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USAID INTEGRATED ONLINE LIBRARY SYSTEM

IOLS EVALUATION AND REVIEW

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Prepared by

MK Dzurinko Associates
1 E. University Parkway #911 Baltimore, MD 21218-2409
410-235-2821 Fax: 410-235-2821-235 E-mail: MKDTRAIN@AOL.COM

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Executive Summary

The USAID Library plans to purchase an off-the-shelf, fully developed, integrated online library system (IOLS). System features must enhance current information services and resources, provide the flexibility needed for the addition of research services, and be adaptable enough to take advantage of future IOLS technology. USAID will use the system to manage library resources and as a gateway to other in-house databases.

MK Dzurinko Associates was asked to assist the Library in determining USAID IOLS requirements by conducting interviews with IOLS staff and reviewing USAID needs.

The evaluations and recommendations in this report are the product of MKD's investigations, including staff interviews, review of the functions and features of currently available off-the-shelf IOLSs, attendance at vendor product demonstrations, contact with vendor clients, and literature searches.

Nothing in this report is intended to endorse or advocate a particular integrated online library system product or an IOLS vendor. MKD will suggest the impact that purchase of a particular system might have on USAID staff and resources, but cannot guarantee the performance of any IOLS that is ultimately purchased and implemented by USAID.

Integrated online library systems were designed to produce databases that allow a library to manage bibliographic records for library resources and to provide end users with access to the records. In general IOLS vendors do not view their products as information, or knowledge, management systems, designed to provide linkage and access to non-library internal databases.

The characteristics of a user friendly, easy to use, and fully functional IOLS include search flexibility that provides for simple and advance searching and local customization; user friendly screens with good help instructions; access to full text, multi-media materials, and the Internet; seamless links to both library and other internal non-library databases; flexible design allowing local customization with little or no intervention from the vendor; and streamlined staff work screens that require few keystrokes.

Effective IOLS project management depends upon staff participation, careful field mapping of converted data, and a well designed implementation timeline.

Integrated online library system cost is based on the number of titles in a library collection and the number of end and staff users. Low-end IOLS costs range from $500 to $10,000 and high-end systems start at $30,000+. There are few systems in the medium cost range, $12,000 to 29,000.

Low-end systems include Inmagic/DBTextworks, CASPR Library Systems, Winnebago, and Nichols' Athena. These systems are Y2K and Z39.50 compliant and offer Web OPACs with user-friendly screens, MARC import/export, customization of

user screens and data fields, and fully developed circulation modules.

However, most do not meet several of USAID's basic system requirements in that they are not relational databases, or do not offer serials and acquisitions modules, or operate only on NT. Most importantly, seamless searching across all USAID databases, if possible, would require a special programming. Low-end markets are generally small academic, public and special libraries or libraries that plan to implement only selected modules, i.e., only a WEB OPAC and cataloging, but not circulation or serials or acquisitions.

Medium range systems include Cuarda STAR and NOTEbookS. They do not fulfill USAID requirements because STAR is not a relational database and NOTEbookS is a Lotus Notes application and USAID does not currently use Lotus Notes.

High-end systems cost in the range of $30,000 to $200,000. They are powerful, robust (capable of handling all local needs within the parameters of the system), relational databases with fully developed system modules, including a Web OPAC. Their functions are seamless and system actions are transparent to the end user. High-end systems are designed with the flexibility needed to implement a variety of local customizations and interfaces.

However, high-end vendors do not view their products as information or knowledge database management systems designed to seamlessly link and provide access to the library and other non-library internal databases. The exception is BASIS Techlib, a library application that was designed to take advantage of the capabilities and integration of the BASIS DBMS. High-end systems include: BASIS Techlib, Endeavor Voyager, EOS Q Series, Ameritech Horizon, SIRSI Unicorn, SydneyPlus, and TLC (The Library Solution.)

MKD recommends BASIS Techlib and SIRSI UnicornSTILAS as the two best IOLS candidates for the USAID Library. SydneyPlus and EOS are recommended as possible alternatives, with reservations.

SIRSI a relational, client/server integrated online library system with fully developed administrative, acquisitions, authority control, cataloging, circulation, digital, MARC import/export, reports, serial control, and Web OPAC modules. It is Z39.50 and EDI compliant.

The SIRSI Unicorn IOLS integrated system product is individually designed for specific types of libraries and UnicornSTILAS is designed for government libraries. It is the only IOLS that handles the COSATI/CENDI record format for technical reports and classified documents.

Advantages for USAID selection of UnicornSTILAS include that it is both UNIX and NT platforms; it is designed for government libraries; it requires minimal screen and field customization with little vendor intervention; it has user-friendly OPAC screens; it is Y2K, ODBC, and Z39.50 compliant; it has flexible functionality and a strong BRS search engine; it offers single staff processing screen; it stores MARC records in one file and allows for MARC import/export. It is successfully installed and implemented in a number of government libraries, i.e., U.S. Courts of Appeals, Aberdeen Proving Grounds, DoD and it is on the GSA schedule. USAID Library cataloging staff has experience using SIRSI.

Disadvantages for USAID selection of STILAS includes whether or not SIRSI can seamlessly link to and provide access to other USAID internal databases, i.e. DEC BASIS databases and the fact that initial cost for SirsiSTILAS may be higher than other systems such as Basis Techlib. However, other systems may require a considerable

amount of staff time for customization.

SIRSI is a stable company with no outstanding debt and has an excellent D&B rating. It has experienced a 60% growth rate over the past year and its products are installed in 900 government, academic, public, and corporate sites. In 1998 SIRSI released its Windows NT product. Sixty percent of its employees are involved in product support and development.

In order to collect information about the system's functionality and easy of use, MKD contacted following libraries that have installed and implemented SIRSI: Army Management Staff College, Ft. Belvoir, VA, Cassidy Cataloging Services, Inc., Harrison, NJ, and the Space Telescope Science Institute, Baltimore, MD.

BASIS Techlib is a completely web based, client/server, integrated online library system with fully developed administrative, acquisitions, authority control, cataloging, circulation, digital, MARC import/export, reports, serials control, and Web OPAC modules. A Web browser, Netscape or Explorer, is used as the interface to all system modules, allowing a considerable a great degree of local customization. The system is Y2K and ODBC compliant. BASIS has a strong cataloging module and search engine BASIS Techlib is a stand-alone product, but it can also be integrated with Livelink as a Livelink Cataloged Library. One of the system's best features is the great degree of customization it provides, allowing users to design screens for specific local needs.

Advantages for USAID selection of BASIS Techlib include that is runs on both UNIX and NT platforms; is completely Web based IOLS and can be customized to fit local requirements; DEXS databases are BASIS databases and the DEC currently has BASIS licenses, the BASIS Webserver, and the expertise needed to customize Techlib; initial system cost is not a high as other high-end systems; and the use of BASIS will facilitate the integration of and searching across USAID databases.

Disadvantages for USAID selection of BASIS Techlib include the fact that MARC record storage is in two files; it requires a substantial commitment of staff time and effort to customize; the acquisitions module was released early in 1999 and there is not much user experience on which to rely; it does not have a single staff processing screen; upgrade to the LiveLink Cataloged Library option is costly; BASIS Techlib customer base is large corporate and government (US Treasury Dept., CIA) libraries, but no government libraries with collections the size of the USAID Library collection; BASIS Techlib is not on the GSA schedule; and local vendor system support appears weak. Additionally, there are concerns about the vendor's commitment to the continued development of BASIS.

