FCLA
Florida Center
For Library Automation

FCLA IN PERSPECTIVE

24 Years of Service (1984-2008)
State University System of Florida and the Library Service Points
Florida Center for Library Automation

What is FCLA?

The Florida Center for Library Automation was established by the Florida Legislature in 1984 with the mission to provide computer support to the libraries, students and faculty of the State University System.

FCLA services make it possible for a student to search the library catalog, check out a book, pull up an online journal article or discover a digital image of a photograph from a library’s unique collections. And that’s just the beginning...

The most visible services provided by FCLA are:
- the universities’ library catalogs
- access to electronic journals and books
- and access to digital collections created by the university libraries and their partners.

In addition to catalogs customized for each University, FCLA supports a union catalog that enables researchers to find anything in the university system through a single interface.

FCLA also supports “backroom” functions needed for the smooth operations of the University libraries. These include the creation and management of digital material, selection and purchase of library material, the receipt of print journal issues, book check out, and the management of the all of the data that supports discovery of and access to all library resources. FCLA also provides a digital archive that preserves digital materials for the future.

All of these services represent a joint venture between FCLA and the University Libraries.
FCLA provides the technical infrastructure: hardware, commercially and locally-developed applications, technical expertise, training and support.

FCLA’s Mission

Provide state-of-the-art, cost-effective information technology to assist the libraries of the public universities of Florida in their support of teaching, learning, research and public service.

More specifically, implement and centrally support high quality computer systems that help the libraries acquire, manage and provide access to information resources. Provide software to enhance access to information for students and faculty, increase the productivity of library staff, improve inter-library sharing, and preserve digital materials for future use. Through planning with the university libraries, ensure that FCLA services are integral to the University libraries’ ability to carry out their own missions in support of teaching, research and service.
The most visible and important service offered by FCLA is providing the library catalogs for use by the students, faculty and staff of the universities as well as the public at large. The online public access catalog (OPAC) is the single point of entry for the public to find the titles of books and journals pertinent to their needs. Circulation information, such as current availability of an item, the ability to put a hold on an item and the ability to check what books you have checked out, are tightly integrated into the OPAC. The online catalog has gone through several phases with different technologies as platforms. From the time when the World Wide Web appeared on the scene, approximately 1996 until 2004, the public knew the catalog as WebLUIS. Prior to that, the catalog was known as LUIS and was made available through mainframe terminals. In 2004 with the implementation of the Aleph Integrated Library System, bibliographic data and information about holdings was provided by the Aleph OPAC. In 2006 FCLA purchased the Endeca search and navigation engine which is currently being used by the eleven State University Libraries as the primary platform to provide data to the public. The Endeca-based (“Next Generation”) OPAC provides functionality that the “traditional” OPACs do not have, including faceted navigation. The benefit of the faceted navigation engine is that the facets can help researchers discover resources in a new way by exposing the rich content of the bibliographic records that older systems did not exploit. It does this by bringing chosen elements of the records forward that would otherwise be mostly hidden by traditional OPACs.

FCLA has implemented a statewide Union Catalog (catalog.fcla.edu) using this same Endeca platform. With this catalog we have begun to build a research portal to offer more web-based library services including access to journal articles, digital images, electronic theses and dissertations, etc.

Usage has grown phenomenally over the years as the student bodies of the Universities have grown and as the types of information available through the OPAC have increased. Originally, the OPAC provided access only to the books and journals held in the libraries. In 1991, FCLA was able to begin acquiring and offering a number of journal citation databases that gave users the ability to search for individual journal articles. In 1996, FCLA began acquiring and providing access to full text of many of the journal articles themselves. More recently, access to journal articles is provided using search tools that retrieve information and articles from a variety of sources, and integrates them into a single user interface.
FCLA provides the software needed by the University libraries to manage their day-to-day operations. This software is known as the library management System (LMS). The Library Management System provides the following services:

- **The library catalog** allows students and faculty to search the catalog to locate materials held by each library.
- **Circulation** is the function that allows patrons to check out materials from the libraries collections, to check those items back in, and to place holds and recalls on items already checked out.
- **Cataloging** provides staff with the ability to add or upgrade the records that make up the catalog; that is, the records that describe the holding of the libraries.
- **Acquisitions, fund accounting and serials control** enables staff to order materials, control their budgets, and record receipt of materials and the arrival of issues of journals.

