Strategic Plan for Information Technology
2012-2016

Supporting the Mission of the University with Planned and Managed Information Technology Resources and Services

August 10, 2013

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Introduction

The *Information Systems Security Policy* established by the Athens State University Board of Trustees specifies that the University will provide "an appropriate and sustained information system security profile that conforms to industry standards to safeguard the deployment, management, and use of all information technology resources." [1] This plan includes information technology related goals and objectives that provide a framework for how the requirements of the *Information Systems Security Policy* can be met.

The intention of this plan is to establish a strategic direction for the procurement and use of appropriate and planned information technologies at Athens State University. This plan will provide valuable information that will support informed and shared decisions about mission critical technology resources.

The budget requirements necessary to run the existing technology infrastructure and renew/replace both central and desktop computing resources are central to this plan. A three year budget is included and based on operational and replacement costs of current resources and funding requirements for new initiatives decided for the upcoming fiscal year.

Athens State University has a complex enterprise of technology to support academic and administrative needs commonly found on university campuses. However, Athens State has not up to this point had a plan in place to guide the development and maintenance of a robust information technology infrastructure that is imperative to the function of the University. Rapid changes in technology, increased user demands, and decreasing budgets requires University wide strategic planning to acquire and implement technology resources effectively.

Continuous monitoring and adjustment of this plan will be necessary to keep it aligned with the priorities established by the University mission and new opportunities and initiatives of the future.

[1] The Athens State University Board of Trustees approved the *University Information Systems Security Policy* at the April 19, 2013 meeting. The policy is published at **www.athens.edu/policies/**

Input for the Plan

Input for this plan included a recent history of IT, OASIS, and OIPRA and discussions with each area to identify strengths and weaknesses; an inventory and description of existing hardware and software resources on the main campus and centers; a review of the budget and spending for 201**2**-201**3**; a review of the staff resources and organization; the network upgrade plan; Banner recommendations; the IT Study Final Report & Recommendations provided by the consultant, J. Reid Christenberry, and the Educause Top 10 IT Issues for 2013.

Additional input was gathered the Banner Advisory Committee; the Technology Advisory Committee, Administrative Council, and the Telecommunications manager.

Documents are included in the appendix of this report that document some of the information gathered and observed by the CIO.

Information Technology: Vision, Mission, and Goals

Selecting, implementing, maintaining, and replacing information technologies and services require clearly defined vision, mission, and goals that align with the mission of the University. The vision, mission, goals and objectives provide a framework of steps toward the appropriate scale and availability of technology resources and services to support each functional unit of the University.

Vision

The vision for information technology is to become a model of daily excellence in services to students, faculty, and staff while providing guidance on leveraging technology to improve the efficiency and effectiveness of all initiatives at the University.

Mission:

The mission of IT and related service areas is to support instruction and business services through continuous enhancement of the technological and human resources required for the design, implementation, management, maintenance and upgrades of all University information technology resources and processes.

Goals

Eight goals have been established for information technology and related services at Athens State. These goals are based upon the standard roles and responsibilities of information technology services provided at universities serving students in both on-campus and online settings. The goals and associated objectives begin on page 6.

Goals/Objectives/Tasks/Recommendations – A Three Year Plan

Information Technology goals will be listed along with the associated objectives, tasks, and recommendations within a three year timeline. Each year in the plan aligns with a detailed budget of the hardware & software resources necessary to achieve the objectives broken down into four primary categories: systems, network, academic, and desktop computing. The budget for each year includes fixed expenses which are mostly software licenses and services and new expenses which are new initiatives or funds available for needed renewal and replacement.

The IT Goals and Objectives described in this section will include which of the three University Goals established in the University Strategic Plan are directly supported.

University Strategic Goals

Goal I: Athens State will increase its recognition as the institution of choice for students with life experience, transfer students, especially from community colleges, and working students who seek a step into success.

Goal II: Athens State will enhance its fiscal strength and effective planning process.

Goal III: Athens State University will continue to strengthen its governance, partnerships and work with communities.

IT Strategic Goals

Goal I: Establish and maintain a reliable, redundant, and secure information and communication technology infrastructure -- including hardware, software, storage, communications, and networking resources that follows industry standards and aligns with institutional requirements to deliver instruction and manage business processes.

Supports University Goal I

Budget: Systems 2013-2016

Objectives Establish & Maintain:	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Hardware replacement lifecycle to maintain server/storage infrastructure.	Replace 15 – 20% of the equipment annually as appropriate. Virtualize servers when possible	Replace 15 – 20% of the equipment annually as appropriate. Virtualize servers when possible	Replace 15 – 20% of the equipment annually as appropriate. Virtualize servers when possible

Objectives Establish & Maintain:	FY-2012-13 Tasks & Recommendations	FY-2013-14 Tasks & Recommendations	FY-2014-15 Tasks & Recommendations
	Review current configurations based upon proposed new initiatives in later parts of this report. Investigate virtual desktop infrastructure computing	Review current configurations based upon proposed new initiatives in later parts of this report.	Review current configurations based upon proposed new initiatives in later parts of this report.
Banner Related Services	Review server requirements to support and maintain the Banner system and related applications including: Banner XE single sign-on. Degree Works Unix platform for Banner Develop specifications to move Banner from Windows to Unix Plan patch management to keep PROD, TEST, and other instances in sync.	Purchase servers /storage required for Degree Works. Establish Unix box for training purposes Implement Degree Works	
Backup and Archiving Systems	Review backup requirements based upon current size and platform in anticipation of changes in 2013-2014.	Finalize backup solution level	

Objectives Establish & Maintain:	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Website technical management	Review server requirements to support and maintain the central website requirements.	Review web services contract Establish service level agreement between contracted services and IT. Develop a quick response team to website issues	
Campus Intranet	Investigate campus intranet options. Options include at no cost: existing web site -or- Stand up a collaborative environment platform such as SharePoint.	Finalize hardware/software requirements to support pass through authentication on AD. Propose possible solutions to administrative council.	
Data storage capacity - ERP system	Review age, maintenance cost, and storage capacity. Project the storage needs for new initiatives.	Review storage requirements for campus with vendors to determine storage solution that will extend growth and contain maintenance costs.	
Data storage capacity individual &	Review age, maintenance cost, and	Review storage requirements for	

Objectives Establish & Maintain:	FY-2012-13 Tasks & Recommendations	FY-2013-14 Tasks & Recommendations	FY-2014-15 Tasks & Recommendations
department files/electronic mail	storage capacity. Estimate storage needs for new initiatives. Discuss storage with vendors that will extend growth and reduce/level maintenance costs	campus with vendors to determine storage solution that will extend growth and contain maintenance costs.	
Data storage capacity - web site & intranet	Review age, maintenance cost, and storage capacity. Estimate the storage needs for new initiatives. Discuss with vendors to determine storage solution that will extend growth and contain maintenance costs.	Review storage requirements for campus with vendors to determine storage solution that will extend growth and contain maintenance costs.	
Data storage capacity - document imaging & archiving for all functional areas.	Review age, maintenance cost, and storage capacity. Estimate the storage needs for new initiatives. Discuss with vendors to determine storage solution that will extend growth and contain maintenance costs. Establish age and capacity of all data backup systems Determine upgrade requirements based on age, condition,	Review storage requirements for campus with vendors to determine storage solution that will extend growth and contain maintenance costs.	

