



Office of the CIO

Information Technology Services

Annual Report

Fiscal Year 2012-2013

Appalachian
STATE UNIVERSITY

Office of the CIO

Welcome

From the Office of the CIO

It is my pleasure to provide you with the 2012-2013 Office of the CIO Annual Report. As I complete my first year as CIO of Appalachian State University, I am proud of what we have accomplished and excited for what is to come. This report highlights the achievements of our highly skilled and dedicated employees, the foundation for our success.

I would like to extend my appreciation to the Appalachian campus for their participation in our IT Forums, the constructive feedback we've received, the participation in our Governance committees and the great collaboration between the many departments on campus and ITS. Working together we can advance Appalachian's strategic goals for our students and for the University

- Cathy



Cathy Bates
Associate Vice Chancellor
and
Chief Information Officer

Presentations Made by ITS Staff at State and National Conferences

Seven members of Information Technology Services have made presentations at State and National Conferences during 2012-2013.

These presenters were:

- **Linda Atkinson** (NC/SC User Forum president and presenter in Charlotte, NC)
- **James Fay** (presenter at UNC CAUSE, Durham, NC)
- **Josh Hodges** (presenter at UNC CAUSE, Durham, NC)
- **Jonathan Morefield** (presenter at Ellucian Live Conference, Philadelphia, PA)
- **Andrew Sanders** (presenter at UNC CAUSE, Durham, NC)
- **Kevin Snook** (presenter at UNC CAUSE, Durham, NC)
- **Kevin Wilcox** (presenter at EDUCAUSE Security Professionals Conference St Louis, MO, and UNC CAUSE, Durham, NC)

CIO Website

The Office of the CIO website was developed to serve as an umbrella and gateway for all IT efforts on campus. This website is designed for the campus to better understand the organization of IT on campus and to have a place to give feedback. The development of IT Governance and the Technology Portfolio Committees will be shown from this website as well.

<http://cio.appstate.edu>

IT Governance at Appalachian

The development of IT Governance at Appalachian is well under way. The following is the progress made this year:

Technology Applications Services Catalog (TASC)

Information Technology Services worked with technologists across campus to develop the Technology Applications Services Catalog. The TASC is a listing and definition of all IT services provided at Appalachian and is the foundation for IT Governance at Appalachian. We have currently defined 205 services divided into eight Technology Portfolios. This catalog of services informs the campus about technology services that are available, how to get them and how they can be used in the work of Appalachian.

<http://support.appstate.edu/service-categories-new>

IT Forums – Spring, 2013

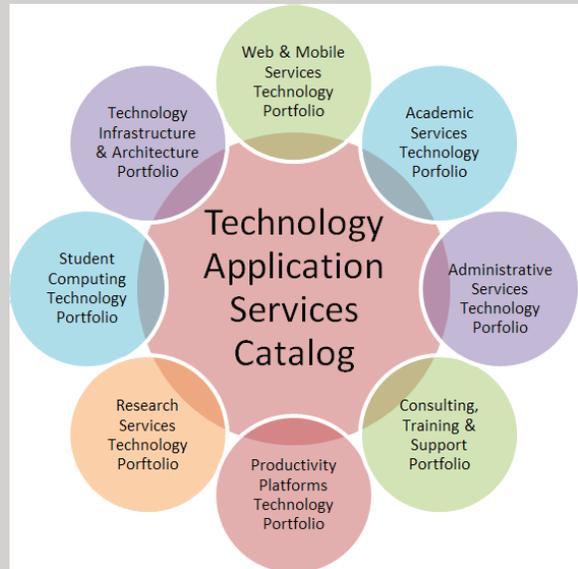
The Office of the CIO hosted four IT Forums during April 2013. These forums were held to discuss IT Governance and to obtain feedback from our users. The forums were extremely successful with large numbers of faculty, staff and students engaging with technology staff members. The feedback was compiled and published on the office of the CIO website.

<http://cio.appstate.edu/news/it-forums-feedback>

Web and Mobile Services Technology Portfolio Formed

The initial pilot portfolio committee for Appalachian's IT Governance process is the Web and Mobile Services Committee which started meeting in July 2013. This group of services was chosen to be the pilot committee because there is a great interest and demand for mobile applications by the campus. The web is used daily by all of the Appalachian campus and web services are always in high demand. This committee will create guidelines and the technical working groups will make Mobile Apps a reality as well as examine our web services and web presence for the university.