**LMS Usage**

**Circulation Activity**

**Cataloging Activity**

**Acquisitions, Fund Accounting and Serials Control Activity**
Since its inception, in 1985, the amount of data in the LMS has grown to reflect the growth in the collections of the libraries.

There are several types of records held in the system, each reflecting a component of the library collections, including:

- **Bibliographic records.** Each record describes a book, journal, DVD, or other unique entity in the collection.

- **Copy (holdings) records.** Each record represents a single physical copy. For instance, if a library holds two copies of a book, there is one bibliographic record and two copy records.

- **Item records.** Each record represents a single physical piece. For books, an item is synonymous with a copy. For journals, however, a single subscription to a journal would be represented by a single copy and each volume of the journal might be described by its own item record.

**LMS Database Growth**

**Bibliographic records**

**Copies**

**Item Records**

FY 1988/89
Circulation system implemented for FAMU, FAU, HU, FSU, UCF and Santa Fe Community College.
Original 5 year implementation plan successfully completed.

FY 1989/90
LUIS searching by call numbers implemented.
Government documents available in LUIS.
Improvements made in the way indexes work; merging authors, titles and subjects into a single index so that searching is more productive for users; cross-references added.
Additional staff support improvements provided.

FY 1990/91
Medical subject headings (MeSH) available for searching.
Indexing made dynamic so that searching is more current.
FCLA programmers begin work on keyword and Boolean searching for LUIS.
Ability for patrons to discover what books they have checked out is implemented.
Beginning in 1996, FCLA has provided access to several databases of journal citations that are housed on FCLA servers. These citation databases replaced printed bibliographies as primary research tools for faculty and students. For several years, the number of databases that were locally housed increased as more databases became available. Over time, citation database providers began to offer direct access to their data on their own servers on the Web. As the price-performance ratio of locally loaded citations versus remote access to the data changed, FCLA responded by reducing the number of local citation databases and providing the necessary authentication software support to allow access to remote citation services. Current locally loaded citation databases are two engineering databases, INSPEC and Compendex, as well as databases that have been created by departments of the universities, professional societies with close ties to universities and state documents not otherwise available.

FCLA provides access to a number of indexes, abstracts, electronic journal collections and other electronic content for use by all of the state universities. Centralized purchase of these services is less expensive than individual university level subscriptions. Resources are chosen by a committee made up of staff from all of the university libraries. This allows smaller institutions to have access to materials that they might not be able to afford on their own while providing cost-effective access for the larger institutions. In addition to the citation services purchased by FCLA, the individual libraries purchase services that are specific to their needs or that offer no savings over centralized purchase by FCLA. Currently, over 200 databases are licensed by FCLA to provide access to 20,000 electronic journals. This complements the 25 to 400 additional databases licensed by the individual university libraries.

Citation Access Growth

Number of locally loaded citation databases

Remote Access Citation Databases

Locally-loaded Citation Searches (Millions)

Remote Citation Database Searches (Millions)

Total Citation Searches (Millions)
PALMM is a cooperative initiative of the public universities of Florida to provide digital access to important source materials for research and scholarship. PALMM projects may involve a single university or may be collaborative efforts between a university and partners within or outside of the state university system. PALMM projects create high-quality virtual collections relevant to the students, research community and general citizenry of Florida. FCLA provides central servers and software for access, data storage, and long-term digital archiving services.

PALMM collections which are centrally hosted by FCLA ran on the DLXS digital library system until 2007. A project is underway to move these to a new platform, Ex Libris’ DigiTool. DigiTool will allow participating libraries to load and describe their own materials, and will support mixed media collections of text, images, audio and video.
FCLA TIMELINE

FY 1996/97
SilverPlatter’s ERL (Electronic Resource Library) available in LUIS.
Full text of articles from Expanded Academic and Business indexes available in LUIS with full keyword and Boolean searching capabilities.
LUIS available seven days a week, 24 hours a day.
First Windows and TCP-based client (WinONI) released.

PALMM Collection Usage

PALMM collection usage has grown rapidly since its inception and public rollout in 2000.