Objectives Establish & Maintain:	FY-2012-13 Tasks & Recommendations	FY-2013-14 Tasks & Recommendations	FY-2014-15 Tasks & Recommendations
	capacity. Recommend replacement cycle.		
Backup capacity – all storage	Review age, maintenance cost, and storage capacity. Estimate backup needs for new initiatives. Determine backup priorities and data retention requirements Discuss with vendors, determine storage solution that will extend growth and contain maintenance costs.		
Physical network backbone, network closet, building distribution	Determine configuration for upgrading network speed. Document existing network for planning network upgrade. Select vendor & design solution Recommendation: Purchase Brocade network switches and network core upgrade & installation- $85,000	Review Internet connectivity options at AMSTI & CLL. Develop alternative solutions and determine costs. Review physical network condition in buildings. Review fiber optic network needs for future growth Complete fiber ring around the network for redundancy Identify requirements to campus planners Recommendation:	

Objectives Establish & Maintain:	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
		Submit budget requirements for 2013-2014	
Wireless network - off-site locations	Contract offsite wireless network assessment. Determine funding source. Review recommendations Communicate wireless upgrade requirements to administration/ users Include wireless requirements in the RFP for wireless solution.	Review & award wireless network vendor Communicate wireless footprint to users – set expectations. Review coverage and adjust coverage according to input. **Recommendation:** Upgrade AMSTI wireless network $15,000.	
Internet connectivity	Current Internet pipeline is 50 Mb on the main campus, 20 Mb for Redstone, 1.5 Mb at AMSTI, and others are unknown. There are no redundant connections to the Internet at any Athens campus.	Review with Administration uptime requirements for the campus. Identify redundant connectivity for main campus and the associated costs.	

Goal II: Establish and maintain quality on-campus and on-line learning environments that support program curriculums and adopted course delivery methods.

Supports University Goal I

Budget: Academic 2013-2016

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Classroom instructional technology	Document technology in all classroom spaces. Recommend replacement cycle. Establish upgrade requirements based on age, condition, and function. Modify equipment configuration based on requirements of users. Establish replacement cycle	Update documentation of classroom spaces Determine upgrade requirements based on age, condition, and function. Modify equipment configuration based on requirements of users. Follow equipment replacement schedule Upgrade workstations in technology classrooms per budget approved amount.	
Computer lab equipment	Inventory and document all computer labs. Determine upgrade requirements based on established minimums. Review lab usage -close or reassign labs. Establish replacement cycle.	Update documentation of computer labs Review lab usage -close or reassign labs Upgrade lab workstations per budget approved amount. Follow equipment replacement schedule	

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Academic computing software resources – desktop applications	Determine current software licensing and OS platform. Review costs for maintenance and support of software applications. • Microsoft Office • SPSS Review software requirements/upgrades with Technology Advisory Committee and faculty.	Invite each college to articulate annually the curriculum requirements for technology to the Advisory Committee. Review Technology Advisory Committee recommendations, prepare budget requirements.	

Objectives: Establish & Maintain	FY-2012-13 Tasks & Recommendations	FY-2013-14 Tasks & Recommendations	FY-2014-15 Tasks & Recommendations
Learning management system and related applications & services	Establish list of features in current system Task Technology Advisory Committee to determine faculty use of existing Blackboard features & third party online learning applications. Task Technology Advisory Committee to review list of existing features available in learning management systems. Review help desk requirements for distance learning students Evaluate current contracted help desk services Improve web pages that provide online resources for distance education students.	Prepare RFP for mid-fall 2013 distribution Review proposals and invite vendors to campus for presentations in late Fall 2013 or early Spring 2014.	

Goal III: Establish and maintain desktop hardware and software standards for the campus that effectively support the academic curriculum, business processes, and institutional decision making.

Supports University Goal I

Budget: Desktop – 2013-2016

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Desktop and laptop standards for campus	Adopt standard for desktops Core 3, 4 GB RAM, 20" monitor. Adopt standard for laptops Core 3, 4 GB, Dell or Toshiba. Require all desktop purchases to be approved by IT director based upon established standard.	Review with the Technology Advisory Committee.	Monitor enforcement.
Centralize desktop replacement	Inventory faculty/staff desktop computers. Determine systems to be replaced. Recommendations: Establish a replacement cycle and centralize desktop purchases. Require all desktop purchases to be approved by IT director.	Recommendations: Replace 70 desktop systems on faculty & staff desks based on recommendations of lead technician. Determine budget appropriations at department and college level.	

Goal IV: Implement and maintain the ERP system, associated third party systems, university data repositories & reporting processes, and archival/backup, required to support business processes, administrative operations, and planning activities at the University.

Supports University Goal I

Budget: Systems 2013 -2016

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Banner Patch levels	Establish monthly maintenance windows for Banner patches	Implement Banner upgrade/patch schedule	
Banner upgrades	Review upcoming Banner upgrade roadmaps provided by Ellucian Determine server & storage implications of future upgrades Off load work from DBA to accommodate planning and technology support for central database and Banner requirements	Develop budget requirements stemming from Banner upgrade roadmap review. Cross train IT staff to assist with duties of DBA during upgrade planning	
Third party applications	Stabilize Extender Solution Argos Nelnet Payment Gateway		
User access procedures	Review existing process for account provisioning/de-provisioning Create system for accounts for the following: AD E-Mail Banner		

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Common test data set for all patches /upgrades/tests	Assigned to Banner User Group		
Data query & Report management	Task IT & OIPRA to work together on report management. Identify common/routine reports. Automate reports when possible based on user requirements. Develop and maintain a data dictionary. Establish data warehouse content and census dates for institutional reporting Train and empower subject matter experts in each area to use Argos reporting tool effectively	Establish request procedures to minimize the impact on IT resources and maximize delivery to user requests	
Campus wide, document imaging & management system.	Review Xtender Solution options Determine volume of documents in areas not using document imaging: President's Office Provost's Office Finance College of Business College of Education College of Arts & Sciences	Present campus wide document management solution Key objective is to provide access through assigned roles established for each office of the University.	
Single Sign-on	Outline single sign-on needs. Determine technology requirements for single sign-on	Choose single sign-on solution	

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
	Solicit input from Banner/Blackboard/Microsoft for single sign-on solution. Review requirements with administration		
Hardware architecture of Banner system and related products	Review current Banner resources and hardware architecture in anticipation of future upgrades/growth. Solicit input from Banner experts Develop a gap analysis between present and future needs		

Goal- V: Establish and maintain quality, visible, and accessible technology support and training services for students, faculty, and staff provided through walk-in, telephone, e-mail, and web that meet the service levels required by all communities served.

