<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Table of Contents</td>
<td>15-16</td>
</tr>
<tr>
<td>3</td>
<td>Division Overview</td>
<td>17</td>
</tr>
<tr>
<td>4-5</td>
<td>Academic Technologies</td>
<td>18</td>
</tr>
<tr>
<td>6</td>
<td>Auxiliary Services</td>
<td>19</td>
</tr>
<tr>
<td>7-8</td>
<td>Electronic Engineering and Communication Services</td>
<td>20-21</td>
</tr>
<tr>
<td>9-11</td>
<td>Enterprise Systems</td>
<td>22</td>
</tr>
<tr>
<td>12</td>
<td>Identity and Access Management</td>
<td>23</td>
</tr>
<tr>
<td>13-14</td>
<td>Information Security</td>
<td></td>
</tr>
</tbody>
</table>
OVERVIEW

The 2012-13 Division of Information Technology Annual Report provides an overview of the major accomplishments of the division from July 1, 2012 through June 30, 2013, as well as goals for fiscal year 2014.

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 AND RECOGNITION

Multimedia producer Jaslyn Gilbert received the Best of Show award at the annual University Photographers’ Association of America symposium for a photo essay of the university’s Wilderness Institute. She also received an honorable mention in the Features and Illustrations category and was honored four times during 2012-13 in the association’s monthly multimedia contest. Meanwhile, Director of Web Communications Jaime Hunt received the UPAA’s Board Appreciation Award for “significant impact on the profession of photography in service to higher education.”

AUXILIARY SERVICES REORGANIZATION

In May 2013, a restructuring initiative moved RU Express, Parking Services, Laundry and Vending Services to the Division of Finance and Administration. Telephone billing and multifunction copier support and billing remain within the Division of Information Technology.

DIVISION HIGHLIGHTS

► Digital signage infrastructure was upgraded with more than 60 new LED large-screen monitors and new, Radford University branded visual identity.
► Migration of all official university websites into the content management system was completed, roughly nine months ahead of schedule.
► A mobile website was developed that allows for all content housed in the content management system to be viewed in a manner optimized for mobile devices.
► Phase II of the identity and access management project was completed and a contract awarded to move forward to the next phase of this project.
► A three-screen immersive telepresence system was installed, providing a state-of-the-art videoconferencing facility.
► An Intrusion Prevention System (IPS) was installed, greatly increasing network security by keeping unwanted and potentially dangerous Internet traffic from entering the university’s network.
► Enhanced software for student-owned computers, classrooms and labs needed for research and instruction.
► A new RU Express ID card was designed to provide updated identifying photos and increased security.
► Enhanced RUmobile with additional features including a bus tracker with arrival times.
► Conducted a review of Risk Assessments, Disaster Recovery Plans and Business Impact Analysis to help ensure a secure computing environment.
► A new hybrid email system was implemented including on-premise Exchange 2010 and Cloud-based Office 365.
► Successfully completed an audit with the Auditor of Public Accounts with no findings reported.
► Continued to enhance and upgrade IT infrastructure to support information systems and services in a secure, highly available and high-performing environment.
► Continued to develop new features and functionality in the Banner ERP system and other ancillary systems to improve efficiencies and provide information for strategic decision making.
► Continued to upgrade classrooms and other learning spaces with the latest in digital technology.
**ACADEMIC TECHNOLOGIES**

**MISSION STATEMENT**

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**

**Desire2Learn (D2L) Workshops, Online Resources and Upgrade**

Academic Technologies continues to play a key role in the training, support and maintenance of the D2L campus learning management system. Eighteen D2L workshops and approximately 20 one-on-one consulting sessions were held to assist faculty with learning to use D2L. After careful planning and testing, D2L was upgraded from version 9 to version 10 in May of 2013. This upgrade resulted in a new user interface, which required the development of new online tutorials and several demonstration sessions to provide users with information on navigating and using the upgraded system.

**Implementation of Check-Out Laptops**

Academic Technologies implemented a laptop check-out system to address departmental requests for secondary laptops needed on an occasional basis. Three-year-old laptops returned by faculty members who received new machines are repurposed as check-out machines, thus allowing users to have newer machines than their department may be able to provide. The system ensures that these check-out computers have an up-to-date, consistent image, which not only provides a positive user experience but also ensures stability and security. The check-out machines are intended for faculty traveling to conferences or out of the country and for adjunct and graduate assistant use.

**Upgrade to Adobe Connect**

In January 2013, Academic Technologies worked closely with the Center for Innovative Teaching and Learning and other members of the Division of Information Technology to upgrade the highly used web conferencing tool, Adobe Connect.

**Virtual Desktop Implementation**

Academic Technologies continues to strive to provide a system that will allow faculty, staff and students to remotely access software in a simple, intuitive and secure manner. A new Citrix-based Virtual Desktop Infrastructure (VDI) environment has been setup to meet these needs. Testing is currently underway with an anticipated fall rollout for remote access to SAS, SPSS, Maple and JMP. The Citrix technology allows access not only from Windows, but also from other systems, including OS X, iOS and Android devices.

Testing is also underway to utilize Citrix for off-campus access to Internet Native Banner providing more secure remote access, including two-factor authentication. In addition to enhanced remote access, Citrix is also being configured for “streaming” computer images to reduce the amount of time required to manage student workstations across campus.

**Patching of Adobe Flash Player, Adobe Reader, and Java**

Academic Technologies continues to work to enhance the patching of third-party software on campus computers. Adobe Flash Player, Adobe Reader, and Java were updated in all multimedia and lab machines on a monthly basis. As of May 2013, 63% of Windows 7 computers have been equipped with tools that allow remote installation of the latest software versions.

