

Information Services

Annual Report 2003-2004

6-30-04

The Division of Information Services encompasses the several units that define University Information Technology Services (UITS). During this year, the IS Division continued a major effort centered around refocusing its efforts to more closely align itself with the University of Connecticut's primary central mission of academic, research and outreach services. This redefinition was undertaken against the backdrop of an increasing number of requests for service from the University community and a decreasing number of staff.

This report will provide a progress report on effort completion centered on the continuation of the charge given to the unit by the Chancellor as well as a summary and status of the major technology projects undertaken during the year.

FY 2003-2004 major technology efforts included:

- Reorganization of the Executive Team and the Management Team within the IS Division,
- completion of a joint visioning effort in conjunction with Enrollment Services to create a new vision of the Enrollment Services Division use of technology,
- the advancement of the PeopleSoft Student Administration Services project including enhancement of the existing Student Records production modules, migration to a new version of the software to provide web access and the initiation of the Admissions, Student Financials and Student Financial Aid modules,
- the continuing work towards the move to a central University-wide e-mail and calendaring system utilizing the Microsoft Exchange product,
- the completion of work on the HIPAA project to protect electronic patient information,
- the completion of work on the SEVIS project to fulfill federal reporting requirements of foreign nationals associated with the University,
- the completion of work on the Document Management System to facilitate the Student Aid process for the Financial Aid Office,
- the completion of work on the Core-CT project to share appropriate information from the Financial and Human Resource systems with the new state Peoplesoft system,
- the completion of a reorganization of the fiscal management for Telecommunication Services,
- the completion of work on the restructuring of our Help Center, and
- the development and adoption of a set of IT policy statements designed to advance institutional security and personal privacy.

These and other accomplishments, which follow, represent the exceptional work of many talented staff who are highly dedicated to supporting the mission and goals of the University of Connecticut and its students, faculty and staff.

University Information Technology Services

Division Accomplishments

Technology Activities

PeopleSoft Project Overview - Over the course of the past year, the University's PeopleSoft implementation has made significant progress in several areas. Major achievements include:

- **Version 8 (V8) Upgrade** – Upgrading the PeopleSoft Student Administration system to Version 8 was necessary to stay current with the release level of the PeopleSoft software in order to maintain vendor support for the system. The significant upgrade was accomplished within a 6-month period, which concluded in September 2003 with the rollout of the V8 software. The new software introduced a new end-user interface through web-based components that are an integrated part of the overall PeopleSoft product. Future modules are now under development in the new V8 environment.
- **Module Development** – The PeopleSoft team began development of the Admissions and Student Financials modules in conjunction with the rollout of the V8 upgrade. These modules are scheduled to go-live in the late Summer and early Fall 2004 respectively. The Financial Aid module, which is last of the Student Administration modules to be implemented, began development in January 2004 and is scheduled to go-live in January 2005. Future development efforts in all modules, as well as peripheral system integration, will continue for an extended period of time after all modules are in production. Although the initial implementations will offer significant benefits of integration and access, there will be much to do before UConn realizes the full benefit of the new integrated environment that PeopleSoft offers.
- **Training and Support** – The PeopleSoft team spent much of its time working with the V8 upgrade process, as well as developing future modules in the V8 environment. The new interface and functionality introduced with V8 required administrative users to attend refresher training. Over 800 administrative users, in addition to faculty and student populations, utilize the systems on a regular basis. In addition, several training classes were offered to new administrative staff in the proper use of the PeopleSoft system environment.

SEVIS Project – During the year, UITs worked with various University areas to complete the implementation of a solution to the Federal Government mandate to report the status of foreign nationals affiliated with the institution. This effort included:

- Providing project management oversight
- Interfacing with the vendor for the ongoing development of the software
- Installing and configuring the software for the Trac-U-Soft system

- Performing a study and choosing an alternate SEVIS system to replace the Trac-U-Soft software when it was determined that the vendor was not viable.

ADASTRA Project – The ADAstra product is used by the Registrar’s Office to provide classroom-scheduling functionality in support of the teaching mission of the University. Technical enhancements achieved during the year include:

- Migration to a new version of the software and
- definition of roles and responsibilities resulting in the enhancement of the coordination and communication regarding system issues.