Supports University Goal I

Budget: Academic – 2013-2016

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Service Level Agreement for all resources/services provided by each unit	Evaluate current service level agreements Determine service capacity with current budget/staffing Deliver a set of SLAs to administration for review	Implement approved SLAs. Communicate to all users. Establish key performance indicators for each service level	Review
Improve the quality of Help Desk services to students, faculty, & staff.	Re-align staffing to meet help desk needs Require distance education, IT and phone service requests to flow through central help desk number and system to log requests. Establish a physically accessible, visible, and appropriately staffed help desk for walk-up services to students, faculty, & staff. Improve online services for students Improve online services for faculty & staff	Implement re-alignment. Continue to improve central help desk resources. Update campus on changes in processes.	

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Training curriculum for staff	Survey campus to determine specific needs. Establish consistent training schedule for all staff. Request feedback at training sessions and adjust schedule accordingly.	Survey campus to determine specific needs. Establish consistent training schedule for all staff. Request feedback at training sessions and adjust schedule accordingly.	
Training curriculum for faculty	Survey faculty for specific needs. Provide training based on instructional resources in place. Request feedback and adjust training opportunities.	Survey faculty for specific needs. Provide training based on instructional resources in place. Request feedback and adjust training opportunities.	

Goal VI Establish and maintain an information system security profile using defined security standards including required policies, procedures, and practices for centralized and desktop computing, networking, communications, and data storage/access.

Supports University Goal I

Budget: None required

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Technology security plan including policies and procedures.			
End User Acceptable Use Policy Acquisition Assessment Policy Password Protection Policy Software Installation Policy Workstation security, anti-virus/malware policy Employee Internet Use Policy Email Security Policy Information Classification Security Policy Mobile Security Devices, endpoint management	Review existing technology policies for missing or outdated procedures and mandates. Communicate the information system security initiative to the entire campus. Establish priority list of security policies to be developed. Develop draft policies that reflect ISO 27K standards. Present draft to cabinet & President for approval. Submit approved policies to Administrative Council for approval & adoption Publish policies in the University Policy Library.	Continue to review policies. Develop draft policies to be reviewed and approved by cabinet & President. Submit approved policies to Administrative Council for approval. Publish policies in the University Policy Library.	

Objectives: Establish & Maintain	FY-2012-13 Tasks & Recommendations	FY-2013-14 Tasks & Recommendations	FY-2014-15 Tasks & Recommendations
Academic environments Lab Anti-virus Policy Internal Lab Security Policy DMZ Lab Security Policy	Review existing technology policies for missing or outdated procedures and mandates. Communicate the information system security initiative to the entire campus. Establish priority list of security policies to be developed. Develop draft policies that reflect ISO 27K standards. Present draft to cabinet & President for approval. Submit approved policies to Administrative Council for approval & adoption Publish policies in the University Policy Library.	Continue to review policies. Develop draft policies to be reviewed and approved by cabinet & President. Submit approved policies to Administrative Council for approval. Publish policies in the University Policy Library.	

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Services Account request Policy Authentication Credentials and Identity Management Policy Web Server Security Policy Extranet Policy Server Security Policy Application Service Provider Policy Inter-process Communication Policy Acceptable Encryption Policy	Review existing technology policies for missing or outdated procedures and mandates. Communicate the information system security initiative to the entire campus. Establish priority list of security policies to be developed. Develop draft policies that reflect ISO 27K standards. Present draft to cabinet & President for approval. Submit approved policies to Administrative Council for approval & adoption Publish policies in the University Policy Library.	Continue to review policies. Develop draft policies to be reviewed and approved by cabinet & President. Submit approved policies to Administrative Council for approval. Publish policies in the University Policy Library.	

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Systems & Network Security Web Server Network Access Policy Remote Access Router and Switch Security Policy Third Party Network Connection Agreements VPN Security Policy Wireless Policy Internet DMZ Equipment Policy DMZ Application Server Policy Internet DMZ Web	Review existing technology policies for missing or outdated procedures and mandates. Communicate the information system security initiative to the entire campus. Establish priority list of security policies to be developed. Develop draft policies that reflect ISO 27K standards. Present draft to cabinet & President for approval. Submit approved policies to Administrative Council for approval & adoption Publish policies in the University Policy Library.	Continue to review policies. Develop draft policies to be reviewed and approved by cabinet & President. Submit approved policies to Administrative Council for approval. Publish policies in the University Policy Library.	
Disaster recovery plan for all elements of the information technology infrastructure.	Review current disaster recovery plan. Evaluate currency of plan twice annually. Performance risk assessment to establish baseline.		

Goal VII: Establish assessment requirements for each unit including key performance indicators and assessment plans.

Supports University Goal II

Budget: None

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Establish appropriate SLAs that reflect user needs and IT staff capacity.	Determine if existing SLAs are realistic given existing resources. Modify SLAs according to review Develop new SLAs based upon new technologies and modified service requirements Review performance outcomes data for Spring 2013 Status: Review IT - to be completed in June 2013 Review – OASIS Review IR	Announce SLAs to user community. Publish each semester the performance outcomes against the goals set in the SLAs	Publish performance outcomes against the goals set in the SLAs

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
Establish appropriate assessments of performance outcomes relative to SLAs.	Determine key performance indicators for IT Set goals and thresholds that indicate quality performance Gather data Compare and publish results Implement and communicate improvements	Review results of analysis of KPIs; determine if modifications to goals are warranted.	
Establish baseline for customer service satisfaction	Distribute customer satisfaction survey in AY 2013-14	Publish results of Satisfaction Survey Respond to issues Implement and communicate improvements	

Goal-VIII: Provide timely and informed responses to new technology initiatives and opportunities that can improve the quality of the student experience and staff and faculty efficiencies in the academic and business functions of the University.

