

INFORMATION TECHNOLOGY REPORT**Courtney M. Carpenter, CIO****Progress on Five of the Initiatives in the Current IT Strategic Plan****Strategic Initiative 1: Enhance the Security of Information Resources**

The recent audit of the College's Information Security Program revealed the need for a program review. Under authority granted by the Restructuring Act of 2006, the College has adopted the ISO/IEC 27002:2007 Security Standard in place of the VITA SEC 501 Standard. The College has aligned its planning and implementation efforts with the relevant controls and recommendations published in ISO/IEC 27002:2007. The Information Security Working Group, under guidance from the College's Information Security Officer meets regularly to assess and satisfy the requirements of the ISO standard. The Security Working Group has also joined efforts with the vice president for administration in the areas of risk management and emergency preparedness providing an integrated planning approach with the larger College community and raising the priority of these efforts for the institution as a whole. Specifically, the following security initiatives are in process or have been completed:

Risk Management (ongoing)

Under leadership by the vice president for administration, the CIO and ISO are members of the College's Risk Management Committee. Currently, the committee is working on an institutional policy that would delegate sufficient authority to the Risk Management Committee to perform and periodically review risk management activities by the College's schools and departments.

IT Asset Inventory and System and Data Classification (in process)

This initiative provides a comprehensive inventory of all information assets including hardware, system software, applications, third party relationships, interfaces, and critical or sensitive data sets. Following industry best practices, a structured methodology defines and classifies all systems and data. Results of the inventory will be used to allocate information security resources where most appropriate.

Security Policies, Standards, and Guidelines (in process)

In response to the APA audit, the Security Working Group has developed, reviewed, approved and implemented important policies, standards, and guidelines to clarify the rules and procedures governing the processing, storage, and dissemination of and access to College information assets. The CIO and other senior College officials have approved the following:

- Risk Management Policy
- Access Control Policy
- Remote Access Standard
- Data Management Policy
- System and Data Classification Standard
- Physical & Environmental Security Standard

SecureNet (complete)

This project created a highly secure sub-network for faculty and staff working with sensitive College data. The network has a default deny configuration and protects the College's most mission-critical and sensitive applications and data from outside threats. The Counseling Center and Student Health departments were added to SecureNet. A full rollout of SecureNet to the other groups with access to sensitive information will start late fall 2008.

VPN (complete)

The College completed implementation of a virtual private network to allow faculty and staff to access sensitive applications and data from off campus using a secured network connection.

COMMITTEE ON ADMINISTRATION

Encrypted Wireless (in process)

To improve wireless data security, encrypted wireless using the WPA2 protocol has been added to the wireless networks on campus. Faculty and staff are required to connect to the encrypted network when using wireless on their notebooks. Students can choose which network to use and guests are currently limited to the unencrypted network.

Strategic Initiative 3: Enhance and Strengthen Enterprise Systems

During the past 18 months, Information Technology has been working closely with the staff in Property Control to move legacy Fixed Asset data from the mainframe to Banner. Though we are still awaiting the results of the physical inventory, the data conversion from the mainframe was successfully completed in Banner Production on August 28.

Server virtualization, allowing multiple servers to run independently on the same physical hardware has taken hold in the Jones Hall machine room. The UNIX Engineering team installed 85 servers on 20 physical systems, many of which provide load balancing and redundancy to improve reliability. The Windows Engineering team transferred 10 legacy Windows servers and added seven new Windows servers to virtual servers producing a high availability configuration providing failover in case of hardware failure. This virtualization reduced the power demands and heat load in the Jones Hall machine room while allowing the installation of additional systems providing services to the College community.

Summarized by business unit, other efforts in progress for enterprise systems at W&M are as follows:

Alumni Affairs/Development

- completed upgrade of Campus Call servers to Oracle 10gR2
- completed upgrade of Advance test and production servers to Oracle 10gR2
- completed BSR Events Management System upgrade
- implemented Advizor dashboard reporting solution for prospect cultivation/management
- upgrade to Campus Call 3.3 (go-live Jan '09)
- upgrade Advance (go-live Nov '08)
- evaluating upgrade to Advance web interface – in planning and cost determination phase

Auxiliaries

- completed implementation of eSuds interface with Blackboard Optim to allow students to view washer/dryer availability on-line
- implement ecommerce solution (project initiation scheduled for 4th quarter '08)
- create business continuity volume for Blackboard Optim ID Card system (go-live Sept '08)
- evaluate and implement new parking tag/ticketing system (go-live Aug '09)

Facilities

- plan for FAMIS upgrade to 8iR2 (go-live Oct '09)

Finance

- completed conversion of Fixed Assets from the mainframe to Banner
- completed upgrade to Banner Finance 7.4 (May '08)
- implement eVA chargeback process

Financial Aid

- implement algorithmic processing for packaging in Banner '08 (go-live Feb '09)