BASIS Techlib is a product of Open Tex, Inc., BASIS Division, a Waterloo, Canada based publicly traded company. It has a good D&B rating and its total income for 1998-99 was over $100 million. Open Text, Inc. is the vendor of Livelink, an enterprise document management product that enables large institutions to develop collaborative knowledge management systems which are available over an Intranet.

BASIS is a full text document management system developed by Battelle Labs and originally marketed under the corporate name Information Dimensions, Inc. In the early 90s, IDI was sold to OCLC, then to Gores Technology, and in 1998 to Open Text, Inc.

It is difficult to determine the future of the BASIS product. It has certainly bounced back and forth between vendors, but Open Text seems committed to the library application's development, especially to the LiveLink Cataloged Library product.

BASIS Techlib libraries has very few clients with collections the size of USAID. Customers usually have over 30,000 records. Many Techlib customers are migrating

from TechlibPlus to BASIS Techlib. In order to collect information about the system's functionality features, and MKD contacted The Urban Institute, Washington, DC.

SydneyPlus is a product of privately held International Library Systems based in Vancouver, Canada. It has an excellent record of customer support and is extremely popular with law libraries because of its handling of special and irregular serial issues and multiple copies of the same title.

SydneyPlus is a relational, fully developed, integrated online library system that runs on VAX/VMS minicomputers and on UNIX and NT. It is Y2K compliant and supports Z39.50 and MARC import/export. Basic system modules are cataloging, authority control, and an online catalog ($30,000 est.) Other modules such as the MARC record interface, Web based OPAC, circulation, interlibrary loan, serial control, etc. are available at additional cost.

Although seen as a competitor to both SIRSI and Techlib in cost and functionality, SydneyPlus Windows screens still appear very "DOS-like" and the system does not seem to have easy functionality when moving between modules. Additionally, it does not offer a Web OPAC as part of its basic package. Integration of and linkage to internal databases such as BASIS would require special programming.

EOS International Q Series, formerly known as Data Trek, is owned by Dawson Holdings PLC, an UK holdings company. The EOS Q Series was released in 1997.

EOS is a client/server, open, integrated IOLS which offers cataloging, circulation, serial, authority, report, imaging, and Web OPAC modules. The acquisition module was released in the spring of 1999. The system runs on UNIX and NT, is Y2K compliant, and supports Z39.50 and MARC import/export. The Q Series has an especially strong serials module. Integration of and linkage to internal databases such as BASIS would require special programming.

EOS would seem to be the natural choice for USAID purchase. USAID is a Data Trek library and migration to EOS would make data conversion easy and the entire project cost effective. However, EOS International's viability as a vendor, reliability (late upgrade and module releases), and its weak customer support are still the same serious issues they were for Data Trek clients. Additionally, EOS user documentation is not any better than was Data Trek documentation. Local system support is weak. Calls by MKD to EOS were not returned and the Q Series was not demonstrated on site at USAID.

MKD recommends BASIS Techlib and SIRSI UnicornSTILAS as the candidates which 'best" fulfil USIAD requirements for an off-the-shelf IOLS. They are fully functional integrated online library systems that will competently handle the Library's database and research resources, can provide the flexibility needed for the addition of research resources, are adaptable enough to take advantage of future IOLS technology, including linkage to and seamless searching of USAID internal databases, and provide easy and friendly access to USAID end users.

SydneyPlus and EOS Q Series are recommended as possible alternatives, with individual reservations concerning their ability to provide seamless linkage and search access to other USAID internal databases and the status of system and customer support.

Introduction

The USAID Library plans to purchase an off-the-shelf, fully developed, integrated online library system (IOLS). System features must enhance current information services and resources, provide the flexibility needed for the addition of research services, and be adaptable enough to take advantage of future IOLS technology. The system will make USAID research resources available for USAID staff in Washington, DC and to USAID worldwide offices.

The system must be user friendly and provide seamless integration with local USAID databases. USAID has several databases, including the Library database (Data Trek), the DEXS database (BASIS), and other internal statistical databases. Initially, the Data Trek database will migrate to the new IOLS.

USAID plans to use the IOLS as a gateway to other in-house databases.

The USAID Library catalogs 750 titles per year and its collection contains 9,000 titles. The present automated system, Data Trek Professional Series, is a DOS-based system that is not Y2K compliant. The Library has experienced serious problems with system functions, especially the acquisitions and serials modules, and the vendor has indicated that it will not support Data Trek Professional software after September 1999.

The USAID Library has asked MK Dzurinko Associates (MKD) to assist with the preparation of library IOLS requirements, to review IOLS products currently on the market, and to recommend the integrated online library systems which best fulfill USAID requirements.

Project Procedures

System Requirements

MKD conducted interviews with the USAID Library, the DEC, and the IRM staffs in order to determine the requirements needed in an IOLS. Based on these interviews, a *USAID Integrated Online Library System Requirements* document was produced and submitted to USAID for review and approval. MKD also submitted a proposed timeline for system installation and implementation.

Investigations

MKD has attended vendor demonstrations, talked with regional and home office vendor representatives, programmers, and support staff, and visited libraries that have implemented selected integrated systems. As Co-Editor of the *Integrated Library System Reports* and its *Vendor Survey*, MKD is familiar with the off-the-shelf IOLS products on the market. MKD also has experience as a TechlibPlus (the predecessor to BASIS Techlib) database manager.

The vendors provided current customer lists and MKD contacted several of these

clients that have library collections similar to USIAD. Discussions centered on system functionality and flexibility, vendor support and training, system costs, system customization, consulting fees, and local library staff and IS support.

Vendors BASIS Techlib and SIRSI were invited to demonstrate their products on site at USAID and several USAID staff members attended an off site SydneyPlus demonstration.

MKD also conducted literature searches on the subjects of library automation and IOLS system performance.

Evaluations

The evaluations and recommendations in this report are the product of MKD's investigations. They are based on USAID requirements, evaluation of the capability of an IOLS to handle said requirements, and review of vendors' viability and ability to deliver an appropriate, cost-effective IOLS product.

Nothing in this report is intended to endorse or advocate a particular integrated online library system product or an IOLS vendor. MKD will suggest the impact that purchase of a particular system might have on USAID staff and resources, but cannot guarantee the performance of any IOLS that is ultimately purchased and implemented by USAID.

Integrated Online Library Systems

As there is no perfect IOLS, there is no one system that fulfills every one of USAID requirements. However, there are systems that are capable of best meeting USAID requirements.

Integrated online library systems were designed to produce databases that allow a library staff to manage bibliographic records for library resources and to provide end users with access to the records. With the growth of digital technology, the Internet, and Intranets, these vendors developed new IOLS products and system updates to handle multi-media, commercial databases, and links to internal and external files.

Integrated Online Systems Features

In general IOLS vendors do not view their products as information, or knowledge, management systems, designed to provide linkage and access to non-library internal databases. Knowledge management may be defined as activities that store and provide access to an institution's internal resources through an Intranet.

Most IOLSs have strong cataloging modules, offer a Web OPAC as part of their "basic" package, and have well developed and versatile circulation modules. Most have fairly standard serial control modules, although some are easier to use, depending on the number of keystrokes needed to create subscription records, check-in issues, and route materials.