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**BY THE NUMBERS**

- **91** technology workshops were provided to faculty and staff
- **260** faculty and staff computers were upgraded (PC and Macintosh)
- **11** computer labs were upgraded (PC and Macintosh)
- **23** new faculty were provided with computers
COBE Trading Room
With the opening of the COBE building, Academic Technologies installed state-of-the-art all-in-one computers with touch-screen capability. Each computer station allows students to utilize the dual monitor function. Academic Technologies staff also assisted in the installation and implementation of a Bloomberg terminal that provides students a real-world experience with monitoring and analyzing real-time financial data. In addition, staff trained faculty on how to use the NASDAQ stock ticker and customize other financial displays in the trading room.

Computer Lab Upgrades
Academic Computing upgraded 11 computer labs during this fiscal year. A majority of these systems were replaced with all-in-one touch screen computers, providing support for future technologies and enhancements as touch screen operating systems become more pervasive. During August 2012, computers were replaced in Davis 114, Cook 124, Cook 125, Cook 222, Walker 225 and the Roanoke Higher Education Center. In May 2013, computers were replaced in Walker 225, Walker 221, Peters 144, Whitt 222 and the Hurlburt Student Center.

Windows 8 Testing
Academic Technologies began testing of Windows 8. Several touch screen Windows 8 machines were purchased to allow for testing of current software packages, multimedia classroom equipment, the university’s network and other RU-specific technology.

GOALS FOR 2013-14

- Implement a Windows 8 pilot program and develop plans for a campus rollout of Windows 8.
- Enhance remote access to software through use of Virtual Desktop technologies.
- Enhance training and support of faculty.
- Implement new procedures, tools and training for management of mobile devices.
- Research and implement a strategy for printing from mobile devices.
- Research and implement more efficient ways to deploy Mac images and software.
- Review lab utilization statistics to determine the appropriate strategy for public computer labs on campus.
- Implement and deploy a streaming video system to capture, store and stream videos.
**AUXILIARY SERVICES**

**MISSION STATEMENT**

The mission of Auxiliary Services is to provide essential business services and support to the Radford University community in order to assist in accomplishing the core mission of education. Our goal is to provide the highest quality customer service and respond to the ever-changing and unique demands of a top-tier institution of higher education through the use of technology in the specific areas of identification card services, parking services and telephone management.

**MAJOR ACCOMPLISHMENTS**

**New RU Express ID Card**

The RU Express office collaborated with several areas on campus to establish a new ID card design that better compliments Radford University graphics and publications. This replaces the old ID card design which was created around 1990 and has been in use since that time. The refreshed design allows someone to quickly distinguish between students, faculty and staff with a quick glance at the card. New identifying photos on all cards, updated encoding on the back of the cards to enhance security, and removal from circulation extremely old faculty and staff cards that had social security numbers printed on them are other benefits of the new card.

**CS Gold Upgrade**

The CS Gold system that is used to manage all RU Express transactions was upgraded. This upgrade provided enhanced features and functionality and increased the level of security for this critical system.

**Monthly Telephone Billing Enhanced**

To provide campus departments with better information about their monthly telephone expenses, Telephone Services implemented a new system that includes a detailed monthly billing statement. The goal of this system is to provide departments with accurate information to manage departmental phone lines and telecommunications budgets. This new system automatically emails a billing statement to departments on the first day of each month.

**Alarm Systems**

Alarm systems were added to two new locations on campus to improve safety and security in those areas. The Disability Resource Office and the Student Counseling Center were equipped with state-of-the-art alarm systems that report directly to the University Police Department. The Student Health Center’s old alarm system was also upgraded to the same technology with additional features to maintain the audit requirement for the pharmacy.

**GOALS FOR 2013-14**

**NOTE:** With the transition of Auxiliary Services to Finance in Administration in the May 2013, these goals only reflect those areas that will remain within the Division of Information Technology.

- Implement an automated attendant for customers contacting the university switchboard.
- Update the billing process for multifunction copiers.

**BY THE NUMBERS**

- 1,255 faculty/staff ID cards were replaced.
- 4,347 parking permits were issued.
ELECTRONIC ENGINEERING & COMMUNICATION SERVICES

MISSION STATEMENT

The mission of Electronic Engineering and Communication Services (EECS) 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, digital signage, electronic repair and video streaming services.

MAJOR ACCOMPLISHMENTS

New Audio/Video Support Model
Many university facilities were updated in 2012-13 to provide high-quality audio and video systems. With the hiring of a manager of audio/video support, on-site technical support for these venues became the responsibility of EECS.

Telepresence
A state-of-the-art three-screen immersive telepresence system was installed on campus. This system allows for connectivity between sites providing a high-quality teleconference comparable to that of a live meeting with everyone in the same room. In addition, RU has added a HD video bridge, which will help provide for high quality video conferencing and make participants feel even more connected. Other telepresence video conferencing systems, including personal desk-mounted office units, will further enhance the video calling system.

Digital Radio Studios
The campus radio station (WVRU) was upgraded to a state-of-the-art digital studio, permitting better sound, improved control systems and high-quality audio to listeners. Further, students operating the system will gain valuable experience using this professional equipment.

New Communication Science and Disorders (COSD) Video System
A new video observation system has been installed in the COSD program to allow students and faculty to monitor clients. This all-digital system replaces a 13-year-old analog system. The system will record audio, video, allow full camera control, and provide a database for archiving sessions. This upgrade will assist COSD in meeting academic program requirements, provide a better clinical experience for students and address HIPAA requirements.