Supports University Goal II & III

Budget: Systems 2013-2016

Objectives: Establish & Maintain	**FY-2012-13 Tasks & Recommendations**	**FY-2013-14 Tasks & Recommendations**	**FY-2014-15 Tasks & Recommendations**
New technologies and solutions	Degree Works	Implement Degree Works Review and respond to needs of the new Cybersecurity option and Information Assurance Minor Review the following to determine priority/opportunities: Assessment/planning compliance Document imaging/management Network redundancy Mobile computing strategy Cloud opportunities Outsourcing options	

Objectives: Establish & Maintain	FY-2012-13 Tasks & Recommendations	FY-2013-14 Tasks & Recommendations	FY-2014-15 Tasks & Recommendations
		Dashboards and Business Intelligence Virtual Desktop Infrastructure Risk Analysis Web Content Management System	

Budget Impacts

The following is summary of the central technology spending for 2012-2013 in four areas: Banner, Distance Education, Web Services, and Central Resources. It does not include individual department spending on technology related items. These four areas total $751,597 or 86% of the student technology fees allocation. This leaves 14% of the $878,858 technology fee revenue ($127,261) remaining for renewal and replacement of hardware, new initiatives/projects, and growth for central network and computing hardware.

Table 1

Technology Spending for Banner, Learning Management, and Central Resources				
Technology Fee Revenue			$878,858.00	
Annual Expenditures				
Banner/ERP Related				
	Alchemy NetCOBOL	$2,050.00		**% of Tech Budget**
	Alliance ST (Jukebox Service)	$3,200.00		
	Banner Maintenance	$108,362.00		
	BSC Imaging System	$11,000.00		
	Evisions Argos, E-check, Tax, & Mask	$9,500.00		
	Nelnet Payment Service	$27,295.00		
	Oracle Maintenance	$85,000.00		
	Oracle Tru-Up Licenses	$0.00		
	Runner Technologies	$2,600.00		
	Total		$249,007.00	28.33%
Distance Education				
	Blackboard	$325,637.00		
	Identity Verification (Axiom)	$12,000.00		
	Online Testing	$4,190.00		
	Tutoring	$4,795.00		
	Online tools	$87,968.00		
	Outsourced Help Desk After Hours	$8,000.00		
	Total		$434,590.00	49.45%
Web Services Contract				
	Web content management staff	$60,000.00		
	Total		$60,000.00	6.83%
Central Resources				
	Network, servers, campus licenses, classrooms, labs			
	Total		$135,261.00	15.39%

The physical technology assets of the University are valued at approximately $1.8 million (this does not include conduit and other physical plant resources outside of the buildings). These assets fall into three categories based upon their respective replacement lifecycle. Assets with a replacement lifecycle of approximately 15 to 20 years include the power generator, IP telephone system, and physical network wiring. Assets with a lifecycle of approximately 8–to 14 years include the network backbone and switch infrastructure and technology classrooms. The last group of assets falls into a 5 to 8 year replacement cycle and includes the central servers & storage and desktop computers. To illustrate the effect on annual budgets, the replacement costs for each lifecycle category is included in Table 2.

Table 2

	Lifecycle Categories			
	15 - 20 year lifespan	8 - 14 year lifespan	5 - 7 year lifespan	
	Power Generator, IP Telephone,Wiring - building/interbuilding	Network infrastructure, Technology Classroooms	Servers, Storage, Desktop Computers, Printers	
Total Value of Assets	$239,500.00	$505,000.00	$1,034,850.00	$1,804,000.00
Annual Percentage Replacement	0.056 (18 years)	0.11 (9 years)	0.2 (5 years)	
Annual budget impact	$13,412.00	$55,550.00	$198,170.00	$267,132.00

The annual budget impact for assets with a 5 – 8 year replacement cycles is approximately $206,970 which is 20% of the total asset value of $1,034,850. In 2012-2013, the renewal & replacement budget of $127,261 is $79,709 less than what would be needed to fund just this category of asset. When considering the 8 – 14 year lifespan category, another $55,000 would be added. Asset replacement outside of the two categories is difficult to predict and the replacement budget will be likely be one time allocations.

The lifecycles used in this illustration extends the technology life to an extreme. Also, other factors must be considered including whether the technology is mission critical and serves all stakeholders in the case of the network and servers and those assets that serve individuals. The evolution of technology is not entirely predictable; as technology improves and matures, the replacement lifecycle is extended because the equipment has a longer useful life.

Detailed Budgets

The detailed budgets are in separate spreadsheets that accompany this report.

Estimated IT Budget
2012-2016

Total			FY-2012-13	Fixed	New	FY-2013-14	Fixed	New	FY-2014-15	Fixed	New	FY-2015-16	Fixed	New
Desktop Hardware/Software *				$30,253	$0		$30,253	$76,100		$31,056	$33,200		$31,892	$68,400
Network				$34,100	$85,061		$31,015	$67,750		$46,855	$7,350		$47,997	$7,718
Systems				$373,874	$33,500		$369,544	$154,400		$388,326	$189,360		$419,859	$80,846
Academic				$442,968	$29,100		$447,590	$506,000		$465,494	$131,990		$484,113	$131,990
Total Fixed				$881,195			$878,402			$931,731			$983,861	
Total New					$147,661			$804,250			$361,900			$288,954
Total All					$1,028,856			$1,682,652			$1,293,631			$1,272,815

Faculty/Staff Desktop Budget
2012-2016

Objectives		Tasks	FY-2012-13 Fixed	FY-2012-13 New	FY-2013-14 Fixed	FY-2013-14 New	FY-2014-15 Fixed	FY-2014-15 New	FY-2015-16 Fixed	FY-2015-16 New
Hardware		Upgrade Faculty/Staff desktop below minimums **								
Desktop Computers		(13/14 - 67, 14/15- 28, 15/16 - 60)				$73,700		$30,800		$66,000
Desktop Printers		(13/14 - 4, 14/15- 4, 15/16 - 4)				$2,400		$2,400		$2,400
Desktop Software		Microsoft Campus License	$20,085		$20,085		$20,888		$21,724	
		SPSS - Campus Wide License	$10,168		$10,168		$10,168		$10,168	
Total Fixed		**Total Fixed**	$30,253		$30,253		$31,056		$31,892	
Total New		**Total New**		$0		$76,100		$33,200		$68,400