The acquisitions module is always the weakest link in an integrated system. It was the last module developed by vendors and is usually the last module implemented by users. It is really an accounting system with bibliographic information attached. Most acquisitions modules don't have the easy workflow and functionality of other system modules.

Creation of a local serials and acquisitions databases is the most labor intensive of all implementation projects. Database integrity relies on careful project planning and monitoring of data entry.

The characteristics of a user friendly, easy to use, and fully functional IOLS

include:

- Search flexibility that provides for simple and advance searching and local customization.
- User friendly screens with good help instructions.
- Access to full text, multi-media materials, and the Internet.
- Seamless links to both library and other internal non-library databases.
- Flexible design allowing local customization with little or no intervention from the vendor.
- Streamlined staff works screens that require few keystrokes.

Project Management

Staff. The key to the successful implementation of an IOLS is staff participation and commitment. Staff responsibilities and library procedures change with the installation of a new IOLS, especially if the selected system is complex and requires a great amount of customization.

In addition to regular duties, the Library staff will initially be called upon to work with other departments and the vendor on data conversion and system customization projects. Bibliographic records will need review and adjustment, patron and vendors files and circulation records will have to be set up, and serials and acquisitions records will have to be created. Most importantly, the staff will have to attend training to learn how to effectively use the system.

During this time, regular duties – cataloging, reference, acquisitions, etc. – do not cease and, in the case of reference services, may increase. Therefore, USAID may find it necessary to add temporary staff to complete specific implementation projects such as serials, circulation, and patron and vendor file data entry.

MKD recommends careful study of library workflow before an IOLS is installed. An implementation plan should be developed and all new and changed procedures should be carefully documented.

A Library staff member should be assigned to act as Library Database Manager (LDM). The level of LDM responsibilities will depend on the complexity of an IOLS and the amount of system customization needed.

During the initial implementation of the project, the LDM will work on system profile (determining how system functions can best meet USAID requirements), customization, data conversion and mapping, authority control, and data files projects. When the system is rolled out and all modules are up and running, LDM responsibilities become less intense and more routine. They include acting as the liaison with IRM and with the vendor, keeping track of IOLS procedures, dealing with vendor help support questions, and monitoring the integrity of database records and the availability of the system.

The Library Database Administrator is the person who handles system updates, system programming issues, and hardware maintenance.

Data Conversion. The main conversion project will be the catalog database. Most libraries find it easier to create new serials and acquisitions databases than to try to convert the old databases. There have been reports of difficulties with the transfer of local notes from Data Trek bibliographic records. However, vendors can find fixes to handle this and conversion should present few problems.

The key to successful data conversion lies in the record fields mapping plan that the library and the vendor develop.

Implementation. The library that plans to roll out all modules at the same time is destined for a rocky road. The USAID Library does not have enough staff to take on all

modules at once. MKD recommends that the Web OPAC and cataloging modules be implemented first and then circulation. A timeline should be planned and followed as closely as possible.

Low-End/High-End Integrated Online Library Systems

Integrated online library system cost is based on the number of titles in a library collection and the number of end and staff users.

Low-end IOLS costs range from $500 to $10,000 and high-end systems start at $30,000+. There are few systems in the medium cost range, $12,000 to 29,000.

Low-End Systems

*Starred costs noted below are based on information supplied to *Integrated Library System Reports Vendor Survey*, March 1999.

Low-end systems are Y2K compliant and offer Web OPAC modules. They can accommodate the import/export of MARC data, are flexible enough to allow for the customization of user screens and data fields, have fully developed circulation modules, and are Z39.50 compliant. One attractive feature of these systems is that their Web OPAC user interfaces are attractive and very user friendly.

However, most do not meet several of USAID's basic system requirements. Many are not relational databases and some do not offer serials control and acquisitions modules. Others operate on NT, but not on UNIX. And, most importantly, since they are not true information or knowledge management systems, seamless searching across all USAID databases, if possible, would require an additional programming.

Low-end markets are generally small academic, public and special libraries or libraries that plan to implement only selected modules, i.e., only a WEB OPAC and cataloging, but not circulation or serials control or acquisitions.

Low-end systems include Inmagic/DBTextworks, CASPR Library Systems, Winnebago, and Nichols' Athena.

InMagic/DBTextworks (*$4900+, 10,000 installed sites) is a relational-like (database linking) database, which was developed as a document management system. It is a low cost first generation system for libraries with small staffs and little or no IS support. In August 1999 Inmagic announced a merger with the high-end system Comstow's BiblioTechPRO (*$40,000 - $50,000, 56 installed sites.)

Inmagic does not fulfill USAID requirements because it is not a relational database, operates only on NT, requires a lot of customization, users must navigate through several screens to see search results, and it is installed in very few government libraries. The majority of Inmagic's client base is special libraries (corporate, law, and trade associations.)

CASPR ($3500+, 10,209 installed sites) has a client base of small and medium public and academic libraries. It has recently expanded into the special, especially law firm, library market.

CASPR does not fulfill USAID requirements because it is not a relational database and not ODBC compliant. The vendor just recently released serials control and acquisitions modules.

Winnebago (*$3500, 5673 installed sites) was originally designed for public libraries, but is currently marketing its product to special libraries.

Winnebago does not fulfill USAID requirements because it is not a relational database, operates only on Windows NT, and does not offer thesaurus, serials control, or acquisitions modules.

Nichols' Athena (*$3495, 4758 installed sites) recently won an American Library Association award for the "best" IOLS functionality in its price range.

Athena does not fulfill USAID requirements because it operates only on NT, does not have thesaurus or acquisitions modules, and serial routing slips cannot be customized. The vendor client base includes all types of, but few government, libraries.

Medium Range Systems

Cuarda STAR (*$17,760-$19,010, 415 installed sites) is "a flat file system with relational capabilities" that operates on NT and UNIX. STAR is a fully developed system that offers all system modules and excellent search capability. Cuadra offers excellent product and customer support.

STAR does not fulfill USAID requirements because is not a relational database and is not ODBC compliant.

NOTEbookS (*$18,275, 82 installed sites) is a fully developed and fully functional IOLS. It is part of a knowledge management system, Lotus Notes.

NOTEbookS does not fulfill USAID requirements because USAID does not currently use Lotus Notes.

Chart B contains low-end and middle range systems features and costs.

High-End Systems

High-end systems cost in the range of $30,000 to $200,000. They are powerful, robust (capable of handling all local need, within the parameters of the system), relational databases with fully developed system modules, including a Web OPAC. Their functions are seamless and system actions are transparent to the end user. High-end systems are designed with the flexibility needed to implement a variety of local customizations and interfaces.

However, high-end vendors also do not view their products as information or knowledge database management systems designed to seamlessly link and provide access to the library and other non-library internal databases.

The exception is BASIS Techlib, a library application which was designed to take advantage of the capabilities and integration of the BASIS DBMS. Techlib can link to BASIS and other internal databases and optionally can be part of the knowledge, or enterprise, management system Livelink as a Livelink Cataloged Library.

High-end systems include: BASIS Techlib (*$35,000+, 36 installed sites), Endeavor Voyager ($50,000+ est., 132 installed sites), EOS Q Series ($45,000+ est, 151 installed sites), Ameritech Horizon ($55,000+ est., 613 installed sites), SIRSI UnicornSTILAS (*$35,000+, 1000+ installed sites), SydneyPlus (*25,000+, 600+ installed sites), and TLC (The Library Solution, (*$38,500+, 148 installed sites).

