

# **Division of Information Technology**

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## **Annual Report**

**Academic Technologies**  
**Auxiliary Services**  
**Electronic Engineering & Communication Services**  
**Enterprise Systems**  
**Information Security**  
**IT Infrastructure**  
**Printing & Vending Services**  
**Project Management & Audit Compliance**  
**Technology Assistance Center**  
**Web Communications**



2010-2011

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## Overview

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The 2010-2011 Division of Information Technology Annual Report provides an overview of the major accomplishments of the division from July 1, 2010 through June 30, 2011, as well as goals for fiscal year 2012. In what will be remembered as the division's largest software integration efforts, the University successfully completed the implementation of the University's new administrative computing system. This milestone allows the Division of Information Technology to move from an implementation mode to a mode where we can focus more attention on improving business processes and reporting capabilities with this new system.

### *Mission Statement*

The Division of Information Technology is committed to delivering a strategic advantage to Radford University by fostering creative and innovative use of technology to achieve the University's objectives. The division promotes effective stewardship of information assets and provides a secure, highly reliable technology infrastructure along with high-quality, customer-oriented services and support, so as to meet the ever changing needs of students, faculty and staff.

### *Special Award & Recognition*

#### **Honorable Mention at Governors Technology Awards**

Radford University was recognized at the 2010 Governors Technology Awards ceremony in September of 2010 for the collaborative work between Radford University, Virginia Tech and New River Community College in establishing the New River Valley Multimedia Services Access Point (MSAP). The MSAP allows Radford University and New River Community College to take advantage of Virginia Tech's high performance research network connections to recognize increased bandwidth and connectivity options while reducing overall costs.

### **Division Highlights**

- **Completed the Multi-year Banner Project** on time, under budget and within scope while delivering enhanced system functionality and operational efficiency
- **Enhanced Features and Functionality of the ERP System** to improve efficiencies and provide information for strategic decision making
- **Enhanced and Upgraded IT Infrastructure** to support information systems and services in a secure, highly available and high performing environment
- **Established the Web Communications Department** to provide integrated marketing web communications that support the university strategic goals
- **Launched a New RU Website along with a Content Management System** which provides the university with a unified, effective web presence
- **Migrated Student Email to Microsoft Live@EDU** to provide students with more storage space and functionality while reducing hardware and operating costs
- **Migrated from WebCT to Desire2Learn** to provide an enhanced course management system to the campus community

- **Implemented a New Telephone Management and Billing System** to enhance functionality and reduce annual maintenance costs
- **Upgraded Security Alarms and Surveillance Systems** to enhance the safety and well-being of our students and employees
- **Aligned the WVRU Radio Station with the Division of IT** to integrate radio into an already technology rich environment
- **Formed the Banner Operations Committee** to provide coordination and direction for the operation of the Banner ERP and ancillary systems
- **Enhanced the MyRU Portal** to provide additional self-service options for students, faculty and staff
- **Implemented a New Housing Management and Judicial System** to provide enhanced services to students through online housing applications and room assignments
- **Developed a New Information Security Standard** tailored to the unique security needs of RU
- **Implemented an Intrusion Detection System** to proactively detect and mitigate IT security incidents
- **Implemented an IT Knowledge Base** to provide the user community with online resources for help with common technology problems
- **Initiated an Identity and Access Management Project** to develop a system that will provide for more efficient and effective ways to provision and de-provision services to various constituents of the university
- **Implemented a Centralized Copier/Printer Management Program** to standardize on equipment, increase efficiency and functionality, and reduce overall cost to the university
- **Instituted a Student Technology Advisory Committee** to increase student involvement and get first-hand feedback on technology issues that pertain to students

## By The Numbers

- **37 workshops** were provided in the use of Desire2Learn
- **1,458 courses** from **277 faculty members** migrated from WebCT to Desire2Learn
- **More than 200 articles** were posted in the IT Knowledge Base
- **Approximately \$10,000 per year** will be saved with the new Telephone Management System due to a reduction in software maintenance and support costs
- **23 video surveillance cameras** and **card access points** were installed in McConnell Library

- **Cable TV was upgraded from a 50 channel system to a 115 channel system featuring 19 channels of high-definition programming**
- **38 campus classrooms were upgraded with the latest digital technology**
- **12 high-quality video projectors were installed in Peters Hall classrooms**
- **7 electronic “Smart Boards” were installed in Peters Hall**
- **The radio station’s tower light was changed from two 620 watt lamps to an LED version which burns 80 watts of electricity, allowing for a significant power savings**
- **2,010 software enhancements were completed**
- **In the Banner ERP environment, 23 interim software releases were installed along with 51 patches**
- **6 Cognos reporting training sessions were held with 40 people in attendance**
- **277 custom reports were developed for the campus community**
- **279 user requested changes have been made to existing reports**
- **8 role-based information security classes were offered with 47 employees attending**
- **1,338 employees successfully completed IT Security Awareness Training**
- **2,000 bookmarks and 100 table tents were distributed to students during Cyber Security Awareness month**
- **46 vulnerability assessments were conducted using Nessus and Rapid7 assessment tools. 30 port scans were conducted using nmap**
- **The 155 Mb/s COVANET connection was upgraded to a 200 Mb/s Verizon Metro Ethernet connection. The connection provided through the Virginia Tech MSAP was increased from 250 Mb/s to 450 Mb/s**
- **Approximately 9,200 email accounts were transitioned to the “Live@edu” system, which provides 10 gigabytes of email storage for each user**
- **Over 80% of students in residence halls used the campus WiFi network**
- **92 multi-function devices were moved to the centralized copier/printer program**
- **24 academic and administrative department websites were migrated to the new content management system**
- **3 multimedia projects were produced**
- **10 content management administrator training workshops were conducted, with a total of 90 individuals trained**