Academic Budget - 2012-2016

Objectives	Descriptions	FY-2012-13 Fixed	New	FY-2013-14 Fixed	New	FY-2014-15 Fixed	New	FY-2015-16 Fixed	New
Maintain quality technology classrooms						Fixed based on a 4% increase		Fixed based on a 4% increase	
	Tech Classroom Equipment Upgrades				$20,000.00		$35,000.00		$35,000.00
	Consumeables (Lamps/filers)	$5,000.00		$5,000.00		$5,200.00		$5,408.00	
	Subtotal	$5,000.00	$0.00	$5,000.00	$20,000.00	$5,200.00	$35,000.00	$5,408.00	$35,000.00
Academic computing labs					$9,100.00				
	Upgrade hardware/software below minimums								
	Library 114 (24)		$21,600.00						
	Tech Classrooms & Labs Computers (348 units)				$348,000.00	**	$72,000.00		$72,000.00
	Upgrade campus labs to Windows 7		$7,500.00						
	Library Commons - technology upgrade								
	Subtotal	$0.00	$29,100.00	$0.00	$348,000.00	$0.00	$72,000.00	$0.00	$72,000.00
Academic & instructional software	**Learning management system**								
						Fixed based on a 4% increase		Fixed based on a 4% increase	
	Blackboard: Community Engagement	$27,011.00		$28,362.00		$29,496.48		$30,676.34	
	Blackboard: Content Management	$33,075.00		$34,729.00		$36,118.16		$37,562.89	
	Blackboard: Course Delivery (Learning System)	$42,226.00		$44,337.00		$46,110.48		$47,954.90	
	Blackboard: Data Integration with Banner	$7,500.00		$16,000.00		$16,640.00		$17,305.60	
	Blackboard: Managed Hosting - Additional Storage	$26,460.00		$27,783.00		$28,894.32		$30,050.09	
	Blackboard: Managed Hosting (Content Mgt)	$26,355.00		$27,673.00		$28,779.92		$29,931.12	
	Blackboard: Managed Hosting (Learning System)	$64,607.00		$67,837.00		$70,550.48		$73,372.50	
	Blackboard: Student Services Annual Account	$4,000.00		$4,000.00		$4,160.00		$4,326.40	
	Blackboard: Student Services LMS Per Incident	$40,500.00		$34,920.00		$36,316.80		$37,769.47	
	Blackboard: Student Services Parature Dept.	$4,000.00		$4,000.00		$4,160.00		$4,326.40	
	Blackboard: Student Services Parature Seat	$1,000.00		$1,000.00		$1,040.00		$1,081.60	
	Blackboard: Wimba Collaboration Suite 6.1	$31,815.00		$34,996.00		$36,395.84		$37,851.67	
	Learning House: Acxiom Student Identity-X	$25,000.00		$12,000.00		$12,480.00		$12,979.20	
	NBC Learn: NBC News - Archives on Demand	$4,400.00		$5,000.00		$5,200.00		$5,408.00	
	Respondus: LockDown Browser Campus-wide	$2,395.00		$2,495.00		$2,594.80		$2,698.59	
	Respondus: Respondus 4.0 Campus-wide	$1,695.00		$1,695.00		$1,762.80		$1,833.31	
	SmarterServices: SmarterMeasure	$3,000.00		$4,795.00		$4,986.80		$5,186.27	
	Smarthinking: Online Academic Support Hours	$16,000.00		$8,000.00		$8,320.00		$8,652.80	
	SoftChalk: Perpetual Site License	$4,735.00		$3,735.00		$3,884.40		$4,039.78	
	Tegrity: Campus 2.0 w/Managed Hosting	$70,394.00		$77,433.00		$80,530.32		$83,751.53	
	WebEx: Unlimited Support Center Sessions	$1,800.00		$1,800.00		$1,872.00		$1,946.88	
Subtotal		$437,968.00	$0.00	$442,590.00	$0.00	$460,293.60	$0.00	$478,705.34	$0.00
New Initiatives/Projects									
Large Venue Audio/Visual									
	McCandless				$50,000.00				
	Carter				$50,000.00				
Subtotal		$0.00	$0.00	$0.00	$100,000.00	$0.00	$0.00	$0.00	$0.00
Learning Management System									
	Blackboard Mobile Solution				$38,000.00		$24,990.00		$24,990.00
Subtotal		$0.00	$0.00	$0.00	$38,000.00	$0.00	$24,990.00	$0.00	$24,990.00
Total Fixed		$442,968.00		$447,590.00		$465,493.60		$484,113.34	
Total New			$29,100.00		$506,000.00		$131,990.00		$131,990.00

Network Budget - 2013-2016

Objectives	Tasks	FY-2012-13 Fixed	New	FY-2013-14 Fixed	New	FY-2014-15 Fixed	New	FY-2015-16 Fixed	New
Maintain campus network infrasture				Fixed based on a 4% increase		Fixed based on a 4% increase			
Network Services									
	AL Supercomputer DAX Maint	$6,000		$0		$0		$0	
	Cisco SmartNet Maintenance	$3,500		$3,500		$3,675		$3,859	
	Enterasys Wireless Maintenance	$6,800		$6,800		$7,140		$7,497	
						$0		$0	
Network Software	Drive Vaccine	$1,700		$1,700		$1,785		$1,874	
	Misc Network Software	$5,000		$5,000		$5,250		$5,513	
Subtotal		$23,000		$17,000		$17,850		$18,743	
New Initiatives									
Network Upgrades (Infrastructure)									
	SAT Brocade switch upgrades/intallation		$81,061						
	Wireless network mapping		$4,000						
	Wireless network upgrade				$52,000				
	Wireless maintenance					$6,240		$6,490	
	Network redundancy build out				$7,000		$7,350		$7,718
	Network Technical support				$8,750	$8,750		$8,750	
Network Upgrade (Bandwidth to Internet)	Review Off-site Internet Speeds								
	Upgrade RSA to 20 Mbits	$11,100		$14,015		$14,015		$14,015	
Subtotal		$11,100	$85,061	$14,015	$67,750	$29,005	$7,350	$29,255	$7,718
Total Fixed		$34,100		$31,015		$46,855		$47,997	
Total New			$85,061		$67,750		$7,350		$7,718
Total All			$119,161		$98,765		$54,205		$55,715