<http://webmobile.cio.appstate.edu>



"It is an exciting time to work with the campus to create a strategic vision for the future of technology here at Appalachian."

- Cathy Bates

Looking Forward

IT Governance – Additional governance committees will be started for the 2013-2014 academic year.

Information Analytics – Working with the entire university, we will define and execute a campus information analytics strategy.

Information Security – We will design and develop a campus-wide security program to protect the digital assets of the University community.

Student Services



WENT LIVE Fall 2012

MyApp is aimed toward prospective students applying for admission to Appalachian. MyApp gives these Appalachian hopefuls the ability to monitor the progress of their application online.

The features of MyApp include:

- View Admissions checklist
- Enter extra information, such as resumès
- View transferred courses
- Update current high school or college courses
- Change intended major
- Update personal information
- Apply for scholarships
- Make payments and Register for orientation

19, 868 prospective students utilized MyApp to track their applications.

Due to the success of MyApp, Appalachian was able to begin accepting new applications for Fall 2014 prospective students on August 1st this year. In the past, it has been September 1st.

Over 50% of students consider their smartphone important in their academic success.

Results From Student Survey



In the spring of 2013, ITS worked in conjunction with EDUCAUSE to conduct a student survey for undergraduates at Appalachian. The results from the survey will help identify opportunities for improvement and increase our understanding of students needs for academic success.

Over 2000 students at Appalachian responded to the survey:

- 98% own a laptop (60% Windows, 40% Apple)
- 20% own a tablet (60% of the tablets owned are iPads)
- 76% own a Smartphone (64% iPhones, 33% Androids, 3% other)
- 19% own an eReader (74% Kindles, 22% Nooks, 4% other)
- 77% consider their laptop extremely important in their academic success.



**WENT
LIVE!**

DegreeWorks is an on-line way for students and advisors to successfully navigate the curriculum requirement for each major and student.

Appalachian is a Pilot School for World Language Initiative

Appalachian, in a collaborative effort with General Administration, participated with four other UNC schools to implement an on-line registration process for language courses offered throughout the UNC system. The other UNC participating schools are UNC Pembroke, UNC Greensboro, Western Carolina University and NC State.

Classroom Technology

We currently have **275 Smart Classrooms** out of 379 General Classrooms (73%).

25 Classrooms were upgraded this year.

There are **Intercoms** in these Smart classrooms, faculty can get instant support if they have a problem during a class. There were **440 intercom calls** for support this year.

Scholarship and Financial Aid

Applications

The **Scholarship Application** process has been streamlined for both students and the committee selection process. There were **2,054** prospective students who used the new web application to apply for scholarships.

Financial Aid is always a popular topic and our students prove it. **76%** of the student population used our Financial Aid system from the time they applied until the time of their exit interview.



Looking Forward

Mobile Apps - The Web and Mobile Technology Portfolio Committee has great campus participation and is actively planning the development for mobile apps.

ePortfolio - A recent survey of departments showed areas of strong interest in using ePortfolios for some programs. ITS is working with an ePortfolio work group to identify and implement a solution for the campus.

Faculty & Staff Services

WebFocus serves over **900 Faculty & Staff** across campus with **100 Dashboards** and over **10,000 Reports**.

WebFocus is a reporting tool used to develop on- demand reports

Dashboards are web links used to distribute the report to the person who needs it.

Global Learning at Appalachian

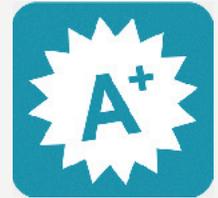
Keeping with the Appalachian strategic vision of supporting Global Education, ITS developed a Self-Service web application for our faculty-led Study Abroad programs, streamlining the application process for our students. This also helps our faculty manage the required paperwork electronically.

MotorPool Vehicle Reservation System

ITS developed and implemented a Vehicle Reservation System for MotorPool in June 2013. This system will save time and reduce the paperwork required for reserving a university owned vehicle.

In the three months it has been live, the Vehicle Reservation System has been used **529** times and averages **189** requests per month

Improved Test Scoring



To improve the service provided to Faculty using computer test scoring, two kiosk stations were added next to the Test Scoring Window in Raley Hall. These give faculty the opportunity to check for issues with the test scoring before they return back to their office.

Uninterrupted System Access For Faculty

In order to make sure the necessary paperwork is completed for faculty contracts and ensure system access for faculty is not interrupted, ITS implemented an early warning system to prompt the faculty member, their department chairs and Academic Affairs that there was potentially a problem with the paperwork for the faculty member.