- **15 homepage student profiles were posted**
- **6.2 million visits were made to the new Radford.edu website**
- **9.2 million logins were made to MyRU portal**
- **1.3 million pages were printed in campus computer labs**
- **More than 6,000 visitor parking permits were issued**
- **More than 4,200 faculty/staff and student parking permits were sold**
- **More than 6,600 meal plans were sold**

## **Division Goals for 2011-2012**

- **Continue to enhance the features and functionality within the ERP Environment**
- **Continue to enhance and upgrade network and systems infrastructure**
- **Enhance technology training and support for faculty and staff**
- **Coordinate and install technology infrastructure in the new College of Business and Economics building and in renovated Moffett Hall**
- **Begin development /implementation of an identity and access management system**
- **Remain current on all vendor supplied software upgrades and patches**
- **Establish the university's E-911 database**
- **Enhance email and messaging systems used by faculty and staff**
- **Deploy campus-wide wireless encryption**
- **Launch a mobile application**
- **Develop a mobile website strategy**
- **Continue the development of the new website**
- **Develop an executive dashboard**
- **Migrate IT security awareness training from MOAT to a locally maintained system**
- **Implement an enterprise project portfolio management system**

## Major Accomplishments & Goals by Area

### *Academic Technologies*

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The mission of Academic Technologies is to provide and support a high quality, customer oriented technology environment for faculty and students that supports the instructional and research needs of the university community.

#### **Major Accomplishments**

##### **Course Management System Configuration, Migration and Training**

In the spring of 2010, an academic committee formed by the Center for Innovative Teaching and Learning (CITL) made the final decision to replace the campus course/learning management system WebCT with Desire2Learn. Academic Technologies has been committed to assisting the CTIL in this migration project. This has included assistance with configuration, integration, migration and end user training on this new system. Over thirty-seven workshops have been taught in the use of Desire 2 Learn and 1,458 courses from 277 faculty members have been migrated from WebCT to Desire 2 Learn.

##### **Windows 7 and Office 2010 Upgrades in Labs & Classrooms**

In an effort to provide students and faculty with the latest available technology, the campus computer labs and multimedia classrooms were upgraded to Windows 7 and Office 2010. Since this upgrade, additional tools have been deployed to better automate the management and maintenance of these systems.

##### **Lab Printing Enhancements**

Academic Technologies worked in conjunction with Auxiliary Services to install an interface between the Equitrac printing system and the RU Express card system. This interface allows students to utilize their RU Express balance to pay for printing in the campus computer labs. This project makes it seamless for students to continue printing once they exhaust their \$5.00 printing allotment. Unattended cash deposit kiosks are located in Walker and McConnell allowing students to easily add funds to their RU Express.

##### **Implementation of an IT Knowledge Base**

A new technology knowledge base has been established providing both IT support staff and customers with a mechanism to find detail instructions and information on common problems. Academic Technologies, the Center for Innovative Teaching and Learning and the Technology Assistance Center have posted and updated content with over 200 articles. <https://php.radford.edu/~knowledge/lore/>

##### **Goals for 2011 - 2012**

- Enhance training for faculty, students and staff
- Provide enhanced support for faculty in the use of Desire 2 Learn
- Provide additional consultations and support for faculty on the use of technology
- Review computer lab utilization across campus to plan for improvements and increase efficiency in resource utilization
- Enhance availability of software to students for use on their machines
- Research and implement printing for mobile devices

## ***Auxiliary Services***

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The mission of Auxiliary Services is to provide essential business services and support to the Radford University community. Our goal is to provide the highest quality customer service and respond to the ever-changing and unique demands in the specific areas of identification card services, parking services and telephone management.

### **Major Accomplishments**

#### **Security Alarm Upgrades for Art Museum**

Made significant upgrades to the University Art Museum's security alarm system to meet the compliance standards of the Virginia Museum of Fine Arts. These enhancements positioned the University to be able to host the Master's Art Show.

#### **Participated in Campus PCI Review**

Participated in the Payment Card Industry Data Security Standard review conducted by Campus Guard. This initial review of all credit card processing points represents a major first step in ensuring that the University is processing all of its credit card transactions in a way that protects both the customer and the University.

#### **Telephone Management and Billing System Upgrade**

Purchased and installed a new telephone management and billing system, Infortel Select by ISI Technologies. This new system provides enhanced call reporting and statistics and will provide the ability to better analyze call trends and determine how to cost effectively manage the trunks for local and long distance calling. A reduction in software maintenance and support costs for this new system will result in a savings of approximately \$10,000 per year.