Covington Hall Technology Upgrades
A major upgrade to video and sound systems in the Covington Performance Hall was completed. The project included the addition of high-definition cameras, an HD video switchboard, a high-quality data projector, a video streaming device, a retractable microphone and state-of-the-art speakers.

RU Board Room Upgrades
The Board Room in Martin Hall was upgraded with a 90-inch monitor, wireless microphones, Crestron controls, a voice recorder and new speakers.

Doctor of Physical Therapy (DPT) Learning Facilities
The Doctor of Physical Therapy program based in Roanoke received eight new electronic learning facilities constructed on the eighth floor of Carilion Roanoke Community Hospital.

BY THE NUMBERS

► Provided AV support for 86 events
► Provided AV support for 8 basketball home games
► 17 classrooms were completely upgraded
► 12 classrooms were partially upgraded
► More than 200 pieces of electronic equipment were repaired
Digital Signage Infrastructure
The infrastructure for digital signage was upgraded and more than 60 new LED large-screen monitors were installed around campus, bringing the total number of digital signs to more than 80. This signage is used to provide targeted information and institutional messaging, as well as to display emergency messages when needed. Additionally, a new system allowing several areas on campus to manage the content on selected digital signs was put into place.

New Campus Cable TV Channels
A new high-definition RU cable television channel was added to provide an improved picture for digital signage over the RU cable network. This new HD channel will feed many locations on campus. A second high-definition channel was added to provide an HD outlet for student-selected movies on RU cable network.

Classroom/Conference Room Upgrades
A new classroom monitoring application (Crestron Fusion) was installed to monitor status and usage for most campus electronic classrooms. Ten classroom upgrades featuring the latest electronic learning space design were completed on the RU campus and the Roanoke Higher Education Center. A newly designed conference room in Martin Hall featuring some of the latest presentation electronics available and a new Procurement and Contracts conference room AV installation were also completed.

Expanded TV Services
To accommodate requests from faculty who wanted to track current events and market trends for classroom discussion, a TV over IP (TVoIP) system was implemented to allow CNN and CNBC to be viewed from any computer connected to the campus network through a wired connection.

GOALS FOR 2013-14

• Continue to provide technologically advanced classrooms for instruction.
• Streamline video communications to allow use by more business and teaching applications.
• Negotiate a new cable television contract and plan for the conversion of the cable television system to an all-digital modulation system.
• Expand avenues for electronic digital signage distribution on campus.
• Develop programs at the WVRU radio station aimed at enhancing student involvement and academic purpose.
MISSION STATEMENT

The mission of Enterprise Systems is to provide systems analysis, design, programming, and implementation services supporting university administrative systems including the Banner ERP system, Operational Data Store (ODS), reporting environment, MyRU portal, radford.edu, RUmobile 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 portal, Web and mobile technologies.

MAJOR ACCOMPLISHMENTS

Radford.edu Goes Mobile
The Systems Integration and Web Services team worked with Web Communications to implement mobile features for the radford.edu site that allows for all content housed in the content management system to be viewed in a manner optimized for mobile devices.

Business Process Analysis Sessions
The Applications Development Team, in collaboration with Project Management and many campus departments, worked with consultants from Ellucian to review business processes in the areas of academic advising and fixed asset processing. The reviews resulted in recommendations that could potentially bring additional efficiencies to these areas.

New Purchasing Reporting
The Data Warehouse and Reporting team worked closely with the Applications Development team to acquire additional eVA data loads from the Commonwealth of Virginia. This data has been brought into the Operational Data Store to enhance reporting for departments when tracking purchases and managing budgets.

Banner Travel and Expense Implementation
The Applications Development team worked with Financial Services to configure and install the Travel and Expense Banner module. This new functionality will be used to automate the travel request, approval and reimbursement processes. Testing is currently underway and is planned to launch to pilot groups during Fiscal Year 2014.

MyRU Undergoing Transformation
The MyRU portal is currently undergoing a major transformation. The Systems Integration and Web Services team and IT Infrastructure has been working collaboratively with Web Communications to prepare the portal to launch in Fall 2013.

Cognos 10 and ODS 8.4 Modernizes Reporting Capabilities
The Data Warehouse and Reporting team, in collaboration with the Database Administration team, installed, tested and implemented version 10 of the Cognos Business Intelligence tools. Cognos 10 provides a much improved and intuitive user interface for customers, allowing end users to make simple changes to report dimensions without IT assistance. Cognos 10 also supports iPhone, iPads and Windows mobile devices. The Operational Data Store (ODS) is the data repository used in conjunction with the Cognos Reporting Suite for delivery of reports from the Banner ERP. A major upgrade was completed that put in place an enhanced and robust architecture to support a more secure and faster loading system for the campus.

BY THE NUMBERS

► 146 user requested enhancements were completed for the Banner ERP environment
► 59 upgrades and 50 patches were implemented for administrative systems
► More than 10,000 downloads of the RUmobile app
► 90 custom Cognos reports were developed or enhanced for the campus community
► 53 hours spent in one-on-one or small group training sessions for Cognos reporting
New Dashboard Capabilities
The Data Warehouse and Reporting team underwent three weeks of training and mentorship with Ellucian for the development of Cognos dashboards. During these sessions the team developed two proof-of-concept dashboards. A plan is being created to begin work on management dashboards in various areas. It is expected that work will begin in FY14 to develop dashboards to be used by management for decision making purposes.

Online Family Education Rights and Privacy Act (FERPA) Release in Self-Service Banner
The Applications Development team, in collaboration with the Registrar’s Office, has developed an online FERPA release. The release allows students to give permission for the university to release certain information to parents, guardians or other individuals. It is anticipated that this will be moved into production in the Fall of 2013.

