
The Systems Department is responsible for maintaining the stability and reliability of the Library's core systems and the supporting network, hardware and software. We are also committed to building our digital program and supporting research and development in new technologies. In the past year, our biggest challenge was to respond to the changing technical environment for libraries.

Empowering and Developing Library Staff

In October 2006, we added Monika Mevenkamp as a Systems Analyst II to serve as an application developer for digital programs. She resigned effective May 31, 2007, so we are recruiting again to fill that position.

In January 2007, Ross Singer was promoted to Systems Analyst IV with specific responsibilities for integrating library services with the campus implementation of the Sakai course management system. The Web Developer position is being reclassified for a Systems Support Specialist I so that we will have more depth in networking and server support. This is needed for the growing digital programs. Two graduate students will be used to support backend programming for our web presence.

Both the Systems Analyst II and the Systems Analyst IV will be moving to a new department in FY 2007/2008.

Beth Thomas has assumed the responsibilities of Training Coordinator for Systems.

Promoting Internal Communication and Collaboration

The Systems Department recognized the growing need for better communication and collaboration. In response, we initiated a Collaboration Solutions Work Group that surveyed the Library about their needs. The results of this effort included a Library-wide instant messaging solution as well as several wikis and blogs. A new collaboration system is being developed to replace the Intranet. The strategic importance of collaboration is such that we changed the name of the Desktop Services unit to Desktop and Collaboration Services.

We have also targeted training as an essential element in maintaining ongoing communication about technology changes. Beth Thomas will be responsible for identifying training needs and developing resources to meet those needs.

Heather King developed a Web Communication Plan to increase participation in decisions about our online presence. This includes a Web Steering Committee and sub-groups that address specific aspects of the site. The Steering Committee coordinates the subgroups and provides a forum for vetting enhancements and new directions. This infrastructure has increased participation and communication around this vital service.
Expanding and Promoting Digital Repositories and Services

The addition of a programmer who is dedicated to the support of digital programs in the Archives and Digital Initiatives has helped to advance our digital services. Larry Hansard and Monika Mevenkamp worked closely with the Digital Initiatives staff to provide support and enhancements for SMARTech, our institutional repository. We supported the Archives Department in the implementation of the Archivists’ Toolkit and Aardvark, their digital repository. The Systems Department also maintains usage statistics and provides usability services for these collections.

Larry Hansard is the technical lead for the Georgia Knowledge Repository effort sponsored by Galileo. It is an opportunity for collaboration to build a larger network of information resources.

Chris Helms served on the Strategic Planning Working Group, and participated in the creation of the 07-11 Library strategic area: Expanding, Preserving, Promoting Digital Repositories and Services.

Preserving Library Materials for the Long Term

The Systems Department is currently providing redundant backup for all digital files with attention to changing formats that will require data migration. Chris Helms has improved server and network capacity and stability by applying the latest information technology innovations. The increased storage capacity and investment in virtualization will ensure that we can sustain this commitment for existing collections over time. The future challenge will be in identifying strategies for preserving new formats.

Developing, Managing and Making Accessible Library Collections

This year, we released a major redesign of our website and added more features to facilitate search and discovery. We have committed a large portion of our development to open source and community software options. We are fortunate to have programmers who are skillful in leveraging these technologies.

A team from across the library evaluated candidates for an electronic resource management system this year. Larry Hansard played a key role as an advocate and member of that team. He will also be responsible for loading our data into Verde and integrating it with SFX in the fall of 2007.

Early in 2007, Ross Singer began work with the campus Sakai project to incorporate course reserves and other Library resources into course management software.

Becoming a Data-driven Library

Heather King has implemented a robust usability program for our website, including specific tools such as Umlaut/Findit. She made a presentation on the program “Usability at the Georgia Tech Library” at the MALTA conference in November 2006.
Working with Bonnie Tijerina, Heather King received approval from the Georgia Tech Internal Review Board to conduct a survey and usability tests on eBooks. She presented the results along with Bonnie Tijerina and Tammy Sugarman at the ACRL Conference in March 2007. Their presentation was chosen as one of Library Journal’s top picks.

The Collaboration Solutions Workgroup also contributed to our department’s assessment efforts. They conducted an online survey that resulted in the implementation of solutions for chat, blogs and wikis.

**Advancing New Models of Scholarly Communications**

In addition to our support of SMARTech, the Systems Department promotes the use of open source applications such as Open Journal Software (OJS) and Open Conference Software (OCS) to expand the options available to scholars.