COMMITTEE ON ADMINISTRATION

Human Resources

- implemented payroll mandatory direct deposit and on-line earnings statements
- develop human resources requirements for Restructuring
- continue implementation of the Faculty Tracking module within Banner

Institutional Effectiveness/Assessment

- developed on-line assessment and reporting in School of Education
- enhance faculty breakdown report to capture categories for external reporting (go-live Mar '09)
- evaluate options to track Faculty research and service outcomes
- develop assessment functionality for School of Business to meet accreditation requirements (go-live Oct '09)
- develop application to capture data from offices needed for external surveys (go-live Mar '09)

Student

- completed pilot project to assess in-class, on-line course evaluations for spring '08 term
- develop requirements to enhance collection and storage of undergraduate research activities in Banner (project initiation Nov '07)
- explore eportfolio options to track student experiences
- implement Law School Admission Council's ACES2 software to replace NOLIJ as interface to Banner (go-live May '09)
- implement Studio Abroad, study abroad management software (Go live, May '09)
- evaluate commencement event processing in Banner 8

Technical/General/Other

- completed upgrade to Banner General 7.5 (May '08)
- completed ODS 3.1 upgrade (go-live June '08)
- completed Blackboard Academic Suite upgrade to 8.0 (May '08)
- continue enhancements to domain accounts management system
- streamline process to collect, store, and maintain parent information (go-live Fall '09)
- archive and purge historical data on the mainframe (completion June '09)
- implement new source/change management life cycle for Banner/Accounts Management System
- implement Luminis IV upgrade (go-live Oct '08)
- collect data and develop application to track software applications and classify data (May '09)
- implement Banner 8 (go-live Feb '09)
- implement new rules for tracking and reporting ethnicity (go-live Mar '09)

Strategic Initiative 4: Integrate Technology in Teaching and Learning

The Windows Engineering Team, Technology Support Center and Academic Information Services Group successfully replaced 500 computers this summer. This provided the latest computer technology to 350 faculty and staff and 150 public access labs and classrooms. New notebooks were configured with Windows Vista Enterprise that includes the BitLocker drive encryption technology to protect data in case the notebook is lost or stolen. This also represents the refresh of one quarter of the computers in the lease program and is the largest replacement cycle in the three-year lease program.

Summarized within multiple initiatives, other efforts in progress for the integration of technology in teaching and learning at the College are as follows:

Development of New Lab and Classroom Models

One goal of myNotebook is to free up space to replace general purpose labs with specialty facilities to

COMMITTEE ON ADMINISTRATION

meet needs beyond those that can comfortably be met with notebook computers. The construction of the following facilities has been completed and was funded entirely by the IT organization. Ongoing assessment is underway for each facility to maximize its use.

- Spatial Laboratory addresses the need for a classroom to teach courses involving Geographical Information Systems (GIS), AutoCad, and other graphical applications. (phase two: Mellon-funded GIS Lab will probably be built in the library.)
- Collaborative Demonstration Classroom designed to facilitate small group projects, collaborative work, class discussion, group presentations, and myNotebook projects. (complete)
- Washington 315, Experimental Classroom, designed for flexible reconfiguration and to serve as a “digital humanities lab.” (complete)

Continued Expansion of the Technology Integration Program (TIP)

TIP continues to provide a comprehensive array of support methods that can meet the needs of disciplines and the strengths of individual faculty members.

TIP Grant-Funded Projects

- Active Sampling Distributions in Economics (complete)
- Audio/video materials for Study of Language (faculty hold)
- Building Business Intelligence through Data Mining (postponed: vendor issues)
- Creating Virtual Environments for Visual Perception Research (phase two)
- Electronic monitoring of the writing process (move to phase two)
- Mellon Foundation GIS Infrastructure (complete - move to Mellon Initiative)

Student Fellowships (fellowship program integrated into focused research)

- Williamsburg Oral Histories Project (complete)
- Global Environmental Governance (complete)
- Getting a Second Life: Exploring Educational Gaming (complete - limited phase two)

Ongoing Events and Programs

- Faculty Orientation Program (complete)
- Swem/IT Series on Emerging Technology (ongoing; fall schedule)
- Pilot credit classes: Digital Literacy (ongoing)
- Field Guide to Digital Data Collection (on hold)

Collaboration with Faculty on Individual Teaching and Research Projects

One of TIP's primary goals has been to allocate more resources and time to projects that directly aid the teaching and research mission. Current projects that will be completed during the spring semester include:

- Classical Studies Image Database Conversion (move to phase two)
- State Governance, Education Policy, and Student Performance (complete)
- Mapping the Growth and Spread of a Colonial Population (complete)
- Talking Dictionary Project (ongoing)
- Help Us Listen (move to phase two)
- International Theater Research
 - The Williamsburg Theater Project
 - Moscow Theater Project
 - Paris Cinema Project

Focused research in key areas of potential educational innovation

TIP research projects identify and expand the impact of established technologies.