Bus Tracking and Predictions
The Systems Integration and Web Services Team, in collaboration with Web Communications and Radford Transit, launched a mobile Web application for tracking bus locations and predicting bus arrivals. This functionality was integrated with RUmobile.

RUmobile Enhancement
RUmobile was enhanced to include a new option for final grades and a Flickr photo gallery. Class Schedule, Events and Directory also were enhanced to increase functionality. In addition, the Quest mobile website was integrated into the app, providing schedules, maps and other pertinent information for Quest attendees.

Electronic Personnel Action Forms (ePAF)
The Applications Development team worked with Human Resources to automate many of the paper-bound processes required for personnel actions utilizing the electronic personnel action forms (ePAF) functionality in Self Service Banner. ePAFs are expected to be moved into production during fiscal year 2014.

Keeping Current with New Database Architecture and Features
In addition to keeping up with all upgrades and patches for the ever-growing number of applications and databases supported by the Database Administration (DBA) team, many older application and database servers were up for replacement this year. The DBA team worked with the IT Infrastructure team to review the existing architecture and make plans to move many systems off of physical servers to the University’s virtual environment supported by VMware – reducing the number of physical servers to be maintained. In addition, a new application server cluster was created for applications requiring Oracle Weblogic in order to control licensing costs.

New SGA Online Election Application
New software was developed by the Web Services team and used for the first time in the spring 2013 SGA Election. The new system has a cleaner, more modern user interface and is mobile friendly.

New Admissions Functionality Developed for Radford.edu
The Web Services team, in collaboration with Web Communications and the Enrollment Management Office, developed a new image map of the United States with links to the counselors assigned for that region, state or county for Radford.edu. Prospective students can use this functionality not only to find out who is assigned to a specific area, but to get a short bio of the counselor, their photo and their contact information.
Additional Banner Enhancements and Improvements

Enterprise Systems continued to develop and enhance functionality in administrative systems. Some highlights from this year include:

- Worked closely with the offices of the Registrar, Provost and Human Resources to fully implement the Faculty Load and Compensation Module for the management of adjunct faculty data in Banner.
- Enhanced undergraduate deposit process to allow students to view deposit status notifications in Self Service Banner (SSB).
- Developed an improved extract for the Hire-A-Highlander Career Services system to auto-populate student profiles from Banner data.
- Worked closely with the Registrar’s Office to implement a pilot of the Student Education Planner in DegreeWorks.
- Implemented a process for the Student Activities office to enter and maintain Greek Life activities information for students.
- Worked closely with the Admissions office to implement new campaigns in the Banner Relationship Module that will automate letter and email notices for new applicants with missing application items and provide notification letters for admission decisions.
- Developed and implemented online password reset functionality for Internet Native Banner users.

GOALS FOR 2013-14

- Complete implementation of the Banner Travel and Expense module.
- Develop and execute plan for development and implementation of Cognos Dashboards.
- Complete needed upgrades to systems ensuring continued vendor support and enhanced functionality.
- Train and prepare for the installation and testing of Banner 9.
- Select and implement a replacement platform for RUmobile.
- Implement recommendations from Advising and Fixed Assets business process analysis sessions.
- Continue to work with Human Resources to implement electronic PAFs.
- Continue to utilize Banner workflow to enhance and streamline business processes.
- Increase Banner Document Management system use.
- Implement Web clients for Form Fusion and Nolij applications.
- Begin implementation of integration between the Banner ERP and the Facilities AiM system.
- Launch new portal technology and design for MyRU.
- Develop and begin implementation of a mobile-optimized portal.
- Work with the Registrar’s Office to implement online graduation applications.
- Work with the Human Resources and Payroll offices to implement online time entry for wage employees.
- Collaborate with the Admissions and Advancement offices to implement Academic Works for scholarship processing.
- Implement the FSA Atlas application for processing and tracking of international students.
- Integrate Lyris (a listserv application) with database information and expand its use.
- Work with Human Resources and the College of Graduate and Professional Studies to begin the entry of graduate assistants into Banner for tracking.
- Work with the Commonwealth of Virginia to implement the COVA Cardinal project.
- Work with the Admissions, Retention and Advancement offices to research Constituent Relationship Management systems.
- Work with the Research Compliance Office to research tracking and compliance software and develop a proposal.
MISSION STATEMENT

The mission of Identity and Access Management at Radford University is to manage user access, troubleshoot access-related issues, and to manage the identities of individuals and organizations associated with the university. To accomplish this, the following tasks are carried out:

• Work with university stakeholders to implement new systems, workflows and processes to improve the management of access and identity data
• Review the university’s current identity and access related processes and identify areas for improvement
• Troubleshoot and resolve account management and identity-related issues

MAJOR ACCOMPLISHMENTS

Selected an Identity and Access Management Solution
A comprehensive Identity and Access Management request for proposals (RFP) was developed and issued during fiscal year 2013. This resulted in a thorough evaluation of several Identity Management solutions with a final selection of TridentHE Identity Manager from Aegis Identity. After successful contract negotiations, the software license was purchased and a high-level statement of work was developed for configuration and implementation of this system. A detailed assessment and implementation plan will be developed in early fiscal year 2014 to plan the next steps of this 12-18 month project.

Implemented an Online Banner Password Reset Tool
A new online tool that allows Internet Native Banner users to set initial passwords and reset forgotten passwords through MyRU was implemented. Previously, users were required to call the Technology Assistance Center, submit a ticket and wait for a call back to receive a temporary password.