Systems Budget
2012-2016

Objectives	Description	FY-2012-13 Fixed	New	FY-2013-14 Fixed	New	FY-2014-15 Fixed	New	FY-2015-16 Fixed	New
Maintain Servers/Storage/Services						Fixed based on a 4% increase		Fixed based on a 4% increase	
Hardware/software maintenance	Barracuda (Maintenance)	$16,000		$16,000		$16,640		$17,306	
	Barracuda Offsite Backup Storage	$8,400		$8,400		$8,736		$9,085	
	Fujitsu SAN (10 T) (maintenance)	$5,000		$5,000		$5,200		$5,408	
	Incidental Contractual Services	$10,000		$10,000		$10,400		$10,816	
	LogMeIn Remote Access (service)	$5,300		$5,300		$5,512		$5,732	
	Symantec Backup Exec (maintenance)	$5,040		$5,040		$5,242		$5,451	
	TBS Print Solution (maintenance)	$3,200		$3,200		$3,328		$3,461	
	Verisign Security Certificates (Annual license)	$1,700		$1,700		$1,768		$1,839	
	VEEAM VM Backup Maintenance	$2,700		$2,700		$2,808		$2,920	
	VMware Maintenance	$3,500		$3,500		$3,640		$3,786	
	Runner Technologies (Annual fee)	$2,600		$2,600		$2,704		$2,812	
	6 NAS @ $700 each	$0		$0		$0		$0	
	Subtotal	$63,440	$0	$63,440	$0	$65,978	$0	$68,617	$0
Banner/ERP applications/service maintenance	Alchemy NetCOBOL (license maintenance)	$2,050		$2,050		$2,132		$2,217	
	HP Left Hand SANs 1.3 T (2) -Hardware Maintenance	$2,704		$2,704		$2,812		$2,925	
	Alliance ST (Jukebox Service)	$3,200		$3,200		$3,328		$3,461	
	Banner Maintenance	$108,362		$108,362		$112,696		$117,204	
	Ellucian Xtender Imaging System maintenance	$11,000		$6,670		$6,937		$7,214	
	Evisions Argos, E-check, Tax, & Mask	$9,500		$9,500		$9,880		$10,275	
	Nelnet Payment Service	$27,295		$27,295		$28,387		$29,522	
	Oracle Maintenance (License Maintenance)	$85,000		$85,000		$88,400		$91,936	
	Oracle Tru-Up Licenses ($60,000)*	$0		$0		$0		$0	
	Think Education (scholarship)	$1,323		$1,323		$1,376		$1,431	
	Subtotal	$250,434	$0	$246,104	$0	$255,948	$0	$266,186	$0
Web	IBS Web Services Contract	$60,000		$60,000		$62,400		$64,896	
	Subtotal	$60,000	$0	$60,000	$0	$62,400	$0	$64,896	$0
Servers/Storage	40 Physical Servers - replace 3-6 annually								
	12 Standalone ($11,000 each=$132,000) replace 2 anually				$22,000		$22,000		$22,000
	14 Blades ($6,000 each=$84,000) (replacement/growth)				$12,000		$13,200		$14,520
	2 HP Left Hand SANS ($25,000) (replacement/growth)						$40,000		$40,000
	Mobile Security Software		$6,500						
	MS Exchange 2010 Test Environment		$15,000						
	UPS (Battery backups data room)		$12,000		$4,000		$4,160		$4,326
	Subtotal	$0	$33,500	$0	$38,000	$0	$79,360	$0	$80,846
New initiatives/projects	Degree Works Implementation								
	Hardware - IBM Blade Center w/two (2) HS22 servers:				$34,000	$4,000		$4,160	
	Software Vmware, Vmware backup, Red Hat Annual				$11,000				
	Linux Training				$7,400				
	Unix Platform conversion								
	Hardware - IBM Blade Center						$60,000	$6,000	
	Red Hat Annual Licenses						$10,000	$10,000	
	SharePoint Intranet								
	Hardware -								
	Training				$2,000				
	Subtotal	$0	$0	$0	$54,400	$4,000	$70,000	$20,160	$0
Total Fixed	Total Fixed	$373,874		$369,544		$388,326		$419,859	
Total New	Total New		$33,500		$92,400		$149,360		$80,846

A History of IT at Athens State University

The use of technology has grown considerably at Athens State University over the past decade. Recent initiatives indicate the relative importance of technology for the University. A review of the history of each unit, IT, Network, Banner, Distance Education, and OIPRA is provided to provide a background for how technology and technology based services have evolved at the University.

Information Technology

Information technology services in the 1990s consisted of decentralized technology support model with each college having their own computer technician, a Library audiovisual specialist, and a central Management of Information Systems (MIS) for administrative services and reporting. The level of support for the colleges ranged from poor to okay with little or no sharing of knowledge or experience across the colleges. The network services consisted of an IBM AS/400 midrange computer system serving student information, financial aid, finance, and payroll, and seven Novel Netware servers providing shared network resources, web server, and email services. The personnel to support technology at Athens State University consisted of three (3) college technicians (one providing Netware Administration for the School of Sciences' network server), one (1) MIS director/RPG programmer with, two (2) RPG programmers, one (1) microcomputer specialist that also served as a Netware Administrator, one (1) Business professor providing Netware Administration for the School of Business' network server, and a part-time secretary shared with the Library. The Library had one (1) audiovisual specialist that managed the technology in the classrooms.

In 1999/2000, the MIS director left the University as it began its upgrade to an NT based student, financial aid, finance, and payroll system (Banner). The new director consolidated all technology support into a single department, excluding the Library audiovisual specialist, and renamed the department Network Services[1]. The Director of Network Services brought the management and maintenance of all computer labs into the department, thus relieving the colleges from having to maintain their labs. During this consolidation, one technician moved to faculty status which left the department with a total of eight (8) members (one director, one part-time secretary, two RPG programmers, one microcomputer specialist with new responsibilities as web master, and two full-time and one part-time technician). The newly formed Network Services department continued the upgrade to Banner and support of the University's technology and reporting needs (IR). Three months after assuming the position, the new director left, with no formal notice. The newly reduced team moved ahead with the implementation of the Banner system, conversion of the AS/400 data for use in Banner, and continued its everyday support of the University.

