not allow for viewing the entire record with MARC tagging. This makes it quite difficult to determine the cataloging treatment of specific record fields. Multiple screens must be viewed to determine the type of series tag, for example.

NOTIS Yes. The system supports this function. The system allows for viewing the entire record, with MARC tagging, in 1 to 3 screens, depending upon record length.

The record field can be modified by cursor positioning to insert or delete characters.

10. The system must support all MARC formats in the database, as well as for tape input and output.

C.E. System will support all OCLC/MARC formats internally as well as for tape input and output.

DATAPHASE System will support all OCLC/MARC formats for input, output, and internal manipulation.

DOBIS System will support DMARC/MARC Book and Serials formats. It does not support MARC formats for Maps, Music and AudiVisuals.

DOBIS does not support MARC tape output, although this could be programmed.

LC/MARC and NLC/MARC input has been programmed by Centennial College. MARC output would be similar to output programs for COM developed by South Africa.

NOTIS

System will support all LC/MARC formats, internally as well as for tape input and output.

11. The system must support a direct interface between the OCLC terminal and the local system database.

C.E.

The interface is not installed, but has been developed. However, it transmits the screen of data to a cassette which can later be dumped into the computer system. Once loaded into the system, it is processed as a background task.

DATAPHASE

The interface is currently installed in Oral Roberts University. The interface transfers the screen of data directly in a computer buffer. The record is processed into the database overnight. The buffer allows multiple records to be transmitted into the circulation system.

DOBIS

No

NOTIS

No. Northwestern University Libraries is planning a direct interface with the RLIN system. They do not currently use OCLC.

12. The system must update the database with the incoming records, whether from tape or a direct OCLC/local system interface. This involves processing based on the MARC tags and content of those fields. Such processing was developed by SOLINET for converting the OCLC archive tapes into a CLSI format.

C.E.

The software does not exist. The new record transferred from the OCLC database is considered a new record or it matches on OCLC or LCCN and supersedes the existing record.

Tape load facility of OCLC archive tapes does exist. The integrating of the database, however must be refined to identify new records, record modifications, new holdings, etc.

The software for processing incoming OCLC records can create an item record.



DATAPHASE

No. The software does not totally exist. The record transferred from the OCLC database is considered a new record unless it matches on OCLC or LCCN.

Tape load facility of OCLC archive tapes does exist. The integrating of the database, however, must be refined in terms of determining if it is a new record, a record modification, or only a holdings record addition. They are now developing software to create an item level record from the 049 field.

DOBIS

No. The software does not exist.

The tape load facility of LC MARC tapes has been developed by Centennial College and is available for \$19,000. Those programs would have to be modified for OCLC MARC formats.

NOTIS

No. The records loaded by tape are always considered new records, because they are transferred from MARC tapes. By not using a shared cataloging network, they have no opportunity to input records which would update existing records.

13. The system must recognize records entered by each processing center as well as support a union catalog, a union order file, and a union patron file. Depending upon the mode of inquiry, records may not be viewed at certain locations; under other modes of inquiry, all records would be accessible.

C.E.

The system supports a means of identifying the processing department which generated the record, yet also allows for a union catalog of records. Holdings and patron files would function as union files.

DATAPHASE

No. Bibliographic records of all libraries would be searched as a combined dictionary catalog -- even if system has multiple entries of a title to represent multiple processing center records.

DOBIS

DOBIS supports a Master File and Local Files. All locally unique fields can be entered to the Local File; when the Master Record is retrieved, the user can then proceed to a subsequent screen with the local fields of information overlaying the appropriate fields of the Master Record.

Holdings information is held in a file subordinate to the Local File. This means that the holdings information is only for those records in the local file. Thus holdings information would not be displayed as a Union Catalog of titles. For the UF Libraries, each of the four processing centers would function as a Local File, each having their own holdings.

In discussions with Caryl McAllister, it appears that the file structure of the system could be modified to allow a master file of all holdings, yet maintain a local file of each processing center's records. By changing the access point links, the system would in effect go from a master file of all records to four local files of records, then back to a master file of holdings, patron, and acquisitions records.