Creation of a Data Warehouse Services (DWS) Architecture Charter - This charter document was created to guide UConn toward the creation of an environment to provide enhanced reporting from UConn maintained data. Highlights of the effort will be:

- **Empowers decision-makers** by enabling direct access to accurate, consistent, and non-volatile information and by offering decision-support services that will facilitate the analysis and interpretation of institutional data.
- **Redirects costly personnel hours** from data gathering, matching, and consolidating to data analysis. Reduces the need for UConn information consumers to replicate data and maintain redundant tracking systems.
- **Promotes the “no walls” culture.** The information sharing will lower the walls among all administrative and academic units, creating alliances and connecting people to each other and the Institution as a whole while being mindful of security issues pertaining to the data.
- **Improves data quality over time.** Broader access to information will help better define what types of information we need on hand for effective decision-making. This will identify areas for improvement in data-gathering functions and data entry.
- **Enhances institutional effectiveness** by extending and expanding the use of management information across the Institution. The extensive use of management information will eventually promote the analytical culture that places value on information and analysis as opposed to “gut feelings.”
- **Improves integrity and conformity of campus-wide information.** As more people on campus use the data, error will be identified and corrected, thereby improving data integrity over time.
- **Improves access to the historical data.** Historical data will be available to the broader campus community for ad hoc access and analytical processing.
- **Provides direct support to Institution executives and the schools** in collection, analysis, interpretation, and provision of institutional information.

Server and Storage Architecture - University Information Technology Services (UITS) supports a wide variety of services on a wide variety of server and storage architectures. Services are supported on two mainframes running VM and OS/390, on large-installation

Unix servers, on small-installation Unix/Linux servers, on various generations of Windows servers, and on Novell servers. Some of these access local storage; some access storage from a central storage area network facility; and yet others have their own storage area network facility. The net result is that there are many types of systems to support, requiring that the technical staff supporting these systems have many types of specialized training and expertise to resolve problems. This significantly increases the cost of supporting our services. Deliverables include:

- Documented current state of the technology infrastructure
- Documented the future (desired) technology infrastructure
- Developed a planning strategy for migration of infrastructure

The key to continued success in the management of the computing and storage infrastructures in the future will depend heavily on the ability to simplify, consolidate and standardize. The key to affordability of the target computing and storage infrastructure to meet the future needs of the University will depend on these same goals: simplification, consolidation and standardization. The achievement of these goals will decrease the cost of hardware and software, while reducing the personnel costs associated with more complex environments.

Core-CT - The State of Connecticut has replaced its current Financial and Human Resources Management Systems with a new PeopleSoft Enterprise Resource Planning (ERP) suite. The work completed involved integrating the current core UConn Financial and Human Resources systems into the State's systems.

WebCT (Electronic Course Management) System Upgrade – A group representing Connecticut's K-20 educational community worked together to explore the potential advantages of deploying a Learning Management System (LMS) -specifically WebCT's Vista product - for use by all. This exercise was sparked by a series of developments including: the arrival of an LMS product that supports consortial delivery; the price and complexity of that product; the existence of statewide implementation plans in other states; the positive experience Connecticut has had with other consortial arrangements; and the fact that WebCT is the LMS of choice for a large segment of the higher education community (over 100,000 Full-Time Equivalents). Representation on the group includes University of Connecticut, the Connecticut State University System, the Connecticut Community College System, Charter Oak State College, the Independent Colleges, K-12, and the Connecticut Commission for Educational Technology, the Office of Policy and Management, and the Department of Information Technology.

The University of Connecticut has participated with this group of educational institutions throughout the state of Connecticut to investigate the feasibility of a consortia-based approach for the acquisition of the WebCT Vista product. The CIOs of the various institutions that participated in the process have been meeting at least monthly over the past 6 months to guide the process. Through the efforts of this group, the consortia have been able to negotiate a state-wide contract at a substantial discount to the individual institutions. The project is projected to be completed by December 31, 2006. Deliverables include:

- Plan, install and deliver the WebCT Vista e-Learning environment to faculty and students to enhance the teaching and learning mission of UConn
- Establish working relationships with other Connecticut educational institutions in the delivery of e-Learning capabilities to their students
- Integrate Library-based resources into the e-Learning environment
- Capability for each campus to brand itself uniquely
- Personalization of the students' learning path (courses can be designed so that a student cannot move to the next concept without passing a mastery exam)
- Content sharing between courses, departments, schools and beyond
- Distributed administrative control
- Automated data exchange with PeopleSoft Student Administration System (WebCT grade information can be electronically fed into the PeopleSoft system instead of requiring faculty to manually enter the data.)
- A dramatically improved user interface (more user friendly)

Customer Support and Relations – Created a unit that combined the roles of the UConn telephone operations and Customer Support area with those of the Customer Relations area and the Desktop support area and located this new unit together. This has promoted an open, collaborative, communicative and cooperative environment for UITS-based customer support services. During the preceding year this unit has:

- Completed a project to restructure the UITS Help Center to improve the quality and consistency of services to the community
- Completed implementation of the CA Problem Management production system
- Merged Call Center and Desktop Support into a single operational unit
- Instituted a “Hot Line” for authorized users to obtain immediate assistance
- Established a “Misuse & Abuse” phone line for anyone to report a suspected incident. Established internal processes to handle these needs.