GOALS FOR 2013-14

Complete Phase III of the Identity Management Project. Phase III includes:

• Implementation of the Aegis Identity “Trident HE” identity management system.
• Implement a new account activation and claiming process.
• Implement a new password reset function.
• Implement a new account recertification process for users of sensitive systems.
• Implement a new online account request process.
MISSION STATEMENT

The mission of the Information Security Office 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 Information Security Office carries out the following tasks:

- Collaborating with and advising individual system owners, data owners, system administrators, data custodians and applications administrators as to their IT role and responsibilities with regard to information security;
- Maintaining the central network Intrusion Prevention System;
- Conducting formal and ad hoc vulnerability assessments of systems and applications;
- Writing IT security-based policies, procedures, and standards;
- Offering annual role-based information security training;
- Maintaining the Managed Ongoing Awareness Tools (MOAT) employee information security awareness training system;
- Acting as the official Digital Millennium Copyright Act (DMCA) agent for the university;
- Conduct disaster recovery plan testing; and
- Leading the Computer Emergency Response Team (CERT)

MAJOR ACCOMPLISHMENTS

Implemented an Intrusion Prevention System
An Intrusion Prevention System (IPS) was installed, greatly increasing the security of Radford University’s systems by keeping unwanted and potentially dangerous traffic from entering the university’s network. Additionally, it will keep the university’s resources more secure by providing the IT Security Office with more data about potential attacks from hackers or computer virus outbreaks.

Major Review of Risk Assessments, Disaster Recovery Plans, Security Plans, and Business Impact Analysis
In order to follow best practices and to assist the Division of Information Technology with keeping a secure computing environment, the university along with an outside consulting firm conducted a major review of the university’s IT system inventory, Business Impact Analysis, Risk Assessments and IT Disaster Recovery Plans. Additionally, a new System Security Plan template was designed and completed for one of the university’s major systems.

Security Awareness Month
Radford University participated in IT Security Awareness Month during October 2012. To increase awareness about online safety and security issues, the Information Security Office partnered with Web Communications to create table tents featuring IT security tips. Security tips were also posted to RU’s Facebook page and Twitter feed throughout the month and three videos were produced highlighting securing electronic devices, online credentials and online identity.
INFORMATION SECURITY

Vulnerability Scans
In addition to various ad-hoc scans, 32 vulnerability assessments were conducted on the university’s sensitive systems using the Rapid7 assessment tool. In coordination with the university’s system owners and system administrators, corrective action was taken to correct critical and high-level vulnerabilities.

IT Security Awareness Training
IT security awareness training was completed by 1,269 employees during the past year. In addition to the online security awareness training, the Information Security Officer presented IT security topics and best practices during new hire orientation sessions, laptop deployment classes and to students in University 100 classes.

Updated Security Standard
The ISO completed updates to the university’s IT Security Standard. The updates were made to assure that the standard was aligned with state requirements and best practices.

GOALS FOR 2013-14

• Integrate new Layer 3 firewalls into the campus network to increase network security.
• Increase the number of vulnerability scans that are completed throughout the year.
• Complete a security awareness campaign during Cyber Security Awareness Month.
• Conduct a major disaster recovery test with a portion of the university’s sensitive systems.
• Conduct a major review of IT security related policies including the University IT Security Standard.

BY THE NUMBERS

► 1,269 employees completed the MOAT IT Security Awareness training
► 32 vulnerability assessments were conducted on the university’s sensitive systems
MISSION STATEMENT

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

Infrastructure Monitoring System Upgraded
WhatsUp Gold, a proactive monitoring system for the campus infrastructure, was upgraded. The upgrade provided enhanced functionality and improved the ability to notify system and network administrators of potential problems.

Two Factor Authentication Enabled for System Management
DoIT utilizes a separate Virtual Private Network (VPN) to secure the management of critical infrastructure components. In February, two-factor authentication was added to this VPN to provide an enhanced layer of security.

Internet Bandwidth Upgrades
An RFP was issued in March in an effort to establish a new contract with one or more vendors to provide enhanced bandwidth and to allow for future upgrades as needed. Vendor negotiations were completed and installation of two new 500 Mbps connections are planned for completion in August 2013.

Email Upgrades
IT Infrastructure implemented a new hybrid email system including on-premise Exchange 2010 for faculty and staff and cloud-based Office 365 for students. The new environment allows better integration between both systems and allows a user’s mailbox to easily be transitioned between the on-premise Exchange 2010 environment and Office 365 as needed. Student email was migrated from Microsoft Live@EDU to Office 365 in May. The process of migrating faculty and staff from Exchange 2007 to Exchange 2010 began in May with completion estimated for August 2013.

Server Architecture and VMware Upgrade
The physical infrastructure for the campus VMware environment was upgraded from stand-alone Dell servers to a Cisco Unified Computing System (UCS) architecture. The new architecture is better optimized for virtualized workloads and includes three energy and space-efficient blade chassis housing 23 server blades. These systems combine network, storage and management into one integrated package. The installation of the new hardware along with an upgrade from VMware 4 to VMware 5 has resulted in simplifying the management of this complex server infrastructure as well as reducing the time required to provision new servers.

Migrated Virtual Servers to New NetApp Storage Infrastructure
All (200-plus) virtual servers were migrated to the new NetApp storage infrastructure without any interruption of service. This new storage ensures that Radford University’s virtual environment resides on up-to-date, secure and supported infrastructure and provides additional capabilities for backup and replication.