The system does not provide a means of flagging specified types of records as internal records, i.e. not to be displayed to the public in the public query mode. Such records would be memberships, binding records, and approval plan information. All this information must be present in the Master File.

NOTIS

The system supports a means of identifying the processing department which generated the record, yet also allows for a union catalog of all records. Holdings records, however, are attached to the record of the originating processing center.

Circulation functions are supported by a separate file. The circulation module would have to be rewritten, as will be discussed in the circulation module description.

14. The system must accommodate additional entities such as Santa Fe Community College, University of North Florida, and the University of South Florida. The catalog records must be handled as those from an additional processing center.

C.E. The system would support this capability.

DATAPHASE The system would support these records, but not as a separate database, i.e. it would not be possible to search only SFCC records.

DOBIS The system would support this capability by adding an additional local file.

NOTIS The system would support this capability for the online database and acquisitions. The circulation module must be enhanced to support this requirement.

15. The operational capabilities described in the Library Specifications for a total integrated system must be demonstrable at existing installations or vendor headquarters.

C.E. The system is installed in Oak Ridge. A new release with a new Sperry Univac operating system is currently being installed in Henrico County.

The Wyoming contract is of much greater interest with many requirements similar to our needs. It is to begin installation in the fall of 1980.

Current installations only include circulation functions.

DATAPHASE

The circulation system is installed. The Reserve Book Room which is installed at Oral Roberts would require modifications, similar to those being effected for the University of Nebraska.

The acquisitions and serials checkin modules do not exist.

The public catalog does not exist with user prompts, although there is an online database which can be queried.

DOBIS

The LIBIS circulation module is installed at Ryerson College (Toronto) and Leuven, Belgium. The IBM package being marketed would require customization programs before the system could be used.

The online database (DOBIS) is similar to that at Centennial College (Toronto). It is considerably different from that of the National Library of Canada and at Dortmund Universität.

The LIBIS acquisitions system is installed at Centennial College. The IBM package being marketed in the U.S. requires program customization in order to use the system.

DOBIS is not installed in the United States. IBM has not developed a strong marketing or support staff for the system, and as yet has not demonstrated a desire or intent to do so. The responsibility lies with the Boston IBM office, but as an additional responsibility to those previously assigned.

NOTIS

The system has been developed and operational at Northwestern University over the past ten years. NOTIS-3 was released in 1978.

The system supports full cataloging and serials checkin functions. The acquisitions module would require minimal enhancements for inventory control.

The circulation system has been operational for 10 years. It would currently support the batch processing operation in Libraries West and East, once transferred to reading barcode labels instead of punched cards. Enhancements would be necessary to handle circulation requirements for all UF Libraries.

16. The system must handle both title and item level records. Title records must contain the bibliographic record. Item level records should contain all copy specific information such as call number, location, loan status, etc.

C.E. Yes

DATAPHASE Yes

DOBIS Call number is currently in title (bibliographic) record. The system file could be modified to move call numbers to the item (copy) level information.

NOTIS The system supports this function by placing all copy specific information in the holdings statements. The circulation module will require some modification in this area.

17. The system must support the ALA MARC character set.

C.E. No. The system cannot support the non-standard characters. The restriction is primarily a limitation of minicomputer technology.

DATAPHASE No. The system cannot support the non-standard characters. The restriction is primarily a limitation of minicomputer technology.

All diacritics are removed.

DOBIS Yes

NOTIS Yes

18. The system must support provisional records which are not "cataloging produced" records. For example, membership records, approval plans, decision file information for gifts.

These must be available for display under internal operations but not available in the public use modes.

C.E. No. They are in the database and can be viewed under the public inquiry mode.

DATAPHASE No. They are in the database and can be viewed under the public inquiry mode.

DOBIS No. They are in the database and can be viewed under the public inquiry mode.

NOTIS Yes. The system allows for a flag to designate that a "record" is an internal record, i.e. it will only display in modes used by library staff, such as acquisitions, or database modification.

19. The system must allow the library to specify which fields will be searchable. It must be possible to search author, titles, series, subjects, LCCN, OCLC number, ISN, call number.