For more information please call the HelpDesk at 262-6266.



New Banner Integrated Orientation Process

- Improved Online Student Registration for Orientation
- Replaced Paper Profile Sheets with Online Equivalent
- Improved Administrative Functionality:
 - Session and Group Management
 - Manual Assignment Capability
 - Fee Schedules
 - Attendance and Reporting

Central Warehouse Request System

ITS implemented a custom designed Central Warehouse Request System. This system is used for ordering from the Central Warehouse and is easy to use.

- Used 1901 times
- Averages 190 orders per month

Banner Upgrades

ITS has installed, configured, tested, and implemented over 50 patches this year. These patches add major enhancements to our Banner systems, and keep us in compliance with state and federal regulations.



AsULearn Upgraded

This summer LTS and ITS collaborated to upgrade to a new version of AsULearn which will allow more choice and flexibility for faculty and students. This upgraded version has provided for a more robust, safe and secure Learning Management System.

80% of AsULearn usage is in the upgraded version
3000 users are in AsULearn at a time
1100 courses are altered each weekday

Looking Forward

Faculty Workload/Digital Measures Initiative - ITS in collaboration with Institutional Research Planning and Assessment and Academic Affairs is developing a project to utilize Banner Faculty Workload and improve the usability of Digital Measures. This will streamline both the collection and reporting of faculty information and activities for use by departments, colleges and the university.

Online Resource Community - ITS, working with the Hubbard Center and LTS, plans to create an online resource community focused on technology for teaching and learning.

IT Support



New! Service Status Alert

ITS implemented a Service Alert Status or a “Stoplight” to our IT Support Services webpage (as well as MyASU) in November 2012. This was created to help keep the campus informed of outages as quickly as possible. Our most commonly used services (Email, Banner, AsULearn, Appalnet etc.) are always listed with a color code. Other services are added as needed. If there are any known or suspected problems with any IT Service, we will update the color as quickly as possible. The campus can tell immediately if a problem is isolated to them or if it is widespread. The feedback has been extremely positive for this time-saving feature.



The HelpDesk is the first line of defense for ITS. The HelpDesk answered:

11,838 calls during the last fiscal year.

74 Pharos Printers on campus

174 Sharp Printers on campus

35% of print jobs occur in the Belk Library and Information Commons

SERVICE STATUS

- ✓ Appalnet
- ✓ AsULearn
- ✓ Banner
- ✓ Email
- ✓ Internet
- ✓ Networking
- ✓ Password Manager
- ✓ uStor (Network drives)

SERVICE STATUS LEGEND

- ✓ Operating normally
- ⬆ Performance issues
- M Scheduled maintenance
- ⊘ Service disruption

The Desktop Consultant Group

The Desktop Consultant Group was reorganized into Campus Teams to improve response time and service. Over 50% of the requests made to the Desktop Consultant Group were resolved within 24 hours of the request.

The Desktop Consultants completed a total of **6,275** incidents for the year.



Technology Support Center

The Technology Support Center worked on **5,731 pieces of technology equipment** (computers, external hard drives, tablets and mobile devices). This was an increase of **8%** from last year.

72% are student owned computers
25% are faculty and staff
3 % are unspecified



BOMGAR– New Remote Support Option

IT Support Services recently purchased a new support tool to improve the support experience for our students, faculty and staff, both on and off campus. This new support tool, called Bomgar, allows ITS support to connect to a person's computer to provide remote support from virtually anywhere in the world. Bomgar allows screen sharing with ITS support personnel, allowing for faster resolution of computer issues.



Distance Learning –

Accessing Campus Software From Off-Campus

“uDesk” is a way for faculty, staff, and distance learning students (or students taking on-line courses) to access on-campus software from off-campus. ITS offered a “Getting Connected to uDesk Initiative” in Fall 2013, directed at Distance Learning Faculty and Students to inform them of this convenient service and to help them get started.

Looking Forward

“uDesk”- Distance Education and ITS are working together to expand the availability and utilization of uDesk to more faculty and students both on and off campus.

PaperCut- In collaboration with the Sustainability Office, ITS plans to implement PaperCut, which is a new print management system. This will help to reduce printed output and lower printing costs.

IT Infrastructure

Wireless Upgrades for the Campus

- Wired and Wireless networking capabilities were added to the Beasley Broadcasting Complex.
- All Academic Buildings and Residence Halls were given increased wireless capabilities through technology upgrades.
- University Highlands was given wireless capabilities.
- Frank Hall and Mountaineer Hall received upgraded electronics in their buildings to improve their wireless capabilities.