Exchange 2000 Calendaring and E-mail Project – The project team worked with departmental liaisons to convert over 30 academic and administrative departments with more than 1700 users over to the new e-mail and calendaring system. This included retiring nearly a dozen central and distributed mail servers on campus.

Software License Group - The Software License Group was chartered to include oversight of software licensing for the HuskyPC, Macintosh, Labs and High Technology Classroom programs. The group consists primarily of IT support staff from departments and schools, inclusive of Storrs and Branch campuses. The group has taken on responsibility for licenses originally contracted outside of their responsibility and is in the process of revisiting all software contracts to ensure compliancy.

Service Level Agreements – An effort to outline roles, responsibilities and costs associated with various services offered to the UConn community was begun. During the year, UITS executed agreements with several Departments and/or Schools to provide clearly defined IT services. These agreements cover four Tier Support Levels: Server Housing, Server Systems Support, Database and Applications Support, and Full Support Services. The initial agreements were negotiated with CSRA, Grants & Contracts and CUE.

Network Construction/Renovation Activity – Involved in numerous design / renovation projects for data networking. Involvement was related to wiring, review of design specifications, review of part submittals, designing networks (voice, data, video), emergency repairs and service updates and site inspections. The projects worked on over the past year include: Avery Point, Benton Museum, Bronwell Engineering, CUE, Gampel Pavilion, Gentry Building, Greek Village, ITE, Hall Dorm, Law School, North Campus Housing, Pharmacy, Ryan Refectory (CHIPS), Sprinkler Projects (East, West and Grad), Student Union, Thrust Theater, Towers Dining Hall and the Waterbury Campus (New Campus Facility)

WAN/LAN Upgrades: Activities surrounding the network infrastructure include:

- Replaced the Cisco 6500 with a 3550 in the Young Building. This is part of upgrading the network core and having survival plans in place in case of a disaster
- Implemented expanded Firewall (router based) services in the MSB Server Farm
- Teamed on project to upgrade Regional Campuses (Torrington / Waterbury / Stamford) to Frame-relay dedicated connections and retired SNET Newbridge ATM equipment
- Teamed with CEN on various projects upgrading or otherwise affecting UConn Internet services
- Enhanced the Network Management Software with the installation of CISCO Works
- Updated switch configurations on all CISCO equipment
- Detected and identified a virus outbreak at the beginning of the fall semester Code created at UConn, was used by Universities nationwide to prevent and repair outbreaks on their campuses

Connecticut Education Network (CEN) – Continued partnering with the State of Connecticut Department of Information Technology (DOIT) to establish the CEN infrastructure necessary to provide high-bandwidth connectivity to educational institutions in Connecticut. Achievements include:

- Execution of a Memorandum of Understanding with DOIT leading to the creation of the Advanced Services Center (ASC) at Storrs
- Initial staffing of ASC nearing completion

Hi-Tech Classrooms – Continued support role for the Hi-Tech Classrooms. Support for the year included:

- Successfully updated software image to upgrade 85 High-Tech Classrooms
- Worked with UCIMT to refine support roles
- Provided hardware and software support for Hi-Tech Classroom computers

Husky PC Program – The Husky PC program was restructured to revamp the process for ordering and procuring PCs. Roles and responsibilities of the various units involved in the acquisition and configuration process were redefined to streamline the program processes.

Operating and Production Updates - Over the past year, UITS has undertaken a number of initiatives aimed at improving operational and production efficiencies. These initiatives have supported new initiatives as well as the ongoing production environment. These updates include:

- **Server Upgrade and Consolidation:**
 - Elimination of one of the three mainframe platforms. This was possible because the PeopleSoft application was moved from a dedicated mainframe to a Unix infrastructure at the end of FY 2003. The workload of the mainframe serving our legacy applications/services was moved to the former PeopleSoft mainframe, allowing us to eliminate the older legacy mainframe, with significant savings in both hardware and software maintenance costs.
 - Elimination of the Commservices NT domain. Services within this domain were migrated to the UITS central Active Directory
 - Elimination of the Lotus Notes Mail environment. All users were migrated to Exchange 2000
 - Elimination of the UITS central Exchange 5.5 environment. All users were migrated to Exchange 2000
 - Migrated several Novell services from departmentally-maintained Novell servers to the central Novell server supported by UITS

- **Modernization of STK Tape Silo Functionality:**
 - Replacement of older Silverton tape drives (tape capacity of 1-2 GB) with STK 9840 tape drives (tape capacity of 20-40 GB). This effort eliminated all of the oldest tape technology from the STK Silo. It prevented the need to expand the silo to accommodate more tapes by using much higher density tapes. It has also sped up the recovery time for ADSM restores by eliminating the need for so many tape mounts.