Archives Florida

Archives Florida (palm.fcla.edu/aff) is a searchable and browseable database of finding aids (guides) to personal papers, organizational records, and other special collections held by archives, libraries, museums, historical societies and other agencies in Florida. Archives Florida is made available by FCLA as a service to the university system and the citizens of the State. It is a growing database as new finding aids and contributing organizations are added all the time.

Archival Finding Aids (EADs)

To appear in Archives Florida, a finding aid must be formatted according to an international standard called “Encoded Archival Description” (EAD). FCLA offers individualized training in EAD creation to the State University libraries. FCLA has received two grants from the state LSTA (Library Services and Technology Act) program to conduct regional EAD training workshops throughout the State.

Electronic Theses and Dissertations (ETDs)

In 1998, FCLA began providing support for Electronic Theses and Dissertations by hosting these documents in PDF format for the University of Florida. Since that time, the explosion of electronic multi-media capabilities has allowed the creation of theses and dissertations in “born-digital” form, where no paper copy of the item exists. Theses and dissertations may now consist solely of multi-media artifacts, making their storage, preservation and access critical to the mission of the Universities.

In 2001, FCLA began a full service support for ETDs including the storage and dissemination of the items while enforcing the appropriate intellectual property rights reserved by the author.

In FY 2006/07, FCLA organized a workshop for university graduate school staff, campus IT personnel and university library staff in the production and life-cycle support for these important elements of the Universities’ teaching and research mission.
The Florida Digital Archive:
Dark Archive in the Sunshine State (DAITSS)

The mission of the Florida Digital Archive (www.fcla.edu/digitalArchive) is to provide a cost-effective, long-term preservation repository for digital materials in support of teaching and learning, scholarship, and research in the state of Florida. In support of this mission, the Florida Digital Archive guarantees that all files deposited by agreement with its affiliates remain available, unaltered, and readable from media. For those materials designated to receive full preservation treatment, the Florida Digital Archive will maintain a usable version using the best format migration tools available.

The Florida Digital Archive (FDA) was the first fully functional preservation repository based on format migration to go into production in the United States, and is one of only a handful worldwide. The FDA is based on DAITSS (daitss.fcla.edu), a preservation repository management application designed and written by FCLA staff. DAITSS was released as open source software under a GPL license in spring 2007.

In early 2007 the FDA participated in pilot audits by the Digital Curation Centre Pilot Audit Programme, and the New England Document Conservation Center’s Digital Preservation Readiness Survey. Reports from these site visits are available from the FDA website. Both studies found that the Florida Digital Archive is operationally and technically well on its way towards satisfying emerging criteria for trustworthy digital repositories.

As of July 2008, the FDA contains about 53,000 items, consisting of over 3,724,000 files, submitted by eight affiliates.

Electronic Journals

In 1994, FCLA broke new ground by working with the Florida Entomological Society to publish an electronic copy of The Florida Entomologist as PDF page images. Since that time, the provision of electronic journals has grown, with support for both online versions of “paper journals” as well as support for “born-digital” journals.

At this time, FCLA hosts the electronic versions of:

- Proceedings of the Florida State Horticultural Society
- Insecta Mundi, a publication of the Center for Systematic Entomology
- The Florida Entomologist, a publication of the Florida Entomological Society
- The Journal of Nematology, a publication of the Society of Nematologists
- Nematologia Mediterranea, a publication of the Istituto per la Protezione delle Pianti (IPP)
- Nematropica, a publication of the Organization of Nematologists of Tropical America

Institutional Repositories

Institutional repositories capture, manage and give access to digital materials created by University departments, faculty and students, for example, dissertations, pre- and post-prints, research data, working papers, and committee reports. Starting in 2007, FCLA has begun offering a new service, hosting institutional repositories for individual libraries and their campuses. FCLA provides the software, storage and data management, and works with the library to customize and configure the selected repository application.

Two repository applications are supported, the DigiTool Deposit Module, and the EPrints open source software package. Both allow author-self deposit as well as staff deposit, both have an optional editorial cycle before deposited materials appear online, and both support the Open Archives Initiative Protocol for Metadata Harvesting.
As more and more electronic materials became available, a new problem arose: How to connect from the bibliographic and descriptive information to an electronic copy of the item? This problem is compounded by the fact that multiple copies of the item may be available but each copy may be subject to different intellectual property rights restrictions. Not only that, some copies may be available to the searcher for free or may be subject to a per-use subscription fee. The library needs to be able to control the link from the descriptive information to the appropriate electronic copy of the item to minimize cost of providing access while protecting the contractual rights of the item provider. SFX is a system designed to transparently allow library users to link to electronic copies of the items in a priority order to provide the best access to the user while controlling budgets and contractual obligations. It also facilitates access to additional library services as appropriate such as interlibrary loan, the library catalog or help screens.