BY THE NUMBERS

- 7,535 user accounts were created
- 86 Lyris email lists were created
- 400,000,000+ incoming email messages were scanned for SPAM and viruses
- 100 support cases per month were closed using Bomgar remote desktop support tool to assist with problem resolution
- 11 VMware ESX 5.0 server hosts were upgraded
- 23 VMware 5.0 server hosts were added
- 70 VMware client servers were added or virtualized
- 449 users were migrated to the new H: drive
- 35 terabytes of new network storage was installed
- More than 9,000 IDs were issued
- 2,280 exams were processed with 95,712 Scantron test sheets scanned
- 21 new electronic door access locations were added
- 9 new IP laundry card readers were added in residence halls
- 48 wireless access points were installed in Moffett Hall
- 436 data connections were installed in Moffett Hall
- 127 cable TV connections were installed in Moffett Hall
- 75 model 1200 wireless access points were upgraded to the latest model
Scantron Grade Import for Desire2Learn Implemented
Computer Operations introduced a new process that allows faculty who give Scantron-based tests to import graded test results into Desire2Learn (D2L). Grades are derived from the processed Scantron tests and aligned to the class. The grades can then be uploaded into D2L by the faculty. This eliminates time-consuming manual entry of grades and reduces the chance of errors.

Improved Data Center Redundancy
Network Services contracted and coordinated the installation of a second fiber path between the main campus and the secondary data center. This change provides two paths between data centers and eliminates a single point of failure between data centers. Network Services also installed Cisco Nexus 5K and 2K switches using the new fiber paths to support this new redundancy.

Encrypted Wireless
In an effort to protect wireless network traffic, IT Infrastructure implemented an encrypted network called RUSecure in the summer of 2011. The network utilizes WPA2-enterprise encryption to protect traffic between a mobile device and the network infrastructure eliminating the risk of someone sniffing traffic on this network. In November 2012, the non-encrypted network was discontinued in all campus buildings, requiring users to utilize RUSecure.

Micros Systems Moved to PCI-Compliant Network
The project to move all Micros systems to a PCI-compliant network was completed. This further increased security, while increasing the flexibility and the overall ease of management of the Micros system.

Phone System Upgrade
In January, the campus Voice over Internet Protocol (VoIP) phone system was upgraded to a new VMware server architecture along with the latest software version. Moving this system to a virtualized architecture helped reduce the number of servers required while improving availability and reliability. This update also prepared the way for new functionality, including enhanced video conferencing.

H: Drive Upgrade
To meet the increasing need for storage, a new network share, better known as the H: drive, was created on a new storage infrastructure. The first phase of migration was completed in the spring, with many faculty and staff benefiting from increased storage.

Microsoft SQL Cluster
New servers and storage were installed and setup as a failover cluster for enhanced redundancy. This new cluster provided Microsoft SQL services to various campus applications.

GOALS FOR 2013-14
- Upgrade CSGold and Micros server hardware.
- Replace the current hardware supporting the Infrastructure Monitoring System, WhatsUpGold.
- Research and plan for the replacement of the current Network Access Control (NAC) system.
- Implement Cisco Virtual Switching System (VSS) in the data centers.
- Expand the wireless infrastructure throughout campus.
- Upgrade the wireless infrastructure in multiple residence halls.
- Implement a pilot IPV6 network.
- In conjunction with the Information Security Office, install new border firewalls.
- Install hardware to replace the current Banner database server and the Banner Document Management server (Xtender).
- Install hardware to replace the current implementation of Microsoft System Center Configuration Manager (SCCM).
- Install additional hardware to support the Virtual Desktop Infrastructure project.
- Implement Red Hat Network Satellite (RHN Satellite) to centralize the administration of Linux servers.
- Complete the migration of faculty and staff to the new storage infrastructure.
- Decommission old storage arrays.
- Decommission old email (Exchange) environments.
MISSION STATEMENT

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

MAJOR ACCOMPLISHMENTS

Equipment Enhancements
Printing Services added an automated card and document cutter which increased productivity and speed by reducing the hands-on time required by staff. In response to increasing demand for saddle-stitched booklets, Printing Services added an offline booklet maker, which enhanced booklet making capabilities and speed while reducing per-piece production costs. A machine that can instantly apply laminate and/or adhesive without heat or electricity was also added. To ensure the security and confidentiality of shredded documents, Printing Services acquired a Level 3 crisscross and a Level 5 high-security shredder.

High Profile Printing Projects
Printing Services continued to produce high-profile materials, such as the “Distinguished Women of Radford” and “RU Votes” large-format poster series. Other notable pieces include The Beehive (student-run magazine), the Quest New Student Orientation Program Guide, and numerous award-winning student and departmental works.

Document Shredding
The opening of the new COBE building, along with the relocation of many other departments, resulted in a large increase in demand for document shredding. Printing Services shredded several hundred cases of documents, all of which were recycled.

Laundry Contract Request For Proposals (RFP)
Laundry Services developed and participated in an RFP to establish a new multi-year contract for washers and dryers in residence halls. A new contract was awarded in June and will result in new equipment, the ability to use RU Express for payment on all machines, and technology allowing students to remotely monitor the status and availability of machines.

Linen Transition
Management of linen deliveries for conferences continued from July to December 2012. Following a successful end of the calendar year, linen responsibilities were transferred to Facilities Management.

Snack Machine Operations Transitioned to Canteen/Compass
As part of the new campus dining contract, Canteen was selected to manage the campus snack machines. In August, this service was transitioned from an RU-managed operation to Canteen. Vending Services managed the transition including the addition of new and upgraded vending machines at locations throughout campus. Vending Services also closely monitored service quality and stocking of vending machines throughout the year.