C.E. Yes

DATAPHASE Yes

DOBIS Yes. The customization programs which must be written would create the appropriate indexes.

NOTIS Yes. Currently it only indexes authors, titles, series, ISN and call numbers.

There is no index for OCLC no., subjects, or LCCN. These could be added.

Subject search capability is currently being designed.

III. AUTHORITY CONTROL

20. The system must support MARC formatted authorities:

- C.E. No. There are plans for developing authority control as part of the online catalog.
- DATAPHASE No. Plans for developing authority control are based on MARC-formatted authorities.
- DOBIS No. DOBIS uses the indexes (inverted files) for some aspects of authority control. But they are not MARC-formatted.
- NOTIS Yes. The MARC formatted authority records contain cross references, the source of entry, and allow for maintaining AACR-1 and AACR-2 entries.

21. The system must support multiple sets of authorities. There must be a separate set of authority files for each processing center.

- C.E. No
- DATAPHASE No. The database structure assumes one bibliographic record per title. Since it doesn't recognize separate catalogs for each processing center, it can't recognize separate authorities.
- DOBIS There can be a separate set of indexes for each local file, thus simulating some aspects of authority control with global changes.
- NOTIS Yes

22. The system must allow for shifting to a single authority from the multiple sets of authorities mentioned previously.

- C.E. No
- DATAPHASE No. Since plans call for a single database with a single authority, the multiple authorities would not be supported initially.
- DOBIS Yes, if the file structure is changed to accommodate the four processing centers while still providing a union catalog.
- NOTIS Yes

23. The system must support name, subject and series authorities:

C.E. No

DATAPHASE No

DOBIS Only in the sense that the DOBIS indexes do simulate certain aspects of authorities such as allowing for global changes which change all affected records with one modification entry. However, it does not maintain MARC formatted authorities with the additional fields such as cross-references, source of entry, etc.

NOTIS NOTIS has a name authority structure which fulfills the UF requirements for Authority Control. The name authority file is currently being keyboarded. Subject and series authority files have yet to be input but the structure is the same as for the name authorities.

IV. ONLINE PUBLIC CATALOG

24. The system must support search formats which are "user oriented" as opposed to librarians who are conversant with bibliographic tagging and the search system. This must include user prompts to guide the user beyond a simple reply of "Error".

C.E. No. Search capabilities require that the field be searched exactly as entered. Fields may be truncated. A new module now being tested will allow for searching by keywords, but Boolean or field manipulation is not possible.

DATAPHASE No. Search capabilities require that the field be searched exactly as entered. Fields may be truncated. There are no stopwords. Boolean search capability is projected for 1981.

DOBIS DOBIS has many guides to help the user search for bibliographic records. Also, the permuted title and author entries are beneficial search capabilities.

However, it does not include user prompts for determining holdings information or changing to different modes of operation, such as viewing master versus local file records, etc. The system has not been specifically designed with a special module for user access. The simplified approach for the technical aspects would accommodate some of these.

The system supports stopword lists for seven languages; more can be added.

NOTIS NOTIS has a separate distinct module for user access to the catalog. It includes user prompts and special screen displays which have removed MARC tags and local processing notes.

The public search capability by subject will display abbreviated records, allowing 17 records per screen.

The BRS software also runs on IBM equipment under CICS and can be integrated into the software. Such software would be even more oriented toward the user, allowing searches by keyword in context, Boolean logic, and positional logic. A further refinement via an interface developed by Dartmouth Library has a user interface to the BRS software which includes user prompts for that search capability.



V. ACQUISITIONS

25. The system must support online acquisitions control.

C.E. No. There are plans to enhance the acquisitions system developed by Duke University Libraries which handles many of the online acquisitions functions. There is not yet a definite commitment in terms of work being done by C.E. Questions relating to the Acquisitions function are thus considered Not Applicable (N.A.).

DATAPHASE No. In the development stage, but not yet available. Questions relating to the Acquisitions functions are thus considered Not Applicable (N.A.).

DOBIS LIBIS contains an online acquisitions system but considerable programming must be done to make it operational. The central concepts are developed, but the actual refinements are not yet programmed.