#### **Library Surveillance System and Door Access Upgrades**

A major upgrade was made to the McConnell Library with the addition of 23 video surveillance cameras, and card access points. This project spanned over several months and in conjunction with the physical intrusion detection system represents a major improvement in security for this area.

#### **Surveillance System Integration with CBord Security Monitor**

Through a partnership with CBord and Cisco, Radford University was selected as one of two beta test sites for the CBord Security Monitor. This software package was designed with campus police departments in mind. It brings together door access monitoring, physical intrusion detection monitoring and Cisco video monitoring in one seamless platform. The software for this system was provided at no initial cost to the University.

### **Goals for 2011 - 2012**

- Upgrade the RU Express / CS Gold System
- Implement an automated E-911 PS/ALI database
- Develop and implement a self-compliant PCI program
- Host a Virginia CBORD Users Group (VACUG) meeting at RU



## ***Electronic Engineering and Communication Services***

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The mission of Electronic Engineering and Communication Services is to provide up-to-date engineering and technical support for electronic classrooms, the cable television system, the WVRU radio station, satellite downlink facilities, distance education infrastructure and operations, digital signage infrastructure and operations, electronic repair, and video streaming services.

### **Major Accomplishments**

#### **Campus Cable TV Upgrade**

The Radford University Cable Television system provides entertainment to residence hall students and assists in meeting academic needs of several areas. The system went through a radical upgrade during the summer of 2010. The previous 50 channel system was upgraded to a 115 channel system featuring 19 channels of high definition programming. The channel lineup now includes special sports offerings, movies, and foreign language channels. The new campus “headend” is housed in one of the campus data centers providing excellent environmental conditions and emergency power backup. The signal delivered to each dormitory and academic building has also been improved to enhance the picture quality around campus.

#### **Multimedia Classroom Upgrades**

In response to feedback from faculty about the configuration of several classrooms in Young Hall, equipment locations and configurations were modified in many of the building’s rooms. These modifications have created a more centralized location for multimedia control while continuing to accommodate faculty desiring a flexible room design.

Thirty-eight additional campus classrooms in Powell, Whitt, Cook, Reed, Porterfield, Waldron, Davis, Walker, McGuffy, and Roanoke Community Hospital were upgraded with the latest digital technology. These rooms include a touch screen-based control panel, high-definition projector, electric screen, ceiling mounted document camera, Blu-ray/DVD/VCR combo player and height adjustable podium. To ensure classrooms have reliable computers, computers were replaced in forty-eight multimedia classrooms. Twelve high quality replacement video projectors and seven new electronic “Smart Boards” were installed in Peters Hall classrooms.

#### **WVRU Campus Radio Station**

The WVRU radio tower was repainted and an original four element antenna array was replaced. A new two element antenna was added to the tower to lessen the weight on the tower to allow additional campus two-way communication resources to join the tower and to provide better coverage for WVRU. The two element antenna actually improved reception in some areas over the older antenna. The tower light was also changed from two 620 watt lamps to an LED version which burns 80 watts of electricity allowing for a significant power savings.

#### **Goals for 2011 - 2012**

- Continue to provide technologically advanced classrooms for instruction
- Assist with planning and coordination of A/V technology for the College of Business and Economics building
- Expand cable television offerings to provide additional channels of interest to students
- Expand avenues for electronic digital signage distribution on campus to facilitate student awareness of upcoming events
- Develop programs at WVRU aimed at student involvement and academic purpose

## ***Enterprise Systems***

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The mission of Enterprise Systems is to provide systems analysis, design, programming and implementation services supporting all university administrative systems including the Banner ERP system, Operational Data Store (ODS), reporting environment, MyRU portal, Radford.edu and other systems used to conduct and manage university business. This includes:

- Actively partnering with our customers to evaluate and recommend business services where additional automation increases efficiencies for system users;
- Planning and implementing fully integrated administrative systems;
- Providing university employees access to transactional and historical data for operational and strategic planning purposes; and
- Engaging the university community to develop and enhance the Luminis Portal framework.

### **Major Accomplishments**

#### **Formation of the Banner Operations Committee**

The Banner Operations Committee (BOC) was chartered and began to meet regularly to discuss and make recommendations regarding the operation, on-going use and maintenance of the Banner ERP system and its ancillary/integrated software packages. In the short time that the BOC has been in existence, much progress has been made reviewing and prioritizing the backlog of IT tasks that are related to the maintenance and enhancement of the ERP system. The BOC membership consists of representation from all campus areas.

#### **Content Management System**

The installation, configuration and implementation of the university wide web content management system, consisting of the CQ5 Author and Publisher for the Development, Pre-production and production environments was completed. Custom programming, implementation services and issue resolution for the launch of the core RU site and 24 micro sites was provided.

Enhancements to the CMS include:

- Rewrite of the online Campus Web Directory to enhance look and feel of the application and to increase the usability
- Added XML feed channel for News & Events
- Added IP Address form submission component
- Added College quick link component with images
- Enhanced Calendar options
- Enhanced social media options
- Created custom headers for critical applications linked to the core

#### **Fixed Assets**

Legacy inventory data was loaded, cleansed, verified and reconciled in the Banner Fixed Assets module. This resulted in the first annual depreciation and the first full equipment inventory completed with the Banner system.