**Developing Partnerships for Joint Ventures**

In 2005-2006, we signed a memorandum of agreement with Emory University Libraries to provide reciprocal servers for offsite backup and recovery. This year the reciprocal backup servers became a reality. Chris Helms, who initiated this project, has been working with server administrators at Emory for several months as we tested the viability of the concept. The project has been a success for both partners.

We continue to work with Galileo on programs such as our catalog, Electronic Resource Management, and the development of shared databases such as the Georgia Knowledge Repository, which will integrate repositories from multiple schools. Heather King served on GALILEO Academic Community Customization Working Group.

The Systems Department supports the LOCKSS software that is critical to the MetaArchive Project.

**Access to Library Collections**

*(Integrated Library System, Electronic Resources, and Database Services)*

Goals from 2006-2007

- Enhance E-Res to comply with LDAP authentication so that students will only see the items for the classes in which they are registered. Mohsen Mahdavi-Hezaveh provided as much LDAP support as possible within the Library. We have requested the enhancement from the vendor who has promised to address it in the near future.
- Upgraded voyager to a new SUN 490R server. Also upgraded Voyager to 6.1 then 6.2
- Worked with Galileo to implement MetaLib for academic libraries. The Galileo Upgrade is on tract with the pilot phase under the technical leadership of Ross Singer. Training and implementation continues in 2007-2008.
- Implement an electronic resource management system (ERMS). Georgia Tech evaluated 6 systems and selected Verde from Ex Libris. Implementation will take place in the fall of 2007 under a partnership with Galileo.

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• Installed another DSpace instance and developed programs to load 7800 NTIS technical reports
• Added document delivery option to ILLiad software and server
• Completed customization training and administrative training for ILLiad software and server
• Implement ILLiad version 7.2 including a major re-design of the public interface. This upgrade is in progress. ILLiad has been upgraded for 13 modules, including the client and customization manager, and connection manager.
• Implemented ODBC Software for ILLiad SQL Server and MySQL databases on GTEL to support reporting and viewing from users’ desktop

Additional Accomplishments

• Larry Hansard batch loaded 4800 URLs into catalog bib records for SPIE records
• Beth Thomas provided support for the Circulation Department to assume control of policies in the circulation matrix in Voyager and for the Acquisitions implementation of EDI
• Larry Hansard developed procedures and programs that allow only current faculty, staff and students to have access to electronic resources.
• Three Major Docutek ERES Upgrades: and debugging for ERES Software/Database
• Developing a New E-Reserves Submission Module on GTEL using PHP and its mail module implementing different submission forms.
• Developing and automating reports from Docutek for mail-out and in-house use.
• Mohsen Mahdavi-Hezaveh designed and developed two applications for Records Management: Sponsored Research Processing Database System and the RMH database
• Developing and automating reports from Docutek for mail-out and in-house use.
• Going live with to the web using ILLiad Client (LEND5).

Desktop and Collaboration Services – David McDuffie, Manager

Goals for 2006-2007

• Implemented departmental and a library-wide network scanning system
• Initiated a project that successfully tested and upgraded Ariel document delivery system and new scanning hardware used by the Information Delivery Department
• Created a new Desktop Services intranet site to provide instructional tools, guides, and IT policies for desktop computing
• Initiated a virtual server project to test the feasibility of giving Library employees remote access to managed virtual computers; project scope modified to pursue interest in testing Altiris software Virtualization solution
• Established an employee off-campus [computer] equipment program for exempt Library employees (managed by Emmett Dennis)
• Tested and implemented a mobile wifi hotspot service for Library faculty and staff reserving a Library conference room (managed by Emmett Dennis)
• Began 12-month project to test the new Microsoft Windows Vista operating system and Microsoft Office 2007 Enterprise Ed. desktop suite
• Tested the implementation of the Altiris PC Transplant Solution to assist in migrating user profiles when performing new computer deployments, after testing this solution, it was decided that the solution would not be flexible enough to allow for a standard profile migration template that would be applicable to all pc deployments
• Plan and organize a training course for library employees that educate faculty and staff on a new or existing service offered by the Library Systems Department. This goal will be addressed in the goals for the coming year. The scope of our training agenda has expanded for 2007-2008. Beth Thomas has assumed the responsibilities of Training Coordinator for Systems.

Additional Accomplishments

• Initiated Altiris Software Visualization project for library end users requesting greater flexibility in testing new software applications; project successfully expanded its scope to include “on-the-fly” computer lab virtual software deployment
• Completed a project to merge all hardware and software inventory into one automated collecting and reporting inventory solution, the Altiris server (managed by Emmett Dennis)
• Competed FY pc deployment cycle on schedule (managed by Emmett Dennis)
• Proposed and obtained approval to outfit mobile library support staff employees with cellular Smartphone devices (i.e. Motorola Q and Palm Treo)
• Initiated a project that successfully tested and migrated the Circulation Department and Architecture Library Reserves unit to a new document batch scanning system and process
• Expanded the asset management of the Altiris Client Management Server to include computers beyond the library network subnet; includes student laptop loans, assigned and borrowed employee laptops, Ethel Street computer equipment
• Implemented a new hard drive disposal policy to address a need for secure formatting, disposal, and destruction of hard drives being transferred from library computer inventory to campus surplus
• Worked with Systems Department Head to create a Collaboration Solution Group comprised of employees representing almost all library service areas
• Initiated a project that successfully tested and deployed a new library enterprise open-source instant messaging server solution
• Developed budget expense report for Desktop Services unit which included projected IT hardware and software expenses

Network and Server Support – Chris Helms

Goals for 2006-2007

• Set up replacement servers for GTEL/ETD – Hardware replacements and software/OS upgrades; NTIS, SMARTech, ROTHesis, ETD; new Library website launch, website collaboration and contributions by faculty/staff
• Enhanced backup power supply capability, including electrical upgrades for server room

Additional Accomplishments

• GTEL/ETD Mail Server Enhancements (off-site authenticated relay for sending email)
• Implemented off-site reciprocal backup services between the Emory University Libraries and the Georgia Tech Library
• Voyager hardware upgrade to a Sun V490 running Solaris 9 and Voyager 6
• 1st Floor East Commons: Network provisioning
• Hosting for itidjournal.org

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• Daylight Savings Time Server and environment patching/compliance
• Implementation of LOCKSS V3 polling for our LOCKSS servers
• DVR: Security Room Project
• Aardvark: Dark Archives Dspace installation for the Archives department
• Strategic Planning Working Group, participated in the creation of the 07-11 Library strategic area: Expanding, Preserving, Promoting Digital Repositories and Services
• Mohsen Mahdavi-Hezaveh completed migration of MySQL databases previously on GTEL to the new production server

Web Services – Heather King, Manager

Goals for 2006-2007

• Re-assessment of the Web Sites Advisory Group functions and recommendations for changes to increase participation in decisions about our online presence. Heather King created the Web Steering Committee to improve communication related to the website and web services. She also formed subgroups including the Usability Working Group and the Intranet Working Group.
• Launched new Library web pages
• Redesign and reorganize the Library Intranet. This goal will be addressed by Desktop and Collaboration Services for 2007-2008.
• Continue to plan, implement, and maintain a comprehensive assessment program, providing for the study and analysis of user needs.

Digital Programs

Goals for 2006-2007

• Monika Mevenkamp was recruited as a Systems Analyst II programmer/developer for digital collections
• Larry Hansard upgraded SMARTech to the latest version of DSpace
• Fully implement the GKR system (Georgia Tech will be the lead on this)
• Develop researcher pages for SMARTech
• The Archives staff implemented the Archivists Toolkit with technical support from Monika Mevenkamp
• Fully implement the Archives dark DSpace archive and the Greenstone interface. Larry Hansard developed programs that allow Archives to batch load records into Aardvark (the Archives Dark Archive). After implementing and evaluating Greenstone, the Archives staff decided to use another solution.
• Finalized the new design and web application development for Accession database. Mohsen Mahdavi-Hezaveh redesigned the Accession database and its corresponding web application. Working with Monica Mevenkamp, they then migrated the data to the Archivist Toolkit.
• Provide standards for archiving videos and start a modest digital video lab. Mohsen Mahdavi-Hezaveh provided research, consultation, and training for a possible video digital project in collaboration with Archives and Digital Initiatives.
Additional Accomplishments

- Larry Hansard installed Open Journal Software (OJS) and Open Conference Software (OCS). Customized the OJS software for use with the ITID Journal.
- Installed Manakin for GKR
- Developed programs to load the SACS reports into SMARTech
- Developed programs to load catalog OSP records into SMARTech.
- Larry Hansard installed another version of the ETD software and made major modifications for the submission of the Undergraduate Research Option Theses.
- Mohsen Mahdavi-Hezaveh implemented Unix version of A Photographic Atlas of Selected Regions of The Milky Way

Research and Development – Ross Singer

Goals for 2006-2007

- Launched the Umlaut as a bridge between library services and the broader web
- Created a 'master mirror' of our Voyager catalog to improve searchability for custom applications or metasearch; centralized data store of MARC records to allow for reuse elsewhere
- Created a separate index for Archives' EAD Finding Aids
- Development of an interface to Voyager’s WebVoyage. This goal is being continued into the current year. A new open source application called VUFind developed by Villanova University is under consideration to enable queries of other services (GIL UC, Archives’ Finding Aids, and SMARTech) and provide additional Web 2.0 functionality.
- Enhanced search interfaces to our collections

Presentations

Heather King – “Usability at the Georgia Tech Library” - MALTA III, November 2006


Conferences / Training

American Library Association Annual Meeting, Washington, DC, June 2007
VMWare Symposium, Atlanta, June 2007
Management Development Certificate Program – Transforming technical expertise into supervisory excellence
MetaArchive Distributed Digital Preservation Workshop, Emory University, May 2007
Altiris 5-day Training Course: Deployment Server Solution

Heather King
Chris Helms
David McDuffie
Chris Helms
Emmett Dennis
EndUser 2007, Chicago IL, April 2007
ACRL, Baltimore, March 2007
OCLC ILLiad Annual meeting, Virginia Beach VA, March 2007
SURA-ViDe 2006 Digital Video Conference Atlanta GA, March 2007
Electronic Resources & Libraries, Atlanta GA, February 2007
Ontario Library Association January 31-February 3, 2007
Second International Conference on Open Repositories, San Antonio TX-Jan 23-26, 2007
6th Annual Sakai Conference – Sakai Foundation – December 2006
Creating a culture for innovation, October 2006
PostgreSQL Boot Camp, October 2006
ASERL Workshop, May 2006

Goals for 2007-08

- Implement a source code repository and tracking system
- Work with Technology Development and Research (TDR) and Scholarly Communication and Digital Services to develop effective work flow and teamwork

Access to Library Collections

- Update Docutek ERes to version 5.3.03 and implement LDAP authentication
- Upgrade ILLiad to version 7.2 and implement Odyssey for peer to peer connections
- Complete development of the Journal Value Project, a database to collect cost and valuation data for journals in all areas of the sciences and social sciences, for Collection Development
- Enhance storage capacity and integration among current services
- Implement virtual environment to increase availability, development opportunities, and enhance backup strategies
- Load all Georgia Tech Library bib records, SMARTech records and all other digital meta-data into VUFind. Provide customization and integrate VUFind with MetaLib.
- Load NTIS records into the catalog
- Install and customize the European Patent Database
- Batch load records into Verde and integrate Verde with SFX.

Desktop and Collaboration Services

- Altiris desktop deployment image consolidation; reduce number of desktop images
- Complete project for new blog, wiki, document sharing collaboration system
- Create and support new library podcasting service
- Continue 12-month Microsoft Windows Vista and Microsoft Office 2007 suite testing
- Desktop computing training for library employees
- Schedule PC deployment

Digital Programs
Continue working with Galileo on the Georgia Knowledge Repository Networking and Server Support

- Enhance storage capacity and integration among current services
- Implement virtual environment to increase availability, development opportunities, and enhance backup strategies

Training

- Provide a wide variety of training opportunities to the Library as a whole - training may be via such settings as classroom, internet, seminar and one-on-one.
- Provide, during the hours of 8 am to 3 pm, a training area, available by appointment, where staff can experiment with and learn new software.
- Provide a variety of training materials, both electronic and hard copy
- Respond to requested training needs, as well as to provide training for 'routine' software such as operating systems, mail clients, chat software, browsers and Microsoft products

Web Services

- Work with Desktop & Collaboration Services to transition the Intranet to the content management system, Clearspace.
- Implement VUFind on the Library website.
- Create a stylesheet for the Library website that will enhance browsing using mobile devices.
- Build new templates for the Library Research Guides and Librarian Info pages.
- Conduct usability testing on the Library website and Library applications.
- Employ a statistics monitoring and analysis plan.