Recommended Systems for USAID Requirements

MKD recommends BASIS Techlib and SIRSI UnicornSTILAS as the two best candidates for the USAID Library.

SydneyPlus and EOS are recommended as possible alternatives, with the

reservations listed below.

SIRSI

SIRSI a relational, client/server integrated online library system with fully developed administrative, acquisitions, authority control, cataloging, circulation, digital; MARC import/export, reports, serials control, and Web OPAC modules. The Hyperion Digital Archives Module, used to provide access to multi-media materials is an optional purchase. SIRIS is Z39.50 and EDI compliant.

The SIRSI Unicorn integrated system product is individually designed for specific types of libraries: UnicornSL for corporate, law, medical, and scientific libraries; Unicorn ACADEME for college and university libraries; UnicornECOLE for school libraries; UnicornOASIS for public libraries; and UnicornSTILAS for government libraries. UnicornSTILAS was released in 1988 for use at the Defense Technical Information Center. In order to assist DTIC with the management of the DROLS database of technical reports, STILAS was designed to handle the COSATI/CENDI record format. COSATI record format was developed by DoD to handle technical reports and classified documents. STILAS is currently the only IOLS that accommodates the COSATI format.

Advantages:

- UnicornSTILAS is designed specifically for use in government libraries. It is the only IOLSs that completely supports the COSATI/CENDI (technical report format developed by DoD) record format.
- It requires minimal screen and field customization.
- It has user-friendly OPAC screens.
- It runs on both UNIX and NT platforms.
- It is Y2K compliant.
- It has flexible functionality.
- It has a strong BRS search engine.
- It is customizable and will require little or no vendor intervention.
- It Workflows™ product provides staff with a customized single processing screen (buttons for function and interface access to all modules is available on a single screen) that reduces data input keystrokes.
- It has a strong circulation module.
- It stores MARC and non-MARC records in one file.
- MARC import/export is available using SmartPORT™.
- It is successfully installed and implemented in a number of government libraries, i.e., U.S. Courts of Appeals, Aberdeen Proving Grounds, DoD.
- It is on the GSA schedule.
- USAID Library cataloging staff has experience using the SIRSI system.

Disadvantages:

- There is a question as to whether SIRSI can seamlessly link to and provide access to other USAID internal databases, i.e. DEC BASIS databases. SIRSI indicates that it can access other databases through the WebCAT. If the database is Z39.50, v. 3 compliant. STILAS can search the databases using the WebCAT's built-in Z client. If a database is not Z compliant, the library can create a link within the WebCAT interface to search another database in that database's interface using a standard Web browser.
- At first glance the serial check-in record screen seems somewhat inflexible and will require local customizations.

- Initial cost for SirsiSTILAS may be higher than other systems such as Basis Techlib, but these other systems may require a considerable amount of staff time for customization.

SIRSI indicated that it would create a beta test database of USAID Library records, but did not quote a cost for this service.

SIRSI hardware requirements and costs are noted in the accompanying Chart A.

Company History

SIRSI, founded in 1979 by Mike Murdock, Jacky Young, and Jim Young, is a privately held company based in Huntsville, AL. It is a stable company with no outstanding debt and has an excellent D&B rating. Financial references can be obtained by contacting SIRSI directly. According to the company, it has experienced a 60% growth rate over the past year and its products are installed in 900 government, academic, public, and corporate sites. Over 132 new sites were installed in 1998. In 1998 SIRSI released its Windows NT product. The company indicates that 60% of its employees are involved in product support and development.

Customer Comments

MKD contacted the following libraries that have installed and implemented SIRSI. Questions were asked about staff and collection size, database management, local IS support, costs, and the best and worst system features.

Army Management Staff College, Ft. Belvoir, VA. MKD spoke with Ms. Nettie Pennington (703-805-4722.) The NT system was installed in 1998. The total library staff is two librarians and they handle library database management, with hardware and local system support from their IS department. The College library database contains 30,000 records and there was no online database before SIRSI installation. Ms. Pennington indicated that the College is pleased with the system, especially with the features and functionality of the WebCAT. Initially there were problems with NT, but with the help of Microsoft, SIRSI has resolved them in their latest update release. The College has implemented all standard modules, except acquisitions and authority and uses MARC record format. The system was purchased through the GSA schedule at a price range of $30,000 - $50,000, as quoted by Ms. Pennington. She is satisfied with SIRSI help support and training.

Cassidy Cataloging Services, Inc., Harrison, NJ. Cassidy Cataloging (973-481-0900) uses Unix-based SIRSI to provide MARC cataloging services for over 80 law, corporate, and public libraries. Access to this bibliographic data is available to the individual libraries over the Internet through Cassidy's MOLEhill'98 product. MKD spoke with Ms. Cassidy who indicated that her catalogers have worked closely with SIRSI to customize a cataloging module that can be used to handle records from a wide variety of clients. Ms. Cassidy is exceptionally pleased with the WebCAT, the Workflows™ product, and vendor support. Ms. Cassidy stated that probably due to rapid growth during 1998, help support became weak, but that the company seems to have resolved that problem. Ms. Cassidy also indicated that SIRSI plays close attention to customer requests. She also commented on the usefulness of the SIRSI users group meetings, at both the regional and national levels.

Space Telescope Science Institute, Baltimore, MD. MKD spoke with Ms. Sarah Stevens-Raybum, the Librarian (410-338-4700.) The Institute recently migrated to SIRSI NT from a DRA system. The collection size is 10,000 records. Before purchase, she and her staff (total library staff numbers 3 FTE) evaluated the Horizon system installed at their sister institution, Johns Hopkins University, and based on that review the Institute decided that SIRSI would best their needs. The library staff handles database management, with hardware system support from their IS department. She likes the flexibility of SIRSI software and both staff and users like the WebCAT. There were problems with serials control patterns and they have been fixed in the latest SIRSI update. She indicated that a library should not underestimate the time needed to work with SIRSI in customizing the system and getting the training needed to use the system effectively. Since SIRSI is report driven,.i.e., to load bibliographic records a report must be run, she feels that SIRSI should provide users with more complete and detailed information on the qualities and functions of each standard report. Ms. Stevens-Rayburn feels that the SIRSI NT product needs more vendor help support. She finds the best help support on the SIRSI users listserv which SIRSI closely monitors. She indicated that several system upgrades and fixes have been issued based on listserv users' comments.

BASIS Techlib

BASIS Techlib is a web based, client/server, integrated online library system with fully developed administrative, acquisitions, authority control, cataloging, circulation, digital, MARC import/export, reports, serials control, and Web OPAC modules. A Web browser, Netscape or Explorer, is the used as the interface to all system modules, allowing a considerable amount of local customization. The system is Y2K compliant.

BASIS Techlib is a stand-alone product, but it can also be integrated with Livelink, a collaborative knowledge management product offered by its parent company, Open Text, Inc. With this integration, BASIS Techlib becomes the Livelink Cataloged Library.

Basis Techlib (the interface used by library staff for cataloging, circulation, etc.) uses three-tier system architecture to deliver the IOLS to the desktop. Components of the system include the BASIS Techlib database, the interface developed using the Microsoft Active Platform (Active Server Pages (ASP)) and the browser.

BASIS has a strong cataloging module and search engine. One of the system's best features is the great degree of customization it provides, allowing users to design screens for specific local needs.