NOTIS The system supports full acquisitions functions, except some enhancements which the UF Libraries would need for invoice control.

26. The system must support a means of distinguishing between order records and cataloged records. This must include a means of excluding non-cataloged records from certain displays, such as public catalog module.

C.E. N.A.

DATAPHASE N.A.

DOBIS No

NOTIS Yes. The records are flagged as being internal or external. Internal records cannot be viewed in the public access module; they are only retrievable under "internal" or technical processing modes of operation.

The system also retains order record information rather than replace it with the bibliographic record from the catalog department.

27. The order file must be accessible to other acquisitions departments for viewing. This would facilitate resource sharing by knowing what another library has ordered, thus already making it available on campus. This same capability must include a means of preventing any library other than the inputting library from changing the record. Thus accessibility would mean only the capability for viewing, not for modifying the record.

C.E. N.A.  
DATAPHASE N.A.  
DOBIS Yes, but the file structure must be modified  
in order to avoid searching multiple databases.  
NOTIS Yes

28. Order record information consists of two segments. The bibliographic section, and the order information. The order information consists of vendor, fund, number of copies, price, date ordered, etc.

The order information must not be visible to the public service module.

C.E. N.A.  
DATAPHASE N.A.  
DOBIS Yes  
NOTIS Yes

29. Security for changing information in records must be limited to the library which entered the information.

C.E. N.A.  
DATAPHASE N.A. For modules which exist security is by function and levels within function; not by location.  
DOBIS Yes. Security is by function and location.  
NOTIS Yes

30. The system must support the multiple budgetary units of the University Libraries, e.g. E & E, Health, and Agriculture. It also must accommodate a separate account for SFCC.

C.E. N.A.  
DATAPHASE N.A.  
DOBIS If the system were modified to allow for a common on-order file, the only mechanism for this would mean that each would operate under a separate set of fund numbers. In effect, they would be a segment of a single file. The accounting routines for creating segments of the total as a complete entity, with totals for its own acquisitions would have to be written.  
NOTIS Yes

31.\* The system must allow for accounting to show separate sources of funds, such as grants, gifts, federal, state, etc.

C.E. N.A.

DATAPHASE N.A.

DOBIS This could be handled in two ways. Either items would be under a separate fund number, or they would be flagged in the order record. This information could be manipulated in reports to show amounts spent from the appropriate funds.

NOTIS As with DOBIS, this could be handled in two ways. Either items would be under a separate fund number, or they would be flagged in the order record. This information could be manipulated in reports to show amounts spent from the appropriate fund.

32. The system must show allocation, encumbrance, expenditures, cash balance, and free balance by fund and by processing center acquisitions department.

C.E. N.A.

DATAPHASE N.A.

DOBIS The system currently shows balance, without distinguishing between free and cash balance. The change could be made to the software. It also does not show allocations.

NOTIS The system currently shows balance without distinguishing between free and cash balance. The change could be made to the software.

33. The system must support standing orders.

C.E. N.A.

DATAPHASE N.A.

DOBIS No. The system does allow, upon receipt and checkin of an item, for reentering the data to re-encumber funds for the next item. It can support an action date for renewal which can be modified upon receipt to trigger a "renewal" encumbrance.

NOTIS Yes. The system allows standing orders through the serials checkin system. It can issue claims based upon an anticipated receipt date or a fixed date, such as every six months.

34. The system must support online invoice control, linking all items on an invoice by entering the invoice number.

C.E. N.A.

DATAPHASE N.A.

DOBIS No. DOBIS treats each item on an invoice as a separate invoice. Thus there is no way to link the items which were billed on a single invoice. Caryl McAllister feels this could not be changed without major file structure modifications.

NOTIS No. However, this could be linked as a field in the order record. There are existing fields which have not been used; the invoice number could be added to these fields. The invoice record would then be linked to the record, just as the holdings record is attached.

35. Fund accounting should be either dynamic online update or batch update. Ideally, the results should be displayable on the screen.

C.E. N.A.

DATAPHASE N.A.

DOBIS The documentation implies this is dynamic.