#### **Student Accounts - Online Deposit Implementation**

Nelnet's Deposit interface was fully implemented. Various processes were written to automate the release of deposits on students' accounts in the Banner AR module and to automate reconciliation of account data. This new service provides the opportunity for students to pay deposits electronically and

apply them immediately to their account. Reporting was also implemented for the Admissions and Residential Life offices to verify those students who have confirmed admission with their electronic deposits.

### **Use of Student Photos**

Class Roster functionality through the Banner Self Service option was populated with ID photos from the RU Express system making it possible for faculty, advisors, and other university personnel to visually identify the students they come in contact with. This will also make it easier for university personnel to learn the names of their students and provide a more personal touch. Initial feedback has been overwhelmingly positive from faculty and advisors.

### **System Integrations**

Integrations that were developed to share data to and from the Banner ERP include:

- Desire to Learn
- Odyssey Housing/Judicial Management System
- RU Express (CS Gold)
- RU Alerts (Blackboard Connect)

Single Sign on Integrations from MyRU that were completed include:

- Desire 2 Learn
- Odyssey Housing/Judicial Management System
- Visual Zen (New Student Programs/Quest)
- Smart thinking Online Tutoring (LARC)
- Email – Microsoft Live
- National Student Clearinghouse

### **New Functionality for MyRU**

Enhancements were completed to provide new features in the MyRU portal. This includes:

- Help Desk Channel – a new channel used by help desk personnel which provides information related to account activation and usage.
- Account Settings Channel – a new channel available to all MyRU users. This channel displays information on the current status of a user's RU domain account, allowing users to manage their own account through the use of a self-service application.
- Postal Channel
- Google Analytics – Google Analytics has been added to MyRU to track usage of the various tabs and channels.
- Forgot username or password – self-service functionality was added to allow the user to retrieve his/her username and/or password securely and quickly.
- Additional Quick Links were also added for:
  - Management of personal emergency contacts
  - Student Email Migration (to MS Live)

### **Governor's School Support**

Provided the participants in the Governor's School with access to technology resources including login credentials, computer lab and printing capabilities, and RU Id cards for room access and dining services.

### **Housing Management and Judicial Systems Implementation**

Installation, configuration and implementation of Cbord's Odyssey Housing Management System (HMS) was successfully completed resulting in numerous efficiencies for the staffs of Residential Life and Student Affairs and greatly enhanced services to students by providing for the first time – an online housing application and on-line room selection eliminating long lines, manual processes and paper.

### **Re-Engineering of the CollegeNet On-Line Application Process**

The CollegeNet online application was extensively reworked to provide better data, more efficient and accurate processing, and enhanced presentation to make it more attractive and convenient for prospective students. **Nolij Transfer** was also implemented to allow for a custom load of the application data from CollegeNet to Banner. This has streamlined not only the time to load the original documents, but has reduced errors and duplication, eliminated required manual data entry and provided a faster response to the prospective student regarding the status of their application to Radford University.

### **Partnering with Departments to improve Student Services**

Many projects over the year have focused on leveraging the power of Banner with custom extensions to provide improved service to students. Some examples include:

- The SORTS program for serving at risk students benefitted from a new system to track study hall attendance via a card swipe system.
- A new department at the university focused on Student Success has benefitted from a new Early Warning system developed to enable faculty to quickly notify the staff of students who are struggling academically.
- In the registration area, a process was developed to assist in preventing class sizes from growing beyond assigned room capacity while still allowing the valuable distributed process of student registration.

### **Keeping current with new Database architecture and Database features through new Software Releases and Patches**

- *Migration of all Oracle Databases from Oracle 10g to Oracle 11g.* In addition to keeping our systems up to date, this migration provided additional features for enhancement of our Oracle environment. One of the new features has been utilized to implement a more robust recovery environment including a more reliable and less complex standby database architecture.
- *Migration of Banner ERP Suite from Banner 7 to Banner 8.* This was a substantial project lasting 9 months and including all of the administrative areas on campus. This release included a large behind the scenes effort to convert our existing architecture from one character set to another in addition to bringing enhanced functional features to help further the goal of efficiency and accuracy through the use of the Banner ERP systems.
- *Interim releases and patches.* Additional issue resolutions and enhanced functionality were installed and implemented via smaller incremental releases and patches. In the Banner ERP environment, 23 interim releases were installed along with 51 patches.