Advantages:

- BASIS Techlib runs on both UNIX and NT.
- It is a completely Web based IOLS and can be customized to fit local requirements.
- DEXS databases are BASIS databases and the DEC currently has BASIS licenses, the BASIS Webserver, and the expertise needed to customize Techlib.
- Initial system cost is not a high as other high-end systems.
- BASIS is a full text document management system and BASIS Techlib will facilitate the integration of and searching across USAID databases.
- Vendor site help support for the product is stable; BASIS Techlib consultants have at least eight to ten years experience working with the Techlib product.

Disadvantages:

- An imported MARC record or local catalog record is stored in two places. The full MARC data is stored in a MARC record and selected fields (title, author, etc.) are stored in a Catalog record.
- BASIS Techlib is a complex system and requires a substantial commitment of staff time and effort to customize. Implementation will place additional burdens on the staff.

Critical issue. *This is an extremely critical issue for USAID.* The Library staff is small and all members are part of the reference staff in addition to their other responsibilities (cataloging, serials, etc.) Regular duties, especially reference services, will continue to need high level coverage during a BASIS Techlib customization project.

Vendor implementation. *The vendor cost proposal indicates that 100 hours may be needed for the data conversion project.* This does not include the number of additional hours that the USAID Library staff will have to devote to the project.

Staff implementation. *MKD estimates that, depending on the amount of customization required, it will take approximately* ***three to six months*** *of intense staff time* to attend TL training sessions and, with the assistance of Techlib consultants, to install TL, customize the system, convert data, and test the system.

Temporary staff. USAID may have to hire temporary staff during the project in order to handle routine cataloging, reference services and help with system projects such as serials data entry, and circulation patron files and vendor files.

- The serial screens seem somewhat inflexible; too many keystrokes are needed to perform routine functions.
- The BASIS Techlib acquisitions module was released early in 1999 and there is not much user experience on which to rely. This module has always been very complicated to use.
- It does not have a single staff processing screen, i.e., access to each module is not available from staff screens.
- Upgrade to the LiveLink Cataloged Library option is costly, although BASIS Techlib library software does contain the LiveLink Activator.
- BASIS Techlib has a customer base of large corporate and government (US Treasury Dept., CIA) libraries, but no government libraries with collections the size of the USAID Library collection.
- There are concerns about the vendor's commitment to the continued development of BASIS.
- Open Text is not on the GSA schedule.
- Local vendor system support appears to be weak.

Open Text will create a beta test database for $5000 (this price seems rather steep.)

BASIS Techlib hardware requirements and costs are noted in the accompanying Chart A.

Company History

BASIS Techlib is a product of Open Tex, Inc., BASIS Division, a Waterloo, Canada based publicly traded company. It has a good D&B rating and its total income for 1998-99 was over $100 million. Open Text, Inc. is the vendor of Livelink, an enterprise document management product that enables large institutions to develop collaborative knowledge management systems which are available over an Intranet.

BASIS, a full text document management system, was developed by Battelle Labs in 1986. Techlib, a BASIS library application, was developed in 1989 and marketed under the corporate name Information Dimensions, Inc. In the early 90s, IDI was sold to OCLC, a non-profit bibliographic utility and OCLC sold it to Gores Technology. In 1998 Gores sold Techlib and the BASIS Webserver to Open Text, Inc.

BASIS Techlib was the first completely web based IOLS on the market. The system's main client base is large special libraries – corporate, research, and government institutions. The company has sold 36 BASIS Techlib systems since its introduction and 15 BASIS Techlib sites were installed in 1998.

It is difficult to determine the future of the BASIS product. It has certainly bounced back and forth between vendors, but Open Text seems committed to the library application's development, especially to the LiveLink Cataloged Library product.

Customer Comments

There are very few BASIS Techlib clients with collections the size of USAID. Customers usually have over 30,000 records. Many Techlib customers are migrating from TechlibPlus to BASIS Techlib and consequently already have fully developed BASIS databases.

MKD contacted the following library that installed the new BASIS Techlib system in March 1999.. Questions were asked about staff and collection size, database management, local IS support, costs, and the best and worst system features.

The Urban Institute, Washington, DC. MKD spoke to Nancy Minter, the Librarian (202-261-5534.) The Library has 48,000 records, 1,000 serials titles, and several special collections such as demographic and census materials and in-house reports. The library staff of seven FTE is customizing the system with consulting help from Open Text. Ms. Minter indicated that OPAC customization is taking somewhat longer than she expected and possibly budgeted for. (This may due to the fact that staff has no experience with BASIS and have had to rely solely on Open Text consultants.) The Institute will use all modules and plans to roll out the OPAC in late August 1999. The Institute's IS staff provides hardware and system support. The catalog will be available on the Intranet, but not accessible through the Internet. Ms. Minter commented that the fact that is so customizable is BASIS Techlib's best and worst feature. The more you get, the more you want. The Institute's cataloger does have concern that if a subject heading is not in current use, it appears on staff and OPAC screens with a "0" result. She feels this may mislead users. Ms. Minter commented that she likes the fact that she'll have OPAC and staff screens that "that look the way I want." The cost was not revealed.

SydneyPlus

A product of privately held International Library Systems based in Vancouver, Canada, SydneyPlus was founded in 1989 and has an excellent record of customer support. It is extremely popular with law libraries because of its handling of special and

irregular serial issues and multiple copies of the same title. Several USAID staff members attended a demonstration of SydneyPlus in July 1999.

SydneyPlus is a relational, fully developed, integrated online library system that runs on VAX/VMS minicomputers and on UNIX and NT. It is Y2K compliant and supports Z39.50 and MARC import/export. Basic system modules are cataloging, authority control, and an online catalog ($30,000 est.) MARC record interface, Web based OPAC, circulation, interlibrary loan, serials, acquisitions, document imaging, material booking, record retention, and electronic desktop modules are available at additional cost (currently quoted in July 1999 as $6000 for each module and $12,000 for the Web OPAC.) SydneyPlus also has a Remote Public Access Catalog module that can copy the library catalog onto a CD for distribution to end users and branch office sites. It has a highly developed circulation module and the search engine allows for a variety of search strategies.

Although seen as a competitor to both SIRSI and Techlib in cost and functionality, SydneyPlus Windows screens still appear very "DOS-like" and the system does not seem to have easy functionality when moving between modules. Additionally, it does not offer a Web OPAC as part of its basic package. Integration of and linkage to internal databases such as BASIS would require special programming. SydneyPlus is a solid product with excellent customer support and closely monitors and responds to customers' needs.

EOS International

Formerly known as Data Trek, EOS International is owned by Dawson Holdings PLC, an UK publishing, subscriptions, automated library systems, and electronic information applications company. Its headquarters is in Carlsbad, CA. The EOS Q Series was released in 1997.

EOS is a client/server, open, integrated IOLS which offers cataloging, circulation, serials and authority control, reports, and Web OPAC modules. The acquisition module was released in the spring of 1999. The system runs on UNIX and NT, is Y2K compliant, and supports Z39.50 and MARC import/export. The DBMS is Oracle or SQL server and it uses Crystal Reports. Q Series allows batch record loads and supports TCP/IP Internet protocols. Q Series has an especially strong serials module, with easy to use prediction and check-in screens. However, Integration of and linkage to internal databases such as BASIS would require special programming.