NOTIS The funds are updated by batch processing. The frequency of updating is a library decision.

The results currently generate a report and do not produce a screen display. It is possible, however, to modify this aspect to include a screen image of the report information.

36. The system must allow for multiple titles per purchase order as well as issuing single title purchase orders.

C.E. N.A.

DATAPHASE N.A.

DOBIS No. The system issues single title purchase orders.  
NOTIS No. The system issues single title purchase orders.  
It could be modified to issue multi-title purchase orders.

37. The system must allow for payment without a bibliographic record.

This would accommodate payments for OCLC services, binding, groups of books bought as a collection, etc.

C.E. N.A.

DATAPHASE N.A.

DOBIS Yes. The system would only require a credit/debit note. Enter the fund, vendor and amount.

NOTIS Yes. A pseudo-bibliographic record would have to exist in the system. It could consist of a statement, an address, etc. In NOTIS, it would be indexed as a bibliographic record but would not be displayed in the public search mode; it would be flagged as an internal record.

38. The system must support pseudo-bibliographic records. This would include information entries for approval plans, memberships, library subscriptions, etc.

C.E. N.A.

DATAPHASE N.A.

DOBIS Yes, but they would be in the bibliographic database and retrievable in the public search mode.

NOTIS Yes, but they would be in the bibliographic database. They would be flagged as internal records and not displayable in the public search mode.

39. The system must handle deposit accounts. It must show the amount deposited, date, and purchases charged against it.

C.E. N.A.

DATAPHASE N.A.

DOBIS Unknown. Not covered in documentation.

NOTIS

The system handles it in a manner similar to membership accounts. The pseudo-record contains the deposit account information. All items purchased on that fund are posted against that pseudo-record for payment.

Receipt of the items also is posted against the bibliographic record as a holdings statement. The attached order record links to the pseudo-record which shows the deposit. The deposit record lists all the bibliographic numbers for items paid through that account.

40. The system must support the Gifts and Exchange program, showing titles which are received as gifts, with the donator shown as source vendor. The exchange program would require information showing which items were exchanged. It must at least show titles being exchanged, but need not show an issue by issue accounting.

C.E.

N.A.

DATAPHASE

N.A.

DOBIS

Yes. The exchange information could go in the credit/debit note field. Incoming items would be treated as gifts which are entered as ordered/received without payments.

NOTIS

Yes. The exchange information could go in the note field. The purchase order is suppressed and a dummy fund code is used.

41. The system must handle partial receipts of orders. This applies to multi-copy orders of a single title, multiple titles on a single purchase order, and multi-volume sets. It does not apply to series.

C.E.

N.A.

DATAPHASE

N.A.

DOBIS

The system would allow for the partial receipt of multi-copy orders of a title. It does not issue multiple titles on a single purchase order. The system does not automatically handle the partial receipts of a multi-volume set. The receipt of some volumes (assuming issued as a single order for the set) must be entered as a receipt and the amount to be paid at that time. The terminal operator would then have to enter another record for the non-received volumes, along with the amount to be paid for them upon receipt. This would be

the only means of encumbering the amount to be paid for the remaining volumes. Actually, according to Caryl McAllister, a library is advised to order each volume of a set as a separate order. This will be changed with the serials control module.

NOTIS

Yes. The system allows for the partial receipt of multi-copy orders of a title. It does not issue multiple titles on a single purchase order.

The system handles the partial receipt of a multi-volume set just as it does the serials checkin function. It readjusts the remaining balance, reflecting the amount left after the operator entered the amount to be paid.

42. The system must handle the frequent replacement orders for out-of-print materials. This involves asking for availability and a price quotation. The receipt of the price quotation either cancels the order or initiates the generation of a purchase order. For those ordered, the system must then issue a purchase order, encumbering the funds until receipt.

C.E. N.A.

DATAPHASE N.A.

DOBIS Yes. You could enter the order record, but not complete the record to issue a purchase order. For example, there would be no amount in the price field. A letter could be sent, asking for a price quotation.

The order record could have the quotation request information in the note field.