As the Web became ubiquitous, libraries worldwide began to experiment with ways to make their collections more broadly accessible. Leaders in this area were the national libraries and providers of electronic citation information and bibliographic databases. Through its role in the Z39.50 implementors Group, FCLA was instrumental early in the development of distributed searching methodologies and standards. These methodologies today are mature and provide one way to collect search results from multiple collections. However, there are many valuable sources of information on today’s web that do not use these standards and more heuristic methods must be used. METALIB is a distributed searching product that allows the University Libraries to provide faculty and students access to a multitude of information sources worldwide via one interface.
FCLA's Budget, Staffing and Facilities

Budget

The FCLA budget has grown along with the services offered to the students and faculty of the Universities as well as the use made of those services. From its inception in 1984 until the purchase of the Aleph library management system, FCLA purchased computer services from the Northeast Regional Data Center (NERDC), later renamed CNS. Annual FCLA budget requests were tied to the cost of the services provided by NERDC which were, in turn, tied to the load placed upon the NERDC computers due to usage of FCLA provided services.

Usage growth led to consideration of purchasing a new library management system exhibiting cost characteristics less sensitive to usage. Since the purchase of Aleph in 2001, budget growth has been more linear than previously, in that it is now more reflective of new services offered and less sensitive to growth in the use of existing services, although this growth does require increases in server hardware and is therefore reflected in the budget.

FCLA Recurring Budget

Budget Outlay

- Indirect (Salaries and Expenses) 37%
- Server Equipment & Maint 15%
- E-Resource License Fees 25%
- Application Software Fees & Maint 5%
- Library Transfers Equip & Maint 16%
- Misc 2%
FCLA TIMELINE

FY 2005/06
Florida A&M University, Florida Gulf Coast University, Florida State University and the University of South Florida migrated to Aleph 500.
Opening Archives workshops trained 80 people from 40 organizations on how to make Electronic Archive Finding Aids (EADs).

FY 2006/07
Florida Atlantic University, Florida International University, New College and the University of Central Florida migrated to Aleph 500, thus completing the migration of the university catalogs to the new system.
Electronic Theses and Dissertations workshops held for graduate school, university IT and library staff.
METALIB implemented for UF, FAMU UWF and NCF.
VERDE electronic resource management system purchased and installed and training begun.
Migration of PALMM collections to DigiTool begun.
DAITSS released as open source.
FCLA given Award of Recognition from Society of Florida Archivists.

Staffing

FCLA has a staff of 21 professional librarians, 30 computer science professionals, 5 office staff, 3 part-time clerical positions and the Director. This staff serves all of the libraries of the state universities of Florida.

FCLA staff have a combined total of 966 years of experience, 444 at FCLA. Previous experience by FCLA staff was gained at institutions such as Rochester Institute of Technology, University of Chicago, Harvard University, UC-Berkeley, UC-UCOP, American University, University of South Carolina, University of Maryland, University of Denver, University of Connecticut, Penn State, Ohio State, University of Cincinnati, University of Illinois, University of Missouri, Library of Congress, the Smithsonian, the National Gallery of Art, several SUS institutions and commercial organizations such as SOLINET, Innovative Interfaces, Sirsi-Dynix, Nationwide, Intel, GTE, ITT, Citibank, IBM and the US Air Force.