EOS would seem to be the natural choice for USAID purchase. USAID is a Data Trek library and migration to EOS would make data conversion easy and the entire project cost effective. However, EOS International's viability as a vendor, reliability (late upgrade and module releases), and its weak customer support are still the same serious issues they were for Data Trek clients. Additionally, EOS user documentation is not any better than was Data Trek documentation. Local system support is weak. Calls by MKD to EOS were not returned and the Q Series was not demonstrated on site at USAID.

Conclusion

MKD recommends BASIS Techlib and SIRSI UnicornSTILAS as the candidates which 'best" fulfil USIAD requirements for an off-the-shelf IOLS. They are fully functional integrated online library systems that will competently handle the Library's database and research resources, can provide the flexibility needed for the addition of research resources, are adaptable enough to take advantage of future IOLS technology,

including linkage to and seamless searching of USAID internal databases, and provide easy and friendly access to USAID end users.

SydneyPlus and EOS Q Series are recommended as possible alternatives, with individual reservations concerning their ability to provide seamless linkage and search access to other USAID internal databases and the status of vendor system and customer support.

IOLS FEATURE AND FUNCTIONS

CHART A		
	BASIS TECHLIB	**SIRSI**
End User OPAC Interface	Web OPAC delivered as part of purchase. Standard search and display forms, icons, scripting to locate and display copy records, Screens are too formal; Not too colorful out of the box; OPAC toolkit is BASIS Webserver Gateway WSG; Can be customized to meet local requirements using HTML; Great potential.	Web OPAC delivered as part of purchase. Could be used of the box – screen has multiple search boxes, access to gateways (internet, library information, etc), standard browser buttons, help, Most libraries will customize for local use; Intuitive & easy to use..
Ease of Use	Help and screen instructions easy to use	Help and screen instructions easy to use
Customization	Will require a lot of local customization for each module	Will require minimal amount of local customization
Single Processing Screen	All modules are not accessible from a single processing screen.	SIRSI Workflows allows staff to access all modules from a single customized work screen using "Wizards."
Database Linkage	Can link to other BASIS and other internal databases.	-Access to other databases through WebCAT Z client if database is Z39.50 compliant. -If a database is not Z compliant, link can be created within WebCAT interface to search other database in that database's interface using Web browser.
Searching	BASIS search engine, Simple and advanced searching; Multiple access options	BRS search engine; Simple and advanced searching, Multiple access options
MARC Records	MARC plug-in: Imported MARC or local catalog records are stored in two places. Full MARC data is stored in a MARC record; selected fields (title, author, etc.) are stored in a Catalog record; Should have no problem with several field tags mapped to a single TL search field.	MARC import/Export with SmartPORT; Records stored in a single file.
Cold Fusion	Accommodates	Accommodates

DT Record Conversion	Included in contract; TL indicates that if fields are carefully mapped, MARC fields and local notes should convert	Included in contract; SIRSI indicates that if fields are carefully mapped, MARC fields and local notes should convert.
Concurrent Users/No. of Titles	Number of users based on current USAID BASIS license/10,000	10/less than 25,000
DBMS	BASIS	Informix: no additional licensing fees, software integrated into STILAS, no DBA support required because all administration handled through STILAS interface. Oracle: may be licensing fees.
Standard/Customized Reports	Both available; Uses Crystal Reports (TL delivers a run-time version, USIAD DBA needs a complete version of CR to create news reports) and Microsoft Access reports	Both available. Uses Unicorn or Oracle for reports. SIRSI uses reports: 1) to gather statistics, 2) to schedule the running of system administrative reports.
Hardware	APPLICATIONS SERVER: Pentium 200 Mhz or higher processor, 256 Mb memory, NT Server with Service Pack 3, Microsoft Internet Information Server (IIS)4.0, TCP/IP windows sockets DATABASE SERVER: UNIX – 128 MB memory, Solaris 2 5, HP-UX 10.01, AIX 3.2.5 or later NT – 200 MB memory, NT Server with Service Pack 3 CLIENTS: OPAC Station – Explorer 2.0+ or Netscape 2.0+. Staff browser – Explorer 4.01+ or Netscape 4.03 + Staff monitor – Super VGA	NT SERVER: Windows NT server with at least 128M RAM, 4.3GB disk space, tape backup drive, monitor, uninterruptible power supply, appropriate network interface cards & cables. UNIX SERVER: IBM RS/6000 Series running on AIX, Sun Polaris 2, HP/UX, Dec Alpha running on Digital UNIX, INTEL running on SCO UNIX. CLIENT: Windows 95/98/NT PC to run Workflows staff client software with 32MB RAM > & 1-2GB hard disk space (SIRSI clients do use slower PCs with good results). OPAC STATION: Web browser, Netscape or Explorer
Project Management	With initial support help to complete system profiling and assist with implementation activities. If time left over, may assist with OPAC customization.	With initial purchase project management support with the configuration of all STILAS software policies, record conversion and data loading, & training.
Training	Vendor site: Optional classes – Using BASIS TL, BASIS TL customization, BASIS DBA	-3 days on site with purchase; teach library how to customize WebCAT during training. -5 days at vendor site for DBA.
Consistent Interfaces	Interfaces can be customized to be consistent	Yes, across all modules & functions

Cost	**Basis Techlib:** -Adding BASIS TL to existing BASIS license (Web OPAC, acquisitions, authority control, cataloging, circulation, reports, serials control) -- $18,500 -MARC plug-in -- $2000 **SOFTWARE COST: $28,500** **Project Support** Installation, configuration, overview of features -- $7000 **PROJECT COST: $7000** **Record Conversion:** -Data conversion assistance (100 hrs) -- $20,00 **CONVERSION COST: $20,000** **Training classes per student (optional on vendor site):** -Using BASIS TL - $1200 -BASIS TL configuration - $1800 -BASIS DBA - $2400 (*Option:* 10 training coupons/$5000 -- 1 coupon/class day/student, not included as part of cost below) **TRAINING COST : $5400** **Maintenance - $3,350** **SYSTEM TOTAL: $52,900** (maintenance not included) **Livelink Cataloged Library (collaborative knowledge update option):** $100.00/200 users **Digital Module cost information below.**	**UnicornSTILAS model B:** -Fewer than 25,000 titles license includes cataloging module, Z39.50 server, circulation, EDI, WebCAT, reports, SmartPORT (MARC import/export -- $23,737 -Authority control -- $1784 -Acquisitions -- $3681 -Serials control -- $3681 -Workflows 6 concurrent users license -- $2052 **SOFTWARE COST: $34,359** **Project Support -** -Management -- $2994 -Program data load (5 days on site, excld. exp.) -- $8383 **PROJECT COST: $11,377** **Record conversion:** -MARC record batch load -- $600 -DT conversion support (6 hrs) - $960 **CONVERSION COST: $1560** **Training:** -5 days on site (incld exp) -- $12,224 -3 days systems admin at vendor site (excld exp.) -- $748 **TRAINING COST: $12,972** Maintenance -2nd year for model B - **$5450** **SYSTEM TOTAL: $60,844** (maintenance not included) **Digital Module cost information below.**
Clients	No government libraries of USAID size; corporate libraries NEC, AAMC, Conexant, Corning; most customer are large libraries Library contacted: The Urban Institute.	UnicornSTILAS was designed for government libraries and several the size of USAID. Libraries contacted: Army Management Staff College, Cassidy Cataloging Services, Space Telescope Institute.
Digital Module	1) Use MARC 856 field (URL) to reference items on a file system (no extra cost) 2) Use BASIS at no extra license charge, might require consulting; 3) Use Livelink ($100,000)	Hyperion Digital Media Archives Model A (up to 10,000 documents) system is an optional module - $38,926
Z39.50 Compliant	No	Yes