If the quotation is too high or the item cannot be located, the record could be left in the system to supply this information should an order request be made again. The bibliographic record would, however, be displayable in the public inquiry mode without holdings information.

NOTIS

Yes. You could enter the order record, but not flag it to generate an order. Rather, a "canned" message could be used to issue a request for a quotation. The record would remain dormant until a quote is received or until an action date prints it on a report.

The note field could show that the item is awaiting a quotation.

If the quotation is too high or the item cannot be found, the record can be left in the system to supply this information if the item should be requested again. The record would not be visible in the public search mode.

43. The system must issue claim notices for items not received within the anticipated time period. The system should ideally issue the claim information as a list. If not acted upon, the next run would generate the claims notices. This would allow the librarians to check the list, determining if there are legitimate reasons for the delay and thus mean the claims notice should not be sent.

C.E. . . . . N.A.

DATAPHASE . . . . . N.A.

DOBIS . . . . . The system will print claims notices based on an action date. The system will print claims notices or a claims list.

The system only uses the claims function based on an anticipated receipt date. It does not allow for continual receipts of journal issues; it only operates between the date of order and date of first receipt for that title.

NOTIS . . . . . Yes. The system will print either claims notices or claims lists. The system bases this on an action date.

The system uses the claims function based on an anticipated receipt date for either the only receipt of a monograph or the anticipated receipt date of each issue of a series. That is to say that it claims serials as well as monographs.

44. The system must allow for the prepayment of materials.

C.E. . . . . N.A.

DATAPHASE . . . . . N.A.

DOBIS . . . . . Yes

NOTIS . . . . . Yes. The system allows full or partial prepayment. The order statement is entered and left active. The pay statement is entered to show that the full or partial payment has been made. Receipt of the item closes the order statement.



45. The system must allow for various types of reports, such as outstanding orders, new receipts, fund status, vendor performance statistics, etc. Some reports must be separated by fund, by vendor, by processing center, etc.

C.E. N.A.

DATAPHASE N.A.

DOBIS Yes. The IBM package does not include any reports. The information in the system can be used to customize reports as needed.

NOTIS Yes. The system contains many reports, but not all that are wanted by the UF Libraries. The information in the system can be used to generate customized reports. Most which have not been programmed have not been needed at Northwestern; their list of available report programs exceeds 200.

46. The system must maintain vendor files. These would have vendor address and order information. They would also allow for multiple addresses, such as ordering, payment, returning items.

C.E. N.A.

DATAPHASE N.A.

DOBIS Yes

NOTIS Yes

47. The system must support an online serials checkin module for the recording of continual receipts of series. Such a module must accommodate the irregular receipt patterns of serials, showing the last date one was received, dates when missing issues were claimed, the summary holdings information, the anticipated number of days between receipt of issues, etc.

C.E. No

DATAPHASE No

DOBIS No. Caryl McAllister expressed an interest in contracting for the programming of this module. However, the module would be programmed as a joint effort, meaning that she would have the final control of the module design. Further customization for our needs could possibly be arranged if the basic package she envisions would not meet our specifications.

Possibly, IBM would buy the package from the U.S. and market it as part of the DOBIS/LIBIS package. But there are no guarantees of this. The price they would pay would not be equal to the amount the University would have to pay to have it programmed by them.

The programming would probably be done in Germany, per Caryl McAllister.

The price quote made to UF (V. Yellon) was \$66 per hour, assuming 6 months of 6 hour days. Caryl had also mentioned that it would be contracted directly with IBM Germany, payable in DetuschMark.

NOTIS Yes

48. The system must support the binding control of materials, showing the pattern of binding, color, type of printing, etc.

C.E. No

DATAPHASE No

DOBIS No

NOTIS No

49. The binding module must address the issue of physical piece versus bibliographic piece.

C.E. No

DATAPHASE No

DOBIS No

NOTIS No

VI. CIRCULATION

50. The system must charge and discharge books by reading a machine readable code.

C.E. The system uses barcodes, based on the Codabar format. The system could be modified to use OCR-A.

DATABASE All current systems use OCR-A. However, the system can support barcodes.

DOBIS The system used barcodes based on the Delta Distance A format.