### **Post Banner Implementation**

After completion of the implementation of the major Banner modules, a substantial backlog of post-implementation tasks emerged. These tasks ranged from additional integrations with third party systems to enhanced self-service options. Some of these projects from this past year include:

- Created and implemented a custom web application for the SORTS program to allow faculty to proactively provide alerts to the Director of Student Success for students who may be in need of academic assistance
- Worked with the finance area to perform the conversion and implementation of the Banner Fixed Asset module
- Created various reporting solutions for use in first asset inventory utilizing this Banner module
- Completed the move and conversion of all IFAS reports to Xtender to support decommissioning the voyager legacy machine
- Completed work to ensure email accounts are created and used as official communications after receipt of an enrollment deposit
- Implemented a process to prevent class size overrides from exceeding the room capacity

- Online Book Vouchers eliminating a very manual process and paper vouchers
- Various deposits now processed via Nelnet
- Parent data loads from CollegeNet and Visual Zen
- Room Max capacity limitation trigger
- Time Sheet returned notifications
- QAS for INB for accurate address information
- Xtender implementations for Advancement/HR/Provost/Admissions/Registrar
- Implementation of Direct Loans process for Financial Aid
- Conversion of Docuware files to Xtender
- Online User Certification
- Work Study Electronic Approval Forms (EPAFS) launched for Financial Aid
- Implementation of the Spreadsheet budgeting process
- Loaded budgets via the Budget Development process in Banner Finance
- Scheduled Budget Rebuild process to avoid out-of-balance issues
- Implemented auto-close processing for AR cashier sessions
- Endowment Management module launched for Foundation endowment tracking
- First full academic year processed and first graduating class successfully processed and degree conferred with Banner
- Institutional Research and Academic Affairs launched effort to enter faculty credentials into Banner
- A business process analysis was conducted to review adjunct faculty processing in Banner
- Leave Liability reporting analysis, development and testing completed
- Completed setup, training and implementation of the Moves Management Module for use in tracking prospect activity for the Advancement Office

### **Reporting**

The Data Warehouse and Reporting group provided the campus community with custom Cognos reports utilizing the Operational Data Store (ODS). The group also provided training for Cognos users on using the available reports and for those who create their own reports. Some of the accomplishments include:

- 6 training sessions with 40 people in attendance.
- 277 custom reports developed for the campus community.
- 279 changes made to existing reports.
- Installation and configuration of enhanced package level security for Cognos users.
- Testing and migration to Cognos version 8.4.1 from 8.3.
- Prepared for the BRM/RAP implementation which is slated to be operational in the next fiscal year.

### **Goals for 2011 - 2012**

- Utilize a project management package to more accurately track project resources and progress.
- Upgrade Cognos and ODS to provide additional features and implement Oracle streams architecture
- Migrate to OracleWeblogic and replace Oracle application server for Banner INB and SSB
- Host MABUG 2011 Conference
- Host and participate in Groovy & Grails Code Camp
- Complete Grants Implementation project
- Complete HR ePAF implementation project
- Complete Adjunct Faculty project
- Enhance the Early Warning System
- Upgrade the Banner ERP System
- Upgrade eVA

- Implement enhanced Quick Pay and Payment Plan
- Complete the QAS Batch process
- Complete the Account Request – online process
- Complete the AIM integration with Banner
- Complete the Banner Receiving process
- Develop a Banner/Lyris integration analysis and implementation plan
- Develop a CMS/CQ5 process to pull data from ODS/Banner
- Develop a New Directory component for CMS
- Complete the Mobile Connection Implementation (Smartphone App)

## ***Information Security***

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The mission of the Information Security Officer (ISO) at Radford University is to protect the confidentiality, integrity and availability of the university's computer systems, electronic data and networks from unauthorized access, disclosure, disruption, modification or destruction. To accomplish this, the ISO carries out the following tasks:

- Writing policies, procedures and standards;
- Collaborating with and advising individual system owners, data owners, system administrators, data custodians and application administrators as to their IT role responsibilities with regard to information security;
- Offering annual role-based information security training;
- Maintaining the MOAT employee information security training system;
- Maintaining the central network intrusion detection system (NIDS);
- Acting as the official DMCA agent for the university;
- Conducting disaster recovery plan testing;
- Leading the computer emergency response team (CERT); and
- Conducting formal and informal vulnerability assessments of systems and applications.

### **Major Accomplishments**

#### **Role based security classes**

8 role-based information security classes were offered and 47 university employees who fill critical IT roles attended and successfully completed the training.

#### **IT Security Awareness Training**

1,338 employees successfully completed IT Security Awareness Training during the last twelve months.

#### **Cyber Security Awareness**

In recognition of Cyber Security Awareness month (September 2010), 2000 bookmarks and 100 table tents were distributed to students via the McConnell Library and the Dalton Dining Hall.

#### **Vulnerability Assessments**

46 vulnerability assessments were conducted using Nessus and Rapid7 assessment tools. 30 port scans were conducted using nmap.

#### **Information Security Standard**

A new information security standard was created. This standard was approved and is now the official IT Security Standard for Radford University.

### **Intrusion Detection System**

The installation of the intrusion detection system (IDS) was completed and began submitting trouble tickets for university owned computers that are suspected to be infected or compromised. 64 tickets were submitted to the TAC since the system became fully operational.

### **Disaster Recovery Plan Test**

A disaster recovery plan test was conducted for selected sensitive IT systems.

### **New Account Deactivation Procedure**

A new account deactivation procedure was implemented to address accounts that fail to complete IT security awareness training in a timely manner. In all, 76 accounts were deactivated for failure to complete IT security awareness training since implementing this procedure.