- Getting More from Blackboard (ongoing - major initiative for 2008-2009)
- Building an Undergraduate Research Community (pilot complete: phase one launch 9/25)

 COMMITTEE ON ADMINISTRATION

- Collaborative Writing (in progress)
- GIS and Visualization (in progress)
- Personal Response Systems – “clickers” (moved to operations)
- Assess Use of Student-Owned Computers in Science Labs (moved to operations)
- Assessing Faculty Use of Tablet PC’s (move to phase two)
- Expanded Support for Apple Computers - faculty and student (move to operations)

Creating a sustainable support infrastructure

Support requirements for faculty and academic departments have changed dramatically in the years since the Departmental Liaison program was launched. The Academic Information Services group has begun a yearlong initiative to respond to those challenges through the following projects:

- Retrenchment of Academic Technology Specialists and Engineering positions (ongoing)
- Build ITAC as an effective faculty advisory group (ongoing)
- Adapt project management methodology for academic departments (pilot complete; phase two)
- Faculty Digital Center Review and Long-Range Plan

Expand specialized "academic cyber-infrastructure"

The AIS group is expanding our support to niche resources, often developed through community-source or open-source methods, to meet the specific needs of small groups of teachers and scholars. Currently the following servers, software or processes have been launched or are under active development.

- Adapt Xythos file management to academic needs (ongoing)
- D-Space Digital Repository for Undergraduate Research (co-sponsor with Swem; phase two)
- High Performance Computing Cluster Program Review (April '09)
- MDID digital imaging server (moving into operations; pilot with Art History complete)
- Opinio enterprise survey tool (move to phase two)
- Statistics server (moving into operations)
- Streaming media deployment plan (project scheduled spring '08)

Emerging Technologies for Review (Fall)

- Desktop Video Tools
- Humanities Cyberinfrastructure Study (planning fall; report spring '09)
- Distance Learning Tools (planning fall, study and report in spring 09)
- Student Portfolio Tools (planning only 2008-2009)

Strategic Initiative 5: Support a Comprehensive Web Strategy

The work in support of a comprehensive web strategy for the College continues; we made substantial progress with the launch of the new W&M web site and are continuing a strong web communication effort.

W&M Web Redesign Project (re.web)

On July 31, the new W&M website launched. Response from alumni, parents, faculty, students, staff, and members of the community has been positive. A complementary look for myWM was also launched and other specific accomplishments include:

- Published new features including W&M Blogs, campus photo galleries, special interest stories (W&M Impact, W&M Inquiry, and W&M Style), and audience gateways (e.g., Info for Parents)
- Launched new copy and photography
- Improved the information architecture
- Built new sites for News & Events, Admission, Financial Aid, Dean of Students Office, Registrar’s Office, Arts & Sciences Dean’s Office, Graduate Arts & Sciences, and Psychology
- Deployed new hardware and a new web content management system (CMS), Cascade Server

COMMITTEE ON ADMINISTRATION

W&M Web Governance

As we continue to enhance our web presence and phase in more departmental websites, efforts to support permanent web governance will be key. Progress on that front includes:

- Established a College-wide Web Advisory Committee (representing all key stakeholders)
- Hired a Web Content Management System Administrator
- Hired a Managing Editor of the W&M Web
- Created working committees for design, technical and editorial decisions (with staff from Admission, University Relations, and IT)

W&M Web – Next Steps

The focus is launching more new sites and providing training and support to web editors using Cascade.

The new websites to be launched in September are:

- The Law School
- VIMS (top-level)
- Undergraduate Arts & Sciences
- Academic Advising
- W&M Strategic Planning
- Vice President for Strategic Initiatives
- University Ombuds Office

These new website projects are underway:

- Economics (October)
- English (October)
- Geology (October)
- GIS Center (fall)
- The Mason School of Business (March 2009)

Cascade training and support activities include:

- Orientation sessions at the Law School and VIMS
- Preparing Cascade user documentation and training materials
- Nearly 24 x 7 support for the W&M web via web@wm.edu

Recognition for W&M

The W&M web redesign project is receiving national recognition.

- The re.web blog received the People's Choice Award from eduStyle/College Web Editor.
- The W&M web redesign is one of two "Noteworthy" sites for September on eduStyle.
- IT staff will make a presentation about the project at the HighEdWebDev conference.

Strategic Initiative 7: Update Data Network and Telecommunications Infrastructure

The IT Network team is in the final stages of a network redesign project that will be more fault tolerant and higher speed, providing up to a gigabit to the desktop. This project will require the replacement of 600 seven-year-old switches with approximately 300 state-of-the-art switches capable of supporting voice over IP in addition to regular network traffic. Implementation will start in early 2009, with completion targeted for fall 2009.