NOTIS The system currently uses punched cards. The system could be modified to use either barcodes or OCR; it is primarily a hardware change plus an additional index.

51. The system must accommodate holds. The holds must be possible on titles owned by a specified library, items processed through a specified library, items processed through a specified processing center, or all copies of that title which are in the system.

C.E. Yes

DATAPHASE The system allows holds on all copies of a title which are in the system or on specified copies.

DOBIS The system allows holds on all copies of a title which are in a local holdings file. Depending upon the file structure changes which would have to be made for use at the University of Florida, it might also be possible to place holds on all copies in the system. It would be possible to place a hold on a specific copy.

NOTIS The system would allow for placing holds on single copies or on all copies in the system. However, it currently only supports one circulation desk location. File modifications for multiple locations must consider this aspect.

*How does it do?*

52. The system must support the recall function.

C.E. Yes

DATAPHASE Yes

DOBIS Yes

NOTIS Yes

53. The system must allow loan and fine rules to be terminal specific. This means the rules governing a loan transaction are a function of the item location or collection and the borrower status.

C.E. Yes

DATAPHASE Yes, except fine rules are a function of the system and the borrower as opposed to the collection and the borrower.

DOBIS Yes

NOTIS Yes. NOTIS only supports a single circulation desk. However, the system is designed to accommodate this requirement. The system already has differential loan periods, depending upon the status of the borrower and item.

54. The system must accommodate the detailed requirements for fine and lost book charge accounting routines. This involves sending the funds to separate accounts, depending upon the library collection of the item.

The system must show the amount of the fine, the dates involved (due, returned), the item, partial payments, processing fees, etc.

The information must be output to tape for transfer to the student accounting office for collection. This may also take the form of a direct computer link between the library and accounting files. The direct link could possibly support a bidirectional communication for updating the library files of fines paid.

C.E. Yes. The link to student accounting would be by tape, although a direct link would be possible, either through a HASP or directly, converted to operate on IBM equipment.

DATAPHASE Yes. The link to student accounting is now being developed, and a HASP interface could be developed.

DOBIS Yes, except the system does not currently allow for partial payments.

The tape output or the direct link to the student accounting database would have to be developed.

NOTIS No. The system does not support online fine records. All fine notices are generated by the system. The remaining aspects of fine and lost book charge control is manual.

55. The system must provide security to prevent certain types of patron information from being accessed at public terminals.

C.E.	Yes
DATAPHASE	Yes
DOBIS	Yes
NOTIS	Yes

56. The system must provide levels of security to insure that only authorized personnel can modify transaction record information, such as crediting fines or changing due dates.

C.E.	Yes
DATAPHASE	Yes
DOBIS	Yes
NOTIS	No. Since fine information is not maintained online, security is not an issue.

NOTIS circulation system contains a patron database which is only entered via batch processing. The book record consists of location, call number and status code; this information is on the punched card and is entered into the system when the book is checked out. When the book is returned, the book record is removed from the system, the applicable fines are calculated, overdue notices are produced, and the remaining control is manual.

57. The system must support the Reserve Book Room operation, primarily defined as short-termed loans for high-use items.

The Reserve Book Room requirements include the following: hourly loan and fine rules which will be collection specific. This requires a clock to monitor the hours of operation of that circulation desk to insure that a due time does not fall after the library closes. In some locations, the reserve book operation will be a separate location; at others, it will be transacted at the "regular" circulation desk, meaning at the same terminal. It must be easy and quick to move from "regular" to "reserve material" checkouts; i.e. a function of the material status without having to change modes of operation.

C.E. Yes. Although not installed, it is designed and in the final test phases. It will be installed this summer as part of the State of Wyoming contract.

It meets our requirements for flexibility.

DATAPHASE Yes. However, it does not yet meet all our needs of flexibility. The design is under revision for the University of Nebraska installation and that release will basically meet our requirements. For example, library hours are system specific instead of branch specific.

It does operate on an item status code to facilitate both reserve and regular transactions at a single terminal.

DOBIS No. Caryl McAllister expressed some interest in programming this module, but it would also be under a contract basis.