### **Goals for 2011 - 2012**

- Migrate IT security awareness training from MOAT to locally hosted system
- Increase attendance in role-based training classes
- Increase IT security awareness efforts for students

## ***IT Infrastructure***

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The mission of IT Infrastructure is to provide a secure and highly reliable technology infrastructure for the campus community with a focus on meeting the ever changing needs and expectations of the university community while minimizing costs.

### **Major Accomplishments**

#### **Bandwidth Upgrades for Primary Internet Connections**

RU's primary Internet connections were upgraded to increase the bandwidth available to the campus community and help meet the growing need for access to media and resources available on the Internet. The 155 Mb/s COVANET connection was upgraded to a 200 Mb/s Verizon Metro Ethernet connection. The connection provided through the Virginia Tech MSAP was increased from 250 Mb/s to 450 Mb/s.

#### **Migration of Student Email to Microsoft Live @ EDU Environment**

In an effort to provide an improved service, enhance efficiency and reduce hardware and maintenance costs, student email accounts have been moved from a locally-hosted Exchange system to the "Live@edu" Exchange environment, hosted by Microsoft. Approximately 9200 email accounts have been transitioned to the "Live@edu" system which provides ten gigabytes of email storage for each user or approximately 170 times the previous storage capacity allocated for students. The system also provides 25 gigabytes of online file storage called the "SkyDrive". Users continue to access their email by logging into the MyRU portal and clicking on the "E-mail" icon. User may also connect to this system using the exchange connector available on most smart phones and Apple iOS devices.

#### **Web Server Infrastructure Upgrades**

In support of the new campus web site, a new backend architecture was designed and installed to provide the needed redundancy and performance. This architecture includes VMWare servers in each of the campus data centers connected via an F5 load balancer to allow for failover if one server or data center were to become unavailable. The performance and reliability of this system is a major improvement over

the previous system.

### **Disaster Hardware at Indiana State University**

Through an agreement with Indiana State University, two servers were configured and shipped to Indiana State University and placed in their primary data center. These servers provide RU with the ability to provide DNS functionality, backup emergency documentation and a minimal web presence in the event of a disaster that impacts the RU infrastructure located in Radford, Virginia.

### **VPN Redundancy**

A virtual private network (VPN) is used by on campus and off campus user to encrypt network traffic and provide an additional layer of security when connecting to sensitive systems. In a continuing effort to enhance the reliability and availability of the campus network services and resources, a second VPN was installed providing an immediate failover in the event of a failure of the primary VPN. This new VPN is located in a separate data center to ensure redundancy.

### **Residence Halls upgraded to 802.11n**

Over 80% of students in residence halls use the campus WiFi network. Due to this increased usage, it is important to focus appropriate effort and resources on upgrading the WiFi network in residence halls. Access points in residence halls were upgraded from 802.11g to 802.11n providing enhanced speed and reliability to the residence hall network.

### **Updated Fire Alarm System in Primary Data Center**

An upgraded fire alarm system was installed in primary campus data center. This updated fire alarm provides emergency power shutoff for the data center in the event of an emergency as well as enunciator panels and override capabilities.

### **Active Directory Upgrades**

Active Directory provides the backend authentication infrastructure for many campus systems. To ensure the functionality and reliability of this environment, both hardware and software upgrades were performed on this environment. This included the addition of three Windows 2008 servers and software upgrades to bring functionality in line with the latest Active Directory features.

### **Goals for 2011 - 2012**

- Coordinate and install technology infrastructure in the new COBE building
- Coordinate and install infrastructure in Moffett Hall as part of the building renovation
- Review faculty/staff messaging system and implement enhancements to the system
- Implement IPv6 on the campus network
- Implement SIP connectivity on the VoIP phone system to reduce long distance costs
- Upgrade Active Directory to latest functional level
- Update DHCP to enhance redundancy
- Update the campus DNS system and reconcile all DNS entries
- Enhance firewall configurations for better protection of campus systems
- Enhance replication and redundancy for VMWare systems
- Implement a new tool for patching 3<sup>rd</sup> party applications on Windows machines via WSUS
- Enhance configuration and capabilities of backup servers located at Indiana State University



## ***Printing & Vending Services***

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The mission of Printing and Vending Services is to produce high-quality production printed materials for the university community while minimizing costs and ensuring timely delivery. Provide reliable laundry and full service vending services to the campus community.

### **Major Accomplishments**

#### **Beverage Contract RFP and Negotiations**

The contract with Pepsi Beverages Company the exclusive provider of campus beverages since 2001 was set to expire in August of 2011. Through close cooperation with the Materials Management and Contracts office, an RFP was issued. After vendor responses and detailed negotiations, Coca-Cola Bottling Company Consolidated was selected as the exclusive beverage provider for the campus for the next ten years. The transition from Pepsi to Coca-Cola is currently underway.

#### **High Quality Secondary Color Digital Printer/Copier**

Printing Services continues to see slight changes in the type of requests being received as well as a decrease in advance notice for print jobs. While the press usage is still high, many more jobs are beginning to utilize the full color copier/printer or a combination of both the color copier/printer and the press. To meet the changing need of the campus community, a second production quality network color copier/printer was added in printing services. This will increase the number of jobs that can be performed in house and allow for balancing the load among daily production work, complex walk-up jobs, and long-run pieces.