GOALS FOR 2013-14

- Continue to enhance capabilities and efficiency of the print and copy center.
- Ensure a smooth transition of laundry and vending services to Finance and Administration.
- Evaluate 3-D printer capabilities and business needs.
PROJECT MANAGEMENT & AUDIT COMPLIANCE

MISSION STATEMENT

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

APA Fiscal Year 2012 Audit
Successfully completed an audit with the Auditor of Public Accounts with no findings reported. An in-depth review of major DoIT areas by the APA included Banner ERP system database security, RUSecure Wireless Security, and System/Data backup and restoration.

Educause Core Data Survey
Coordinated and entered the response for 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 inform IT strategic planning and management.

Reports and Surveys
Coordinated DoIT responses for the following surveys and reports:
- Barron’s Survey
- College Board Survey
- DoIT Strategic Plan update
- Princeton Review
- Peterson’s Undergraduate Survey
- RU Fact Book 2012
- US News and World Report
- Wintergreen Orchard House Survey

Project Management Support
Facilitated and provided project management support for the following:
- Banner Fixed Assets Business Process Review
- Identity and Access Management selection phase
- Business Impact Analysis, Risk Analysis update
- Faculty Load and Compensation/Adjunct Faculty implementation in Banner
- Electronic and Personnel Action Form (Epaf) implementation in Banner
- Digital Signage replacement
- Telepresence
- Manpower Control Program
- Exchange/Office 365 upgrade
- Travel and Expense Management implementation in Banner

Project Management System
Continued the discovery phase to select enterprise project management and portfolio system for the division. More than 30 project and portfolio management systems were reviewed. In November 2012, the AceProject system was selected as an interim solution for project tracking until an enterprise solution can be selected and approved.

GOALS FOR 2013-14

- Update project management standard and framework (including templates, instructions and FAQ documents).
- Ensure all recommendations from the review of the Disaster Recovery Plan, Risk Assessments and BIA are appropriately addressed.
- Coordinate the update to the DoIT Strategic Plan.
MISSION STATEMENT

The mission of the Technology Assistance Center is to provide a high-quality, customer-oriented, single point of contact and coordinate the resolution of all technology support requests.

MAJOR ACCOMPLISHMENTS

End User Support for Desire2Learn
Provided support for the growing needs of students and faculty using the campus learning management system Desire2Learn (D2L). The telephone support coverage was enhanced to provide 24/7 support for D2L problems and issues. This expanded coverage is provided by a contract with D2L and utilizes their call center and its knowledgeable staff to provide night, weekend and holiday support to the RU community.

Enhanced Technical Knowledge Base
The Technology Assistance Center continued to enhance documentation provided within the online IT Knowledge Base. This year, efforts were made to review and update the knowledge base articles to better reflect current systems and information.

Lecture Capture Support
The Technology Assistance Center worked closely with several faculty members to help with the use of lecture capture technologies in campus classrooms. This support included the setup of a directory structure within the Media Site system as well as managing and providing the appropriate level of student access to content created within the system.

Review and Update Technical Processes and Checklists
The Technology Assistance Center continued to strive to provide quality support to students, faculty and staff. To help technicians more consistently resolve problems and reduce repeat service contacts, several technical processes and checklists were updated.

Expanded Hours for Young Hall
With the exception of the times that the McConnell Library is open on Saturday and Sunday, Young Hall was staffed to provide students with a place they can go and study 24/7.

GOALS FOR 2013-14

- 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 60% of incidents on first contact.
- Resolve 75% of incidents within 24 hours.
- Implement a new call ticketing and tracking system.

BY THE NUMBERS

- 11,680 incident requests from faculty, staff and students were processed:
  - 1,651 Web Requests
  - 5,113 Phone Requests
  - 3,070 Walk-In Requests
  - 1,005 Internal Requests
  - 841 Email Requests
- 43% first call resolution
- 58% one-day resolution
- 7,877 work orders were created for other DoIT groups
- 338 computers were deployed

Young Hall now has expanded hours to provide students a place to study 24/7.
WEB COMMUNICATIONS

MISSION STATEMENT

The Office of Web Communications is dedicated to the strategic development of Radford University’s web presence. In addition to supporting the development of Radford University’s online brand, the team works closely with the campus community to develop effective, appealing websites in support of the university’s strategic plan.

MAJOR ACCOMPLISHMENTS

Honors and Awards
Multimedia producer Jaslyn Gilbert received the Best of Show award at the annual University Photographers’ Association of America symposium for a photo essay of the university’s Wilderness Institute. She also received an honorable mention in the Features and Illustrations category and was honored four times in the association’s monthly multimedia contest. Meanwhile, Director of Web Communications Jaime Hunt received the UPAA’s Board Appreciation Award for “significant impact on the profession of photography in service to higher education.”

Completion of the Content Management System Migration Project
Web Communications completed migration of official university websites into the content management system roughly nine months ahead of schedule.

Mobile Web Strategy
A mobile website was developed that allows for all content housed in the content management system to be viewed in a manner optimized for mobile devices. The implementation makes Radford University one of the first universities in the country to have a fully mobile-optimized website.

Multimedia Projects
Produced 56 multimedia projects and three photo essays.

Search Engine Optimization
Web Communications completed the second phase of a Search Engine Optimization strategy and provided training to content administrators on SEO implementation. Traffic from search engines increased from 4% of site traffic before optimization to 16% after phase I and 22% after phase II.

Portal Strategy
In collaboration with Enterprise Systems, Web Communications developed a portal strategy by speaking with stakeholder groups, holding informal focus groups and conducting surveys. A dynamic new design was developed and is in the process of being implemented with completion expected in fall 2013.

Enhancement of Social Media Channels
Web Communications developed and deployed a social media strategy designed to improve engagement with its audiences on Facebook and Twitter. The strategy contributed to a 60% increase in Twitter followers and a 30% increase in Facebook followers over Fiscal Year 2012. The team also monitored and responded to social media messages during several issues during 2012-13.