Over the last 13 years the IT Department has accomplished, experienced, and supported the following:

- Retired and removed the AS/400 from the campus
- Enterprise-wide anti-virus properly configured and deployed for servers and workstations

- Part-time secretary position moved to Alumni in 2002 with a work-study providing IT secretarial support until a new secretary position was authorized and filled in 2005
- Email spam filtering implemented, upgraded later for spam and virus filtering
- Self-hosted WebCT implemented to support online classes, later moved to self-hosted Blackboard Standard, upgraded to Enterprise, and eventually moved to hosted services with Blackboard
- Library audiovisual specialist moved to IT department
- Backup solution upgraded to a stand-alone, multi-tape device, later upgraded and expanded to disk backup and multiple tape libraries, and eventually expanded to include a backup appliance with cloud storage of mission critical backups (Banner and email) and non-mission critical backups store in safety-deposit box at bank
- Upgraded Banner hardware three (3) times to accommodate growth and resource needs (contractor assisted)
- Web site moved to University Advancement with development and maintenance contracted out
- Open-source student and adjunct email server deployed (contractor assisted), later moved to Novel GroupWise (contractor assisted), and then to hosted Microsoft Live@edu
- Firewall deployed with a second firewall deployed a year later for failover capability
- Institutional Research moved to Academic Affairs
- Three new PC technician positions created and filled over a six (6) year period
- Help desk application purchased and deployed, later replaced by internally developed help desk which provided more flexibility
- Novel Netware servers condensed from a high of 12 to three (3) (contractor assisted)
- Batch email archiving implemented and later upgraded to real-time archiving
- Web filter deployed to reduce undesirable traffic
- The department was renamed Information Technology
- Developed assessment and survey application for IR
- Developed telephone log for tracking calls and identifying trends
- Wireless service implemented in 2008 (contractor assisted w/ configuration)
- Software analyst position created and filled in 2008
- Microsoft Active Director and clustered Exchange 2007 environment created and all faculty, staff, and students migrated from Novel Netware services (no external assistance)
- Coordinator of Distance Learning moved to new department focused on providing distance learning support to faculty and students
- Created virtual environments to better manage the physical environment and continue to support the need for application server growth, later clustered physical servers to provide failover support of the critical virtual services
- VPN evaluated and deployed to provide secure access back into the network
- Deployed and supported 22 multi-computer teaching (included in count below)/testing/tutoring/open computer labs, all with Internet connectivity
- Deployed and supported over 42 smart-classrooms, conference rooms, meeting rooms, and presentation areas, all with Internet connectivity

The IT department has implemented many of the standards and best practices for network security, backup, redundancy, cross training, and staff development. IT is responsible for all central computing and storage resources, network management and configuration, database management, Banner system maintenance and operation, technology classrooms, academic computing labs, desktop computing for faculty and staff, and help desk services. Resources are made available in the evening to serve the needs of faculty in relation to instruction space technology. There is an up-to-date disaster recovery plan that is thoroughly documented with assigned responsibilities, procedures, and details of the infrastructure architecture and configuration.

Network

Until the end of the 1990s, the University operated a publically accessible (no firewall) local area network (LAN) with a token-ring and Ethernet star topology with fiber connectivity between the buildings, and a 1.5Mbps T1 gateway to the Internet. The network services were provided by one AS/400 and seven Novell Netware servers in five locations. The AS/400 and its token-ring were retired in the summer of 2001.

The University network went behind a firewall for the first time in 2003 providing a more secure network environment. In 2004, the University purchased additional bandwidth to increase the gateway speed to 7.5Mbps. Alabama Supercomputer increased the base service to all their customers to 10Mbps in 2006, then to 20Mbps in 2009, and to our current 50Mbps in 2011. The University just completed an upgrade in spring 2013 of its fiber backbone replacing the multi-mode 100Mbps with a single-mode 1Gbps backbone in to support a telephone upgrade to VOIP (voice over IP) and VDI (virtual desktop infrastructure).

Banner

In the late 1990s, Athens State College used an in-house developed application running on an IBM AS/400 for student services, finance, and payroll. Student applications, registration, and payments were all done manually and in person, with few exceptions. The University purchased SCT Banner in March 2000. Finance and HR were the first to go live January 2001 with Student and Financial Aid following that summer for the fall semester (AY2002) with manual registration. In October 2001, online registration began in October 2001 for the spring 2002 semester and online payment was implemented Sprin2002.

Transition to the Banner system was not a seamless process. Several impediments included the departure of the project coordinator at the University in the middle of the project and the choice to reduce implementation costs by eliminating some of the services provided by the vendor. This created a heavy burden on functional areas to learn a completely new system while continuing to do business with the old system. Additionally, there was a lack of the critical preparation necessary to move Banner responsibilities to the functional areas with MIS playing less of a role.

This resulted in a minimally implemented system that did not deliver the efficiency and reduced workload that it was intended to provide.

A change in leadership at the University has allowed an open discussion of Banner issues and in the past two years, numerous consultants have been brought in to complete the implementation of the system features and functions that will make tremendous improvements in the functional areas.

Distance Education

The first online course taught at Athens State in 1998. Between 1998 and 2001, courses were offered online using static web pages with Java-based chat rooms with no real goal in mind. As interest began to build, WebCT was licensed in 2001 as part of the Banner initiatives and replaced the static web pages with a true content management system (CMS). WebCT was locally hosted and was quite difficult to stabilize and run smoothly. In 2002, the decision was made to transition to Blackboard. Training sessions on Blackboard were conducted in November 2002 and classes went live in January 2003. Blackboard was quickly adopted for both online and traditional classes. In 2005, the College of Business began to offer fully-online degree programs.

OIPRA

Between 2004 and 2007, the University engaged in significant efforts to strengthen its institutional planning, research and assessment capabilities through several strategic actions. In 2006, the Office of Institutional Planning, Research and Assessment (OIPRA) was established. Through OIPRA, processes were developed to collect and use assessment data throughout the University with standards, procedures, and timetables implemented to guide the measurement and documentation of institutional effectiveness. The Assessment Management Online System (AMOS) was also developed to track the assessment process, serve as a document management repository and control system.

CIO

A consultant was engaged in December 2011 to review the staffing and effectiveness of the IT, OIPRA, and OASIS units. The final report included the recommendation that Athens State should create a central administrative position to provide leadership in these areas and to provide input and recommendation to the President on IT related issues. In August 2012, the first CIO was hired.

The goals for IT, OIPRA, OASIS, & CIT have been developed based on the common support required by a university.

Issues and Initiatives

Numerous issues and requests pertaining to IT, OASIS, CIT, and OIPRA have either been communicated to the CIO by faculty, staff, and administration or observed by the CIO.

The following table organizes the initiatives/issues, the tasks required, and the current status in ten areas within IT, OASIS, CIT, and OIPRA: general, staffing, processes/procedures, the network, academic computing and distance education, audio/visual resources, user services, data management & reporting, Banner/ERP resources, and future initiatives.