Standard Modules	Web OPAC, acquisitions, authority control, cataloging, circulation, serials control, reports, thesaurus	Web OPAC, acquisitions, authority control, cataloging, circulation, serials control, reports, thesaurus
ODBC Compliant	Yes	Yes
Messages from OPAC	Yes	Yes
EDI	Yes	Yes
Barcodes	Yes	Yes
Special Features	Completely Web based system	Most recent checked in serial issue immediately appears in OPAC.
GUI	Yes	Yes
Customer support	Good at vendor site level; weak at local level.	Excellent.
Operating System	NT, UNIX	NT, UNIX

CHART B	LOW/HIGH END	COST	USAID REQUIREMENTS
Inmagic	L	$4900+	Not relational; operates only on NT; requires great a lot of customization; few government installations; weak local customer support in DC area.
CASPR	L	$3500	Not relational and not ODBC compliant; serials & acquisitions just released; public & academic libraries.
Winnebago	L	$3500	Not relational; operates only on NT; no thesaurus, acquisitions, serials modules.
Athena (Nichols)	L	$3945	Most installations of any low-end system; Operates only on NT; no thesaurus or acquisitions modules, can't customize routing slips.
STAR (Cuadra Associates)	Middle	$17,760+	Strong system; Not relational, not ODBC compliant.
NOTEbookS (Robert A. Schleuss)	Middle	$18,275+	Must be Lotus Notes office
Horizon (Ameritech)	H	$55,000+	Fully functional relational system; New generation IOLS not yet released; Large international library market; Vendor may be sold; Installed in government libraries (Social Security Admin.)

Voyager (Endeavor)	H	$50,000+	Fully functional relational system; Rapid growth in '98; Library of Congress project has occupied much of vendor customer support staff; Academic library market base
TLC (The LibraryrSolution)	H	$38,500+	Fully functional relational system; good customer support; Crowded staff screens; Academic & public market base.
VIRTUA (VTLS)	H	$45,000+	Little vendor activity at conferences· difficult to evaluate product; Nnew generation IOLS, Virtua; Concentration on sales to the international library market

CHART C		
	EOS Q SERIES	**SYDNEYPLUS**
End User OPAC Interface	Web OPAC delivered as part of purchase; Simple and advanced searches, Can be customized.	Web OPAC an optional purchase; Windows OPAC delivered as part of purchase; Simple and advanced searches.
Ease of Use	Good help screens	Very good help screens; screen formats recently updated
Customization	Screens can be customized for local needs.	Screens can be customized by customers for local needs.
Single Processing Screen	No staff screen.	No staff screen; Electronic Desktop provides e-mail access, links to databases, and ability to run application.
Database Linkage	Need Info Q module; Links to ASCII, spreadsheets, word-processing documents.	Links to selected databases – Word, Excel, WordPerfect; Programming required for other types of databases
Searching	Excellent search engine – Excalibur; simple & advanced options, keyword searching.	Good; Simple & advanced searching, Some problems with cross-reference links
MARC Records	MARC import/export.	MARC import/export; Stored In one file.
Cold Fusion	Probably.	Probably
DT Record Conversion	Good because EOS owns DT.	Should present few problems.
DBMS	Oracle	Oracle

Standard/Customized Reports	Yes; Proprietary, Crystal Reports, ODBC compliant packages.	Yes; Sydney Reportwriter
Hardware	Server: Sun, DEC Alpha, Windows NT. Staff client: Intel or Pentium with 24 MB, any machine that supports 32 bit clients and a Windows word processor.	UNIX: HP, IBM, SUN, SCO; 24 MB memory, 100 MB hard drive capacity; tape backup. NT Server: Microsoft Windows 4.0+, Alpha processor, 100 MB hard drive for system program, 4 MB for each 1,000 cataloged records, 200MB disk drive work space, tape backup, CD-ROM drive, hard drive speed 10 ms+. Windows PC client workstation: Windows 95, 16 MB memory, Pentium.
Cost	$45,000+	$30,000+ for basic package (cataloging, Windows OPAC, reports); $6000 for each additional module: serials, ILL, acquisitions, Digital Media Interface, Electronic Desktop, etc , $12,000 for Web OPAC.
Digital Module	Iota Newsware	Digital Media Interface
Z39.50 Compliant	Yes	Yes
Standard Modules	Web OPAC, acquisitions (recently released), authority control, cataloging, circulation, serials control (excellent), reports, thesaurus	Windows OPAC, acquisitions, authority control, cataloging, circulation, serials control, reports, thesaurus. Web OPAC optional
ODBC Compliant	Yes	Yes
Messages from OPAC	Yes	Yes
EDI	Yes	Yes
Barcodes	Yes	Yes
GUI	Yes	Yes
Customer Support	Weak at both the national and local levels.	Excellent, but no on site DC representative
Operating System	Q Series, NT, UNIX.	NT, UNIX

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MK DZURINKO ASSOCIATES
1 E. University Parkway #911 Baltimore, MD 21218-2409
410-235-2821 Fax: 410-235-2821-235 E-Mail: MKDTRAIN@AOL.COM

USAID INTEGRATED ONLINE LIBRARY SYSTEM REQUIRMENTS
5 July 1999 (revised)

A. USAID Library

The USAID Library collection contains approximately 9000 volumes and the database contains over 12,000 item records. The current Library software, Data Trek Professional Series, is not Y2K compliant, provides mixed customer support, will not be supported after September 1999, and the vendor's stability is of concern. Software problems make it difficult for the Library staff to enter and maintain serials and acquisitions data. A Web based catalog is available through the Agency Intranet.

The Development Experience Clearinghouse (DEC) collects, processes, catalogs, and disseminates USAID sponsored, funded, and generated information. The DEC maintains a system of BASIS databases in a system called the Development Experience System (DEXS), running on a SUN Solaris. Bibliographic records are based on a MINISIS format and the database has searchable PDF files.

B. General System Requirements

The integrated system must be an off-the-shelf, fully developed integrated online library system with a robust database management system, providing full text, integrated Internet and Intranet access to the Library catalog, the DEXS database, and other internal Agency databases (SAS, etc.). System features must enhance current information services and resources and provide the flexibility needed to handle future services and technology. The system must be user friendly, both for end users and staff, in order to provide high level service to a worldwide clientele.

USAID requirements:

- The system must be a relational database – data entered once and used for multiple applications.
- System modules must be fully developed and in current release: acquisitions, cataloging, circulation, reports, thesaurus, serials, Web based OPAC.
- The system must be Y2K compliant.
- The vendor must be a reliable and stable company providing a fully developed (all modules released and installed at customer sites) integrated software product.
- System transactions must occur in real time,
- The system must provide dynamic and automatic indexing of all records, including linked records.
- Searching must be seamless across all databases, i.e. Library and DEXS.
- System transactions must be transparent to the end user.
- The system must provide maximum linkage to Internet URLs, commercial databases, and internal databases.
- The system must be Z39.50 compliant.
- The system must support full and brief MARC and non-MARC records.
- The system must support document and image scanning (PDF and TIF files, TOC, content notes, and bibliographies.)