#### **Goals for 2011 - 2012**

- Monitor performance of the new beverage vendor and ensure the needs of the university community are being met
- Enhance capabilities and efficiency of the print and copy center
- Review laundry contract and investigate online functionality to allow students to check the status of laundry machines online
- Analyze the current business model for snack machines and review options for enhancing this service

## ***Project Management & Audit Compliance***

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The mission of Project Management and Audit Compliance is to provide effective and efficient management of the university's technology projects and ensure the division remains in compliance with university, state and federal requirements.

### **Major Accomplishments**

#### **Banner Project Closeout**

Successfully completed the Banner implementation on time, within scope and under budget. Completed project closeout activities which included the final status report, acceptance by the Steering Committee and functional areas of the deliverables, documented lessons learned, and archived project documents.

### **SACS Reaccreditation**

Updated WeaveOnline with DoIT's goals, objectives, and measures and findings for fiscal year 2010 in support of the SACS reaccreditation. Provided narrative support and documentation for SACS standard 3.4.12.

### **APA Fiscal Year 2010 Audit**

Successfully completed audit with the Auditor of Public Accounts (APA) with no findings reported. In-depth review of major DoIT areas by the APA included Database Management, Firewall Management, Router Management, Change Management and Virtual Private Network (VPN).

### **Identity and Access Management**

Conducted the discovery phase for a project to review Identity and Access Management (IAM) business processes and industry best practices. Engaged Gartner to perform a gap analysis, document one major IAM process in the current environment, and provide strategy and recommendations toward the selection of IAM products designed to automate and centralize complex IAM processes.

### **Educause Core Data Survey**

Completed the annual Educause Core Data Survey, which is higher education's source for comprehensive IT benchmarking data. This service provides research and analytics used by colleges and universities to influence IT strategic planning and management.

### **Project Management Support**

Provided project management support for the following:

- Banner Relationship Management (BRM) implementation
- Service Desk Express (SDE) upgrade for Help Desk Management System
- fsaAtlas implementation for international student tracking
- Identity and Access Management discovery phase
- Banner 8 upgrade

### **Project Management System**

Conducted discovery phase to select an enterprise project portfolio management system for the division. More than 30 systems were reviewed.

### **Goals for 2011 - 2012**

- Select and implement an enterprise project portfolio management system
- Complete project management standard and framework (including templates, instructions, and FAQ documents)
- Develop dynamic project management website for users

### ***Technology Assistance Center***

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The mission of the Technology Assistance Center is to provide a high quality, customer oriented single point of contact for technology support requests. This is accomplished with phone support, walk-in support, and on-line submissions of user requests.

## **Major Accomplishments**

### **Centralized Copier / Printer Management Program**

Each Radford University department has been responsible for selecting and managing their own copy machines. This has led to a large variation with respect to vendors, models, functionality, and mode of acquisition (purchase vs. lease). Departments are commonly paying for unused capacity. Many departments also have multiple devices such as a copier, a black and white printer, color printer, and fax machine in the same location. Replacing these devices with a single multi-function device (MFD) can save direct costs and indirect energy costs.

The Division of Information Technology began offering departments a centrally managed copier option. Departments are given a new full featured MFD and pay a per page amount for the number of pages actually printed. 92 devices were moved to this program in FY2011.

### **Young Hall Extended Hours**

An extension to the hours for Young Hall began in response to requests to accommodate varying student schedules and study habits. The Technology Assistance Center is managing a staff of employees to provide technical support and assistance to users during these extended hours. During both the fall and spring exam periods these hours were extended to the weekends providing students with an additional location to study.

### **Service Desk Express (SDE) Upgrade**

This upgrade was completed to enhance the functionality and feature set within the help desk ticket system. The enhancements will allow the technology assistance center staff to better serve university employees and students with improved logging and tracking of technology support requests.

### **Goals for 2011 - 2012**

- Enhance the quality and level of support provided by the Technology Assistance Center
- Enhance the skills of support staff through training and enhanced documentation
- Enhance the IT Knowledge base allowing customers to easily find answers to common problems
- Resolve 70% of incidents on first contact
- Resolve 85% of incidents within 24 hours
- Implement a remote assistance tool to allow technicians to easily view and control customer computers

## ***Web Communications***

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The mission of the Office of Web Communications is to provide integrated marketing web communications that support the university strategic goals. The Office of Web Communications works with divisions, colleges, and departments in maintaining consistent online graphic and editorial identity by:

- Managing and developing the “core” site of the Radford University website;
- Working with University departments to assist with Web-related issues including site design, message strategy, content creation, development of multimedia, website templates, content management tools, analytics, usability, and information architecture;
- Overseeing and providing guidance for all departments and individuals with Radford University

- websites;
- Managing the mobile website and mobile applications;
- Providing strategic direction on e-communications, such as e-mail, e-newsletters, e-postcards and e-alerts;
- Performing research and analysis through site reviews, usability testing, online surveys and web traffic analysis;
- Providing training on content development; and
- Developing, maintaining and disseminating university web standards.