Area	Initiatives/Issues	Tasks	Status
General	IT planning & governance	Establish Technology Advisory Committee	Complete
		Establish IT Strategic Plan Components	Underway
		Define service level agreements between IT and users	Underway
		Inventory & review current desktop computing hardware/software	Complete
	Desktop computing management	Implement a spare "PC" program to replace non-functioning desktops	Underway
		Develop campus standards for hardware purchases.	Technology advisory Committee
		Standardize desktop setup for all users to reduce virus/malware and improve efficiency.	Under review
		Assess current desktop hardware levels against present software requirements.	Underway

Area	Initiatives/Issues	Tasks	Status
		Implement a desktop system replacement cycle.	Under review
	Mobile Computing	Athens website	Mobile version established
		Blackboard mobile application	Under Review (TAC)
		Mobile device management	Under Review
		Wireless network plan	TBD
	Account provisioning/ user account management	Review current account provisioning processes. Formalize account provisioning/de-provisioning through all areas of the University. Formalize processes to provision desktop computer & phone resources for new employees.	Under review
	Training	Establish yearlong training schedule for University staff in the areas of security, privacy, desktop applications and file management.	Training curriculum is being developed.

Area	Initiatives/Issues	Tasks	Status
	Security	Improve IT the security culture at Athens State University. Develop policies for end users, academic lab environments, applications &services, and systems & network security	Policies are being written and put forward for approval by the President, cabinet, and administrative council.
		Limit Banner ERP access based on job duties and generally accepted methods.	Access has been modified – restricted to job area.
		Provide formal information to employees about job responsibilities in relation to data privacy and non-disclosure requirements.	Under review
	Applications	Review applications developed in-house by one person, including: Assessment Management (AMOS), Survey development tool (AIMEE), Advisement and transfer credit management (SAM) Identify the functions provided by each of these systems.	Third party applications are being investigated for each of these systems.
	Intranet	The University is in need of an "intranet" to store and make accessible official University documents and information that does not need to be publically accessible.	A low cost solution is being investigated.

Area	Initiatives/Issues	Tasks	Status
	Technology quality	Establish a policy that technology must be ordered then implemented upon receipt. Improve web content in all areas reporting to the CIO for students, faculty and staff use. Explore web content management systems to distribute the workload for web maintenance.	Staff has been assigned work in each of these areas.
Staffing	IT/OASIS/OIPRA	Review current staffing needs and shift staff where appropriate. .	A re-organization plan has been recommended. See the section: Reorganization later in this report.
	MIS	Establish the functions and assign duties to staff to handle MIS tasks formally.	Underway
	Staff efficiency and organization	Review and align staff reporting to CIT to improve efficiency in the delivery of services and the maintenance of technological currency	A re-organization plan has been recommended. See the section: Reorganization later in this report.
Processes/procedures	IT related client services	Encourage the use of the helpdesk and other processes to log service requests of staff to improve efficiency and service level quality.	CIO has requested that all IT service providers review and recommend modifications to current processes

Area	Initiatives/Issues	Tasks	Status
		Establish user expectations of IT, OASIS,& IR through service level agreements and communicate to stakeholders.	Service level agreements are being reviewed.
		Establish a front-facing, user accessible, student centered help desk.	Reorg will allow staff to be assigned responsibilities. A campus location is being investigated.
		Review existing policies and recommend policies/procedures required for IT and other area functions.	Reorg will allow staff to be assigned responsibilities. A physical location is being investigated.
	Network & Security	Review existing policies and recommend policies/procedures required for campus wide security and network management	Procedures and policies will be developed that respond to the Board requirement for a functional and secure information technology environment for the campus.
Academic Computing & Distance Education	Classrooms and computer lab maintenance, operation, and support	Inventory all technology resources in learning spaces – share with Academic Affairs	Completed
		Address standards in each classroom including number of seats, technology configuration, processes used.	Underway
		Review academic spaces routinely – proactively manage.	Underway

Area	Initiatives/Issues	Tasks	Status
		Improve technology usability in classrooms – add labels with directions/information for each instructor podium.	Completed 10/2012
		Establish a replacement cycle for all existing equipment used by students	Included in 2013-14 budget
	Online learning system/distance education	Review utilization of existing online learning management tools.	Technology Advisory Council
		Rank the online learning environment using the SLOAN consortium criteria	Underway
		Plan academic centered e-learning symposium with committee	Completed January 2013
		Develop criteria for Request for Proposal on learning management system (Blackboard).	Meeting Scheduled
		Establish criteria for LMS upgrades	Assigned to technology advisory committee
		Determine quality of help desk services currently contracted for distance education students	Under review
AV resources	Large venues/conference rooms	Two spaces have been identified as requiring updates in AV – McCandless & Gym	Proposal received from vendor 6/1/2013

Area	Initiatives/Issues	Tasks	Status
Network	Network Infrastructure	Network upgrade and equipment replacement	Completed May 25, 2013
		Review Internet connection speeds on Main Campus, Redstone, Center for Life Long Learning, AMSTI	Underway
		Identify opportunities to connect AMSTI & CLL to fiber.	Telecom Manager is working with Limestone County to identify.
	IP telephone system	Solicit proposal from ShoreTel	Complete
		Upgrade Network	Completed June 2013
		Plan implementation with IT and Telecommunications	Underway, 6/2013
		Schedule implementation with Shoretel	Scheduled 7/8/2013 Go Live date – August 2
User Services	Help Desk	Unite OASIS & IT Help Desk.	Proposal put forth
		Relocate physical Help Desk	Stakeholders are being consulted
	Web Pages for IT/ASU Online	Improve IT, OASIS, and OIPRA web presence and improve web pages and online resources serving students	Review underway
	Virtual Learning Commons	Solicit input from campus, determine what other schools are doing in this area	Assign to Technology Advisory Committee

Area	Initiatives/Issues	Tasks	Status
Data management & reporting	Gain insight to data management & reporting issues	Determine data integrity issues	Develop data integrity checks (DBA)
		Complete ARGOS training Determine area responsibilities for reporting	Scheduled for July
		Determine business processes used in Banner Student and data associations.	Requested review of issues/implementations completed by Banner consultant (Student)
		Form data/report management task force	Group has been formed and have met three times
		Develop master report schedule	Assigned and completed (OIPRA)
		Develop routine reports that can be run by end users	Established data task force – IT & OIPRA
		Improve response rate for management data and report queries	IT & OIPRA
Banner & ERP related areas	Document Imaging & Management	Stabilize existing x-tender solution and engage new maintenance vendor	Partially completed 3/2013
		Develop campus wide document management plan	CIO will have report September 15.

Area	Initiatives/Issues	Tasks	Status
	Conversion to Unix platform in preparation for Degree works implementation	Determine costs and steps involved	Assigned to IT Director
	Banner XE	Pass through authentication is required – implementation of CAS server will be necessