



## **Infrastructure, Systems, and Support Annual Report 2006-2007**

The College's core infrastructure, computer systems, and community support functions have achieved significant objectives set forth over the past year. Many of these accomplishments continue to build upon the already impressive transformations to the computing environment that began in the previous year. Collectively these initiatives further create a robust foundation that will allow for extended capabilities utilizing technology in teaching, learning, research, and service within the Mount Holyoke College community. Below are selected accomplishments that contribute to the continued development of the technology environment and ecosystem. Together, they form the fabric for development of future applications and services.

### **Infrastructure**

- The core identity management directory (LDAP) has been expanded to integrate alumna and volunteer identity attributes. This will allow for volunteer workers and alumna to gain seamless entry into core systems, reports, and applications necessary for the business of Alumnae and Development offices. Five College student ID / account creation has also been streamlined to allow for faster incorporation into LDAP creating quicker access to necessary resources
- The Five College Fiberoptic network loop, which links all five colleges together to high bandwidth internet services, was put into operation in the Spring of 2007. This eliminates the need to lease fiber from third party providers. The fiber loop offers significantly more bandwidth to the College if we so choose to use it
- Redesign of core network architecture to include Virtual Local Area Network (VLAN) segmentation. This significant next-generation redesign will help best support the wired and wireless network services, network security, availability, and other extended network capabilities
- Replacement and enhancement to several components of network hardware including core routers and switches. This was the second year of a concerted effort to form a core homogenous architecture for the network continuing to lay necessary groundwork for enhanced network services, communications, and applications
- Introduction of a secure departmental computer space located within the Kendade computer operations center. This has been established to allow for departmental

servers to have a physically secure, redundantly powered, and environmentally stable environment to house departmentally administered servers if so desired

- Implementation of new Network Access Control system replacing the existing system developed at Mount Holyoke. This new appliance based solution is used for student and guest network registration, desktop system patch management, and antivirus compliance. This protects the network and it's residence hall users from corruption due to non-compliance of desktop standards or malicious software
- Continued network wiring upgrades replacing outdated low-bandwidth wiring completed for Mary Lyon and critical areas of Cirruti, Reese, and Dwight buildings. The upgrades allow for users of the network to enjoy up to ten times faster network speeds and wireless services
- Implementation of new Enterprise Server and Storage Network architecture. Several independent server and storage arrays were consolidated through the deployment of two large enterprise-class servers and a common Storage Area Network (SAN). Together, this new architecture enhances system capacity and reliability, while also reducing system administration time. Enterprise systems using this architecture include Datatel, Lawson and Sakai (ella)
- Acquisition of Oracle Database Site License to be used for consolidation of various centrally supported database environments. Core administrative and academic systems, including Lawson, Sakai, Datatel, and others have begun migration to Oracle. Oracle is the industry leader in database technology, performance, reliability, scalability, and security
- Installation, version upgrade, and platform migration of a new Learning Management System to replace WebCT was all accomplished in the past year. The initial pilot program introduced Sakai to the community as "ella", and was soon adopted by many for curricular as well as administrative functions. Over the year the system software was upgraded to a new version, migrated to larger servers, integrated into the storage area network, and most significantly migrated to the standard Oracle database environment
- Installation of integrated wireless network systems linked to centralized controllers offering enhanced capacity, availability, and failover for the wireless network. The Residence Hall Wireless project has introduced a pervasive wireless presence in 11 Residence halls (approximately 2/3<sup>rds</sup>) and some academic and administrative buildings that have undergone renovations

## **Systems**

- Planning for the Lawson Financial systems upgrade to V9.0. This includes system migration to new enterprise server and storage environment, migration to

- Oracle enterprise databases, integration to LDAP directory, and enhancements to new web services
- Introduction of a college-wide Web Calendar / Events Calendar system. This new calendar system allows for integrated event scheduling and maintenance. Viewing of campus events by the campus and extended community is accomplished through a comprehensive view replacing various autonomous departmental systems. Planners can also see scheduled events before they are published to the web, allowing them to schedule their event more efficiently
  - Upgraded Meeting Maker to support daylight savings changes. Planning for future upgrade for wireless device synchronization through wireless communications, no longer requiring a docking station
  - Upgrade PowerFAIDS financial aid software used by Student Financial Services
  - Upgrade PowerFAIDS student financial aid software called NetPartner, which allows students to access their financial aid data via the web
  - Ongoing implementation of the RedDot Content Management System (CMS) designed to replace all college supported web presence. Approximately 40% of College websites sites have been incorporated over the past year. The RedDot system is undergoing restructuring of core architecture and template design to facilitate better administrative user performance. This will also allow for ease of migration of the academic sites into the system in the near future
  - Introduction of automated Five-College registration process. Course selections at member institutions are electronically approved and transmitted to host institutions for appropriate five-college registration approval. Prior to developing this system, Mount Holyoke College and others relied upon a paper-based process
  - Ongoing implementation of Datatel Advancement modules to replace the existing Summit system on the AS/400. The new system will system support the Alumnae and Development offices with the common Datatel application that also currently supports admissions, registration, advisement, student financials, accounts receivable, human resources, and payroll functions. Once this system is completely migrated, the AS/400 platform can be decommissioned
  - Implementation and Deployment of Datatel Human Resources Management system to replace existing Cyborg HR/Payroll system. Additional phases and enhancements will be developed over the coming year including the incorporation of the Faculty Information System
  - Upgrade of Laser Check Software and associated hardware used by Accounts Payable and Human Resources

- Upgrade to Datatel WebAdvisor (ISIS) product, which establishes a web front end to Datatel applications for use by students, employees, and alumnae of the College
- Migration of the Datatel systems to the new enterprise server and storage architecture.
- Development of multiple Datatel interfaces including interfaces to the Learning Management (ella), Central Library (Aleph), Event Management (EMS), and Career Recruitment (Symplicity) systems.
- Development of the “YourPlan” career checklist for the Career Development Center programs. This may be used by all students to assist in achieving various career planning goals and tasks based on their class year.
- Development of a registration and workflow tracking system for the annual Senior Symposium event. This is used by participating students, faculty, Symposium administrators, and advisors to facilitate collection and approval of topics and abstracts. It also aids in the production of various publications for this event.
- Definition of an eCommerce Request for proposal (RFP) for acquisition of a common application to be used with various college systems. Currently multiple eCommerce applications are in use. The chosen product may be used in the future for tuition payment, service requests (transcripts), onecard deposits, conference payments, event payments, storefront and merchandise payments, replacement of existing systems, etc.

### **Technical Support**

- Installation of over 150 desktop for the MHC community and public labs. This represents the final year since establishing a 4 year replacement cycle program for all MHC owned machines. The creation of a standard desktop / laptop environment on campus allows LITS to maintain the highest level of support and service to the community
- Introduction of extended support of Blackberry RIM devices for Senior Staff and Designees. In conjunction with core service providers (e.g. verizon, tmobile), support for extended integration of College email and calendaring functions is provided through standard operations
- Introduction of a student computer purchase program in collaboration with the Smith College Computer Store. Computers (Dells and Macs) purchased through the program include on-site support from MHC trained and certified technicians

- Installation of new Antispyware (MS Defender) software on all newly purchased PC's. The new Defender product is an enterprise class software component, which replaces freeware products previously deployed for this purpose
- Training and support model introduced for new Vista operating system. Incoming student machines as well as all future college owned machines will be supported on the Vista system
- Digitization of e-Reserves, Museum objects, and various documents through newly developed DigiCenter services. The incorporation of these items into the digital library allow for easier maintenance and extended usefulness of the materials
- Processed 4705 work orders through the LITS Help Desk. 675 were from the Student Diagnostic Center.
- Finalized and distributed a documented operational process flow for support services and the digitization center
- Initiated strategic plan for campus wide implementation of Office 2007 with anticipated roll out date of Summer 2008. Team includes members from across LITS groups.
- Digitization of e-Reserves (2500 readings for 200 courses), Museum objects (275), MHC Archives (75), Faculty Research (800) through newly developed DigiCenter services. The incorporation of these items into the digital library allow for easier maintenance and extended usefulness of the materials
- Installation of 103 Kyocera printers through a newly established Printer Management Program . The new program leases the printers and manages printing cost through a fee per print accounting program. This decreases campus expense, manages printer support through an external vendor, and extends a green computing initiative

Submitted by  
Scott J. Coopee