Members of the FCLA staff have served in a panoply of organizations including: ALCTS SS Board, ASIST committees, OCLC Users Council and other advisory committees, FACRL Board, NASIG, LITA committees, LITA Board and Presidency, NISO Board, MARBI (MARC 21 advisory group) Z39.50 Implementers Group, SLA Division Chair, and ELUNA and IGeLU committees and Boards. They have also been recognized in a variety of ways:

- Priscilla Caplan - LITA Hi Tech Award for Outstanding Communication in Library and Information Technology (2007), author Metadata Fundamentals for All Librarians (ALA Editions, 2003)
- Chris Carney - Member, Beta Gamma Sigma Honor Society
- Josh Greben - Member, Phi Kappa Phi National Honor Society, 2001
- Mark Hinnebusch - LITA High Tech Award for Outstanding Communication in Library and Information Technology (2000)
- Michele Newberry - SOLINET Executive Director's Award of Merit, 1976-1977; Florida Legislature Outstanding Achievement and Performance Award for State University System Faculty, 1990; Florida State University School of Information Studies Distinguished Alumni Award, 1998
- Lynda Preston - Member, Beta Phi Mu
- Karen Schneider - IBM Division Award, 1990
- Ned Stewart - Davis Productivity Award

FCLA technical staff have certifications in Oracle, DB2, AIX, Redhat Certified Engineer, IBM Certified Advanced Technology Expert.
For much of its history, FCLA rented computer time. Reacting to the availability of mid-range server hardware capable of handling the massive loads placed on the library management system and a desire to provide new, innovative services, in 2001 FCLA began a transition from renting mainframe services to the purchase and maintenance of mid-range servers running primarily UNIX operating systems. Except for a number of small test boxes, these servers are housed at the UF data center, CNS. In mid 2008, FCLA owned and operated more than 30 servers providing the broad range of services described in this report.

In 2006, FCLA embarked on implementation of a Continuity Of Operations Plan (COOP) that resulted in placement of several servers at the Northeast Regional Data Center (NWRDC) in Tallahassee to act as a “hot backup” site. While the primary purpose of these servers is that of backup, they are routinely used to augment the servers housed in Gainesville so that the investment in the backup servers provides capacity at all times. In the event of a service interruption, the switch to the hot backup servers can be made in a matter of minutes.

In addition to the hot backup site at NWRDC, FCLA sends nightly incremental backups of all of its strategic data to the San Diego Supercomputer Center (SDSC) using the National LambdaRail and Florida LambdaRail high speed telecommunication networks.
In addition to meeting as the FCLA Board, the directors of the State University Libraries (SUL) and the director of FCLA also meet as the Council of State University Libraries (CSUL). CSUL has created a number of committees to provide advice and recommendations to both the SUL and FCLA. These committees are:

**TECHNICAL SERVICES PLANNING COMMITTEE**
- Authorities Subcommittee
- Metadata Subcommittee

**PUBLIC SERVICES PLANNING COMMITTEE**
- Information Literacy Subcommittee
- OPAC Subcommittee
- Interlibrary Loan Subcommittee
- Circulation Subcommittee

**COLLECTION PLANNING COMMITTEE**
- Electronic Resources Subcommittee
- Special Collections Subcommittee

**TECHNICAL ADVISORY GROUP**
- Digital Initiatives Subcommittee
FCLA’s Strategic Plan for 2006-2010

BUILDING AND MANAGING COLLECTIONS

GOAL 1: Install and maintain software applications to support library staff functions and increase library staff productivity.

GOAL 2: Support the acquisition and management of commercially licensed electronic resources.

GOAL 3: Support the creation and control of locally created electronic resources.

GOAL 4: Improve library productivity by optimizing applications, staff knowledge, and central support services.

ACCESS TO INFORMATION RESOURCES

GOAL 5: Provide interfaces for users to discover, identify and access relevant resources.

GOAL 6: Provide software and services to help users obtain content.

PRESERVATION

GOAL 7: Provide for long-term preservation of digital materials relevant to SUS students and faculty.

CONTINUITY OF OPERATIONS

GOAL 8: Provide a robust and secure computing systems environment.

GOAL 9: Be able to restore services in an appropriate timeframe in the event of any short or long-term failure or outage, including a major local or regional disaster.

SERVICE TO THE COMMUNITY

GOAL 10: Engage in cooperative projects to improve library services and expand the availability of resources of interest to SUS students and researchers.

PLANNING, RESEARCH AND DEVELOPMENT

GOAL 11: Carry out joint planning with SUS libraries so that the plans for information technology developed by the libraries and FCLA fit together into complementary plans of action.

GOAL 12: Explore new technologies and services that are potentially useful to the SUS libraries.

FUNDING

GOAL 13: Secure the political support and financial resources needed to accomplish strategic goals and objectives.