The design specifications for this module do not exist, as was earlier expressed by Bob Alexander.

NOTIS No. It contains the "hooks" for adding this module, but the hourly loan capability is not currently programmed.

58. The system must facilitate the transferring of materials between collections. This is especially true when moving from a primary to a secondary location, such as from the stacks to the reserve desk operation.

The system should allow for retaining the information attached to the item when housed in the stacks, and that information (e.g. status code) should be automatically re-instated when returned to the stacks. The system must provide for reserve support information such as: professor, course, date to be released, new loan period, fine rate, etc.

The system should act on the release date, issuing a report to show that specified materials could then be removed from the reserve collection.

C.E. Yes, in the reserve function which is now being debugged for actual release.

DATAPHASE Yes. This function is a separate module of the reserve function of which the second release is being finalized.

DOBIS No

NOTIS No

59. The circulation system must accommodate the problem of physical piece versus bibliographic piece. This is particularly true with serials.

C.E. The system addresses this issue to some extent. The circulation record has fields for bibliographic piece information.

DATAPHASE The system addresses this issue to some extent. There will be a volume level between the title and item (copy) level of information. The volume level identifier is flexible to identify various formats.

DOBIS The system addresses this issue to some extent. Caryl McAllister plans to incorporate this into the serials control module.

NOTIS The system uses physical piece information for the circulation system which operates as an inventory control system. The catalog database which supports the online catalog and technical services operations uses bibliographic piece information.

The circulation system uses a "key extension" in conjunction with the call number to identify each physical piece uniquely.

VII. PATRON FILES

60. The system must allow for a patron file which will include all valid borrowers. Non-valid borrowers may be included, but flagged to indicate that their priveleges have been revoked.

The system must support tape loading of patron files.

The system must support special borrowers which are not part of the University Community. Such patron records would not be available by tape input.

C.E. Yes

DATAPHASE Yes

DOBIS Yes

NOTIS Yes

61. The system must allow for updating the patron file by tape input from the University Registrar file, the EIP file and a SFCC student file. The update information processing would mean that a valid borrower would be changed to invalid, an address would be updated, the status in school corrected, the phone number changed, etc.

New names in the incoming update tapes would be added as new borrowers.

C.E. The system supports a tape load of the patron file. It does not meet some of the complexities required for updating existing patron records with new tape input. It would be necessary to offload the patron file, process it externally, and reload the file.

DATAPHASE The system supports a tape loading of the patron file. It does not meet all the complexities required in this area. To update the file, it would be necessary to offload the patron, process it externally, and reload the file.

DOBIS The system does not support tape loading of the patron file.

NOTIS The system supports a tape load of the patron file. It does not meet some of the complexities required for updating the existing patron records internally with the new tape input. It would be necessary to process the information externally and then reload the entire patron file.



62. Fine obligations must remain in the system for a specified period of time regardless of whether or not moved to the student accounting office.

The library is responsible for this information because the complete justification for the charge is not sent to the student accounting office.

C.E. The link would be by tape or direct transfer. Tape output would not delete the information from the circulation record. It would also allow for tape input of payment information from Student Accounts to update the library files. This would not delete the information from the circulation record, however.

DATAPHASE No. Currently not retained once paid; tape offload for Student Accounting office under development.

DOBIS Fine information remains in the system until it is transferred to tape for historical records and possibly COM production. The data is removed according to the dates involved.

NOTIS No. Fine information is not retained online; it is handled through manual files of system-generated notices.

VIII. BARCODES

63. The system must support Codabar Barcodes. The University Libraries have inserted several thousand of this format into the books and the numbers are currently held in the archive tape records.

C.E. Yes

DATAPHASE Uses OCR-A in all installations, but the system could support barcodes. The OCR numbers have been in the codabar format regarding number of characters and check digit code.

DOBIS No. The system uses Delta Distance A format. The McAllisters felt that it would be possible to convert the system to Codabar by using a translation table for each wand scan; this would expand the number from the 9 characters to the 14 characters of the Codabar number.

NOTIS No. The hardware would have to be changed as well as the index. It currently operates with the call number on punched cards.