**Peak Wireless had 2,392
Concurrent Users**

There are **1,844**
Wireless Access Points
across campus.



Faster Internet

ITS installed new state-of-the-art equipment which increased the network bandwidth speed to a 10GB connection from a 1GB connection. This will improve the Internet experience for all users on campus, including wireless. Immediate faster web browsing and streaming was noticed by the campus.

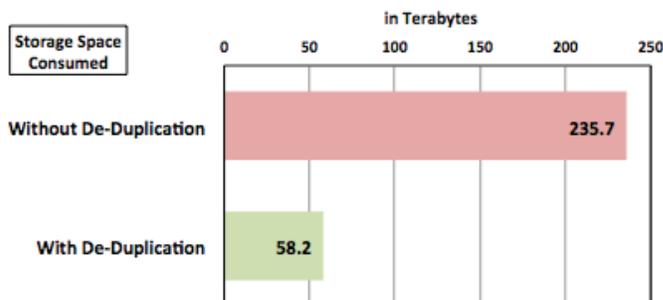
The Data Center

The multi-year infrastructure modernization and efficiency project in the Raley Data Center has been completed. The goals accomplished with this project include: the upgrading of the copper and fiber infrastructure, improvements in electrical power redundancy, and a more modern and energy efficient design. This modernization project will allow the Raley Data Center to continue to meet the current and future needs of campus.

Efficiencies in Storage and Backup

By utilizing a space reduction technology called De-Duplication, ITS has been able to reduce the amount of storage consumed for uStor, Virtualization, and Backups. De-Duplication is a technology that reduces the amount of duplicate data stored on physical storage. The following graph detail the reduction gained through use of De-Duplication.

De-Duplication Provides Storage Space Savings



**Total Space Saved Using
De-Duplication**

177.5 TB



Security



Security is always one of the top priorities for ITS. The following are examples of some extra layers of security that ITS put in place during 2012-2013:

Campaign for students to use ASU Secure Wi-Fi

During the Fall 2013 semester, ITS and Student Development made a concentrated effort to register all student devices on the ASU secure network. The secure network provides an extra layer of encryption for all online interactions.

Changes to ASU Secure Wireless Authentication

Beginning June 30, 2013, all faculty, staff and students were required to authenticate to our secure wireless using their ASU username and password. The generic username and password of "asu" was discontinued to provide better troubleshooting and service for wireless.

Connecting to Email from off-campus

All faculty and staff were required to use secure protocols to connect to our inbound email server beginning in May 2013. This was implemented to provide our faculty and staff with a safer experience when checking email from off campus.

Email and Password Manager Security Enhancements

ITS developed new reporting tools for early detection of email account compromise and efficient remediation.

Significant security and maintainability improvements were implemented to the Password Manager System. The load balancer was upgraded to improve system availability during peak usage times.

Update procedures in Labs

ITS improved the update procedures for Acrobat, Acrobat Reader, Flash, Shockwave, and Java in all public labs to improve the security within the campus.

Printing Green Initiative



In accordance with Appalachian's Green Initiative, ITS has cut our total paper use in the Data Control area by **100,000 sheets**.

16 Offices Across Campus are using Fortis to reduce the need to print and demand is growing.

Fortis is an electronic documentation system that reduces the need to print and store paper records



All Email requires **12.4 Terabytes** of Storage.
(Faculty, Staff & Students)

The total number of server virtual machines currently stands at **350 VMs**.

Virtualization Services has available resources of **368Ghz of CPU, 1TB of RAM, and 67 TB of storage** for providing server VMs.

2,160 GB of storage is used to run Banner.

ITS filters all email sent to Appalachian addresses for Faculty, Staff & Students. **72%** of all the email received is marked as **SPAM**.

Looking Forward

Data Center – Working with the Physical Plant and Pepco Energy Services, a new Data Center is planned for State Farm Road. This facility will extend our research and data capacity for the next 10-20 years.

Email/Calendaring System – The Productivity Platforms Technology Portfolio Committee will form very soon and will evaluate and select an email/calendaring solution for the campus.

Network Computing Master Plan – ITS will be working on a strategy to develop a structured campus-wide network and computing master plan to address investments needed over the next 5 years to support instructional, research and administrative needs.



Thank You

to members of the Appalachian Community across campus who have partnered with us, collaborated and given important feedback to help make our projects become the best solution to our constituents' needs.

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