BY THE NUMBERS

► 56 multimedia projects were produced
► 90 departments were migrated into the content management system
► 28 student profiles were published on the Radford University homepage
► 9.6 million visits to Radford.edu
► 8,000 Twitter followers (60% increase from previous year)
► 15,300 Facebook fans (30% increase from previous year)

Radford University became one of the first universities in the country to have a fully mobile-optimized website.
WEB COMMUNICATIONS

Creation of a Multimedia Signage Template
Web Communications designed and implemented a template for multimedia signage across campus that conveys a consistent brand and visual identity.

Campus Email Communications Recommendations
Working with stakeholders across campus, Web Communications formulated recommendations for improvements to the university’s mass email system.

GOALS FOR 2013-14

- Launch a lean portal solution accompanied by a comprehensive communication and training plan.
- Overhaul and upgrade 20 websites with enhanced graphics and improved navigation architecture based on analytics.
- Develop a Web Communications strategy to include new website sections and a more focused emphasis on online marketing.
- Produce 48 multimedia projects.
- Enhance the university’s social media presence to increase engagement.
- Work with IT Infrastructure, Enterprise Systems and campus departments to launch new mass email tools.
- Work with IT Infrastructure and Enterprise Systems to implement a digital asset repository.
- Implement a virtual walking tour for the RU website.
APPENDIX A

SUPPORTED SYSTEMS

BANNER INB AND SSB MODULES
- Human Resources
- Finance
- Student Records & Admissions
- Financial Aid
- General Person
- Advancement
- Accounts Receivable
- Endowment Management
- Fixed Assets
- Research Accounting
- Faculty Load and Compensation Module
- Budget Development

ANCILLARY SYSTEMS
- Degree Works
- Ad Astra
- Banner Document Management System (BDMS aka Xtender)
- Banner Relationship Management
- Banner Workflow
- FsaAtlas
- Operational Data Store
- Cognos Reporting
- Nelnet
- Intellicheck
- UC4 Job Scheduling

ADDITIONAL SYSTEMS
- 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
- RuffaloCody

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
- PTAdmit
- Hire-A-Highlander

DATABASE MANAGEMENT SYSTEMS
- Oracle
- Microsoft SQL

OPERATING SYSTEMS
- Windows
- Linux
- Mac OS
### APPENDIX B | Alignment of Division Highlights WITH UNIVERSITY STRATEGIC GOALS

<table>
<thead>
<tr>
<th>2012-13 Division Highlights</th>
<th>DoIT Strategic Plan</th>
<th>7-17 Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital signage infrastructure was upgraded: more than 60 new LED large-screen monitors and with a new, Radford University branded visual identity.</td>
<td>Goal 1</td>
<td>Goal 4</td>
</tr>
<tr>
<td>Migration of all official university websites into the content management system was completed, roughly nine months ahead of schedule.</td>
<td>Goal 5</td>
<td>Goal 4</td>
</tr>
<tr>
<td>A mobile website was developed that allows for all content housed in the content management system to be viewed in a manner optimized for mobile devices.</td>
<td>Goal 5</td>
<td>Goal 4</td>
</tr>
<tr>
<td>Phase II of the identity and access management project was completed and a contract awarded to move forward to the next phase of this project.</td>
<td>Goal 7</td>
<td>Goal 4</td>
</tr>
<tr>
<td>A three-screen immersive telepresence system was installed, providing a state-of-the-art videoconferencing facility.</td>
<td>Goal 1</td>
<td>Goal 4</td>
</tr>
<tr>
<td>An Intrusion Prevention System (IPS) was installed, greatly increasing network security by keeping unwanted and potentially dangerous Internet traffic from entering the university’s network.</td>
<td>Goal 7</td>
<td>Goal 2</td>
</tr>
<tr>
<td>Enhanced software for student-owned computers, classrooms and labs needed for research and instruction.</td>
<td>Goal 2</td>
<td>Goal 2</td>
</tr>
<tr>
<td>A new RU Express ID card was designed to provide updated identifying photos and increased security.</td>
<td>Goal 8</td>
<td>Goal 2</td>
</tr>
<tr>
<td>Enhanced RU mobile with additional features including a bus tracker with arrival times.</td>
<td>Goal 4</td>
<td>Goal 4</td>
</tr>
<tr>
<td>Conducted a review of Risk Assessments, Disaster Recovery Plans, Security Plans and Business Impact Analysis to help ensure a secure computing environment.</td>
<td>Goal 7</td>
<td>Goal 2</td>
</tr>
<tr>
<td>A new hybrid email system was implemented including on-premise Exchange 2010 and Cloud-based Office 365.</td>
<td>Goal 4</td>
<td>Goal 4</td>
</tr>
<tr>
<td>Successfully completed an audit with the Auditor of Public Accounts with no findings reported.</td>
<td>Goal 7</td>
<td>Goal 2</td>
</tr>
<tr>
<td>Continued to enhance and upgrade IT Infrastructure to support information systems and services in a secure, highly available and high-performing environment.</td>
<td>Goal 4</td>
<td>Goal 4</td>
</tr>
<tr>
<td>Continued to develop new features and functionality in the Banner ERP system and other ancillary systems to improve efficiencies and provide information for strategic decision making.</td>
<td>Goal 3</td>
<td>Goal 4</td>
</tr>
<tr>
<td>Continued to upgrade classrooms and other learning spaces with the latest in digital technology.</td>
<td>Goal 2</td>
<td>Goal 2</td>
</tr>
</tbody>
</table>