- **Installation of New Computing Infrastructures to Support the following:**
 - SEVIS project
 - HIPAA project
 - ImageNow project
 - Active Directory (centralized enterprise Active Directory to support centralized and decentralized Windows services for the University). We have delegated administration responsibilities to the following: CSRA, CLAS, NSOE, CUE, UCIMT
 - Exchange 2000 –This involved hardware and software installation of 16 Intel servers, expansion of the Shark, expansion of the Storage Area Network, and expansion of the IBM Automated Tape Library (ATL) to generate a highly available production environment for Exchange 2000 for University faculty and staff
 - Centralized Web Services for the University
 - E-Mail Gateway to support virus and SPAM scanning of e-mail

- **Data Storage:**
 - Expanded the central storage area network to support Exchange 2000 and ImageNow
 - Expanded the Automated Tape Library (ATL) by adding two IBM 3590 tape drives to support the Exchange 2000 e-mail / calendaring system
 - Designed and implemented a process for moving backup tapes offsite for disaster recovery
 - Designed and implemented “*flashcopy*” process to back up the production PeopleSoft database, taking downtime of the database down from an hour to about 10 minutes
 - Implemented a reporting database for PeopleSoft from the *flashcopy* of the production database, which allows for expanded reporting capabilities

Various Other UITS Initiatives:

NetIDs – Implemented a process to ensure that various NetIDs would be retained over periods of time when people were not, technically, employed by the University. This allows access for Adjunct Faculty to be retained over the summer period.

Policy Management System – Chartered and initiated a project to replace the Lotus Notes-based Document Management System which is used as the University’s central repository for policy documents. This will terminate the need for any UITS-supported Lotus Notes services.

Various Telephony Initiatives – Several enhancements were instituted to allow for increased automation of services. In discussion with UConn’s Health Center (UHC), it was discovered that various contracts could be expanded / renegotiated which would provide substantial savings for the Storrs and UHC campuses. With the opening of the Connecticut Education Network Advanced Services Center to network services business, UConn switched its Internet 1 and Internet 2 service to utilize the ASC. This resulted in substantial savings to the University.

- Automated several parts of the Student Registration system. This made the fall registration period run faster and with fewer people.
- Through the synergy projects with UHC, better rates for International calling were secured. This will save end users about 60% off of their calls on the international level.
- Through this same project, domestic long distance rates will also be reduced and the student billing system will be replaced.
- Through relationships with CEN/ASC, Internet rates for both Internet 1 and Internet 2 were reduced by more than 50% over existing contracts in place today.

Network Master Plan - Preliminary installation plans were created in anticipation of the first year funding of the campus-wide Network Master Plan for the data network.

Network Security – UITS was involved in many different issues involving the maintaining of security on the data network including investigating a major Denial of

Service (DoS) attack in the fall. Responded to hundreds of complaints from the Recording Industry of America and other copyright owners regarding file distribution and sharing on the network.

Network Standards Document -The standards document was updated and published on November 1st, 2003. This is used as the technical specifications guide for all new construction and renovation projects on campus.

Applied Various Vendor-Supplied Fixes to FRS, SAM, SARS and Genesys – These efforts ensured the continued functionality of the legacy Financial, Student Financial Aid, Student Accounts Receivable, UConn HR and Payroll systems. Several Federal, State and UConn-mandated and requested enhancements were completed.

Upgraded Listserv Services - A web-enabled version of LISTSERV has been installed, giving LISTSERV owners easier and better tools to maintain their lists. This was our first production Linux-under-VM service.

Enhanced the Exam Scoring Process – Worked to ensure that the UITS-offered bubble sheet scanning for scoring faculty exams was clearly documented and published. Work centered on resolving the roles of various areas of UConn in providing this service to the faculty. The process includes providing exam scoring, scanning and reporting services.

Project Management – Adopted a division-wide project management methodology to be used by UITS in the effective and efficient management of projects. An initial group of staff was sent to Lewis Project Management training. These staff members have completed their work to customize and document the methodology for introduction into the UITS Division. The project chartering process has been incorporated and planning is underway to introduce, in stages, the remainder of the methodology.