## **Major Accomplishments**

### **Web Content Editors**

To provide university support for website development, two web content editors were hired. These individuals assist departments in building sites, developing content and working in the content management system. They also provide content for the Radford.edu core site.

### **Content Migration Strategy**

A content migration strategy for the new Radford.edu web presence was developed. This strategy allows for development of new sites in the content management system to be done in a targeted manner, ensuring sites that have the most visibility are completed ahead of those serving primarily internal audiences.

### **University Web Guidelines**

University Web Guidelines were created. These guidelines ensure that the university's web presence is consistent and effective across all Radford.edu websites.

### **Mass Email Guidelines**

Mass Email Guidelines were created. These guidelines serve to ensure that email communications are accessible to individuals with visual impairments as well as comply with federal regulations.

### **Phase I of the University Website**

Launched phase I of the new university website on January 6, 2011. The first phase consisted of a core marketing site featuring content related to admissions, academics, student life and alumni services.

### **Phase II of the University Website**

Moved 24 academic and administrative departments into the content management system between January 6, 2011 and June 30, 2011.

### **Multimedia Producer**

A multimedia producer was hired to create multimedia productions in support of Radford University's recruitment and retention efforts.

### **Multimedia Projects**

Produced three multimedia projects. Additional projects are underway for the fall semester.

### **Content Management Administrator Training**

10 Content Management Administrator training workshops were conducted, training a total of 90 individuals.

### **Homepage Student Profiles**

Posted 15 homepage student profiles.

### **Goals for 2011 - 2012**

- Publish 24 new homepage student profiles
- Launch 40 new academic and administrative sites
- Develop and implement a Search Engine Optimization strategy
- Provide six training workshops on Search Engine Optimization and Content Strategy
- Produce a 360-degree tour of the campus
- Launch a mobile application
- Develop a mobile website strategy

## Appendix A – Supported Systems

- Banner INB and SSB Modules
  - Human Resources
  - Finance
  - Student Records & Admissions
  - Financial Aid
  - General Person
  - Advancement
  
- Ancillary Systems
  - Degree Works
  - Ad Astra
  - Banner Document Management System (BDMS aka Xtender)
  - Banner Relationship Management
  - Banner Workflow
  - Fsa Atlas
  - Operational Data Store
  - Cognos Reporting
  - Nelnet
  - Intellicheck
  - UC4 Job Scheduling
  
- Additional Systems supported by ES
  - Campus Call
  - Luminis Portal (MyRU)
  - Blackboard Connect
  - Odyssey Housing & Judicial Management System
  - CQ5 Content Management System (RU website)
  - Redrocks Advisor Trac and Tutor Trac
  - Nolij Transfer
  - Quick Address System
  - AIM (Facilities)
  - Harvest/SCM Change Management
  
- Supported Integrations or Single Sign Ons
  - Desire 2 Learn
  - Library System
  - PeopleAdmin
  - CIPPS
  - CARS
  - eVA
  - HMS
  - CS Gold (RU Express)
  - Visual Zen (Orientation)
  - Smart Thinking online tutoring
  - National Student Clearinghouse
  - SDE Helpdesk system
  - RU Involved
  - T2 Parking
  - CollegeNet
  - Bookstore (Book vouchers)

- Active Directory
- iTunesU
- Adobe Connect
- AlcoholEdu
- Microsoft Live@edu
- Microsoft Exchange
  
- Database Management Systems
  - Oracle
  - Microsoft SQL

## Appendix B – Alignment of Division Accomplishments with University Strategic Goals

2010-2011 Division Highlights	DoIT Strategic Plan	7-17 Strategic Plan
Completed the multi-year Banner Project	Goal 3	Goal 4
Enhanced Features and Functionality of the ERP System	Goal 3	Goal 4
Enhanced and Upgraded IT Infrastructure	Goal 4	Goal 4
Established the Web Communications Department	Goal 5	Goal 4
Launched a New RU Website along with a Content Management System	Goal 5	Goal 4
Migrated Student Email to Microsoft Live@EDU	Goal 4	Goal 4
Migrated from WebCT to Desire2Learn	Goal 2	Goal 2
Implemented a New Telephone Management and Billing System	Goal 4	Goal 2
Upgraded Security Alarms and Surveillance Systems	Goal 4	Goal 2
Aligned the WVRU Radio Station with the Division of IT	Goal 4	Goal 4
Formed the Banner Operations Committee	Goal 3	Goal 4
Enhanced the MyRU Portal	Goal 5	Goal 4
Implemented a New Housing Management and Judicial System	Goal 3	Goal 4
Developed a New Information Security Standard	Goal 7	Goal 4
Implemented an Intrusion Detection System	Goal 7	Goal 4
Implemented an IT Knowledge Base	Goal 6	Goal 1
Initiated an Identity and Access Management Project	Goal 3	Goal 4
Implemented a Centralized Copier/Printer Management Program	Goal 6	Goal 2
Instituted a Student Technology Advisory Committee	Goal 1	Goal 1