- The system must support local customization of fields on search and data input screens.
- The system must be available 24/7.
- The system must allow for both system defined and local customized reports in all modules.
- The system should support integration with both wide and local area networks.
- The system must support a GUI operating on Windows.
- The system must offer browser technology desktop access to an OPAC through Netscape 4.0 or Explorer 4.0 and support Adobe 3.0.
- The System must have fast response time.

C. Environment

USAID requirements:

- The system must operate in a UNIX or NT environment (to be decided on.)
- USAID runs BASIS and Oracle.

USAID BASIS databases run on UNIX. Techlib (Open Text, Inc.), an integrated online library system (IOLS) which is a BASIS application, will be investigated. USAID currently has two BASIS licenses. It may be possible to add Techlib to an existing license or to buy a license and grandfather in costs. USAID is concerned about Open Text's commitment to continuing BASIS development and future costs for the application.

- The system architecture must be client/server.
- The system must be ODBC compliant.
- The system must support Cold Fusion software.
- The system must be Y2K compliant.
- The system must support one user interface to search across all databases.
- The system must have IRM standard server configuration for all platforms.
- IRM will review all technical specifications for the IOLS.
- IRM will handle technical support: backup, hardware, operating system maintenance; the Library will handle database applications and updates.

D. Vendor Support

USAID requirements:

- The vendor must be a reliable and stable company, with an excellent credit rating.
- The vendor must produce deliverables on deadline.
- The vendor must supply system support by phone or fax, on CD-ROM or video. On site support (most likely fee based) should also be available.
- System documentation should be clear and available in hard copy and electronic format (online, CD-ROM).
- Software updates should be issued on a regular schedule.

E. Acquisitions

USAID requirements:

- The acquisitions module must support order and receipt of all types of materials (books, serials, electronic, media, technical reports, gifts, memberships, etc.) in a single order file.
- The system must handle single and standing orders, claims, renewals, multiple copy orders, import/export of MARC records, and non-MARC

records.

- The system must support vendor and patron files.
- The system must produce standard and customized reports.
- If the system supports EDI, the Library, if feasible, can link to its subscription service, EBSCO.
- The system must support: an invoice codes file, the creation of temporary catalog records, an encumbered funds field, a requestor/department field, and a cost code field, by department and account.
- The system must retain an order history file, including retention of annual acquisitions reports.

F. Authority Control

The Library and DEXS use USAID descriptors in their catalog records. At one time, Library records also contained Library of Congress subject headings. Discrepancies between USAID and LC corporate, conference, and proper name headings must be resolved.

USAID requirements:

- The system must support thesaurus management.
- The thesaurus must accommodate both USAID (690) and LC headings (650) and other commercial authority databases.
- The thesaurus must support hierarchical headings: see, see also, related terms, cross-references, etc.
- Cross-references must appear in OPAC searches.

G. Cataloging

Approximately 500 titles are cataloged per year. The catalog contains both MARC records downloaded from OCLC and local non-MARC records. The Library uses USAID descriptors and at one time used Library of Congress subject headings, a practice that may be revived.

USAID requirements:

- The system must support the following MARC fields/subfields –
  - 240, sf 1 *(uniform title)*
  - 246, sf I (eye) *(varying form of title)*
  - 246, indicator 2 – system should generate specific notes as coded
  - 856, sf 3,z, etc. How are they labeled *(URL)*
  - 700, sf t *(added entry personal name)*
  - 111, 611, 711, sf order should be a,n,d,c,e *(meeting name: main entry, subject, added entry)*
  - 610 – system should not put "- -" between sfs a and b; "- -" should come before sfs v,x,y,z ONLY *(subject added entry corporate name)*
  - 780,785 – system should generate "Continues" and "continued by" notes. *(preceding, succeeding entries)*
  - 690, USAID subjects *(local subject term)*
- The system must support customization of field labels on staff and OPAC screens (653, 690). *(index term, local subject term)*
- The system must support local mapping of fields to indexes:
  - Map 700, sf a to author
  - Map 700, sf t to title
- The system must accommodate customized USAID fields, subfields, and indicators.

- The system must support MARC record import/export.
- The system should ignore punctuation in OPAC searches.
- A single processing screen should be available for staff data entry.
- The system must support global changes to all records.
- The system must support full MARC, non-MARC and metadata formats.
- The system must support full and brief catalog records.

I. Circulation

The system must support USAID barcodes to track circulation. The Library has a patron file, which may be loaded into the new system.

USAID requirements:

- The system must support self check-out/check-in of material.
- The system must allow entry of on-the-fly records.
- The system must support a variety of circulation reports: list of missing books, overdue and final notices, by title, call number, patron name, patron location, circulation statistics for each location, etc., some generated on a daily basis.
- Patron records should have a "special notes" field for staff use.
- Information on circulation periods, classes of users, and material types should be available for staff use.
- Circulation information (available, not on shelf, missing, loan periods, copyright information, etc.) must be displayed in the OPAC.
- The system must support holds and reserves.

I. Data conversion

Conversion of Data Trek catalog records into MARC format can be handled in-house or contracted out to a commercial data conversion service. The Library's OCLC tape can also be used with Data Trek records to produce MARC records.

J. OPAC

USAID requirements:

- The OPAC must be Web based.
- The system must allow searching across databases, with the Library as the default database.
- The number of retrieved records should display on the OPAC screen.
- The user should be able to sort search results by call number, date, title, etc
- Local field labels (USAID headings) must display in the OPAC.
- Subject/authority cross-references must display on the OPAC screen.
- User and staff screens must provide adequate help information.
- OPAC screens must provide users with the steps necessary to conduct a search and offer simple and advanced search strategies.
- The OPAC must support material type searching (format, genre, and 655 sf h).
- The OPAC should display on order/in process materials.
- Serial holdings statements must display in OPAC records.
- The system must support links from the OPAC to the Internet.

K. Search Engine

USAID requirements:

- Search options must include title, author, subject, keyword, USAID

descriptors, Boolean, phrase, natural language, wild card, truncation, material type, date, publisher, call number, and location.

- The system must support command level searches, FQM.
- Searching must be seamless across all databases.

L. Serials Control

Serials, except for seven special titles, are retained for only five years and serials are not routed Because of this retention policy, the holdings statement is an important field. The Library will create standard subscription, prediction, and check-in records for serial titles.

USAID requirements:

- The serial screen must have fields defined for free and gift subscriptions.
- Holdings records must be viewable from both staff and OPAC screens.
- Serial subscription records must have a notes field that may be displayed in OPAC records.
- The system must produce a variety of customized reports: lists of serials by title, subject, and location; claims reports; annotated bibliographies of serials; serials purchased by departments and branches, etc.
- If the system supports EDI, the Library, if feasible, can link to its subscription service, EBSCO.

M. Costs

- Vendors may be on the GSA schedule or may work under an existing government contract.
- Software: $25,000 - $75,000.
- Licenses: Site and users licenses. It may be necessary to purchase additional license(s) when the DEXS database is added to the system.
- Training: $5,000. These costs may be included in the purchase price or may be additional to the purchase price.
- Annual maintenance fees: First year maintenance fees should be included with the purchase price.
- Data conversion: This project can be done in house or handled by a commercial vendor. If the Library OCLC tape is also used in this project: $1500 - $2000.
- Hardware: Estimated cost (based on review of several vendor quotes) of hardware (server, hard disk storage, tape backup and software, modem) purchased from a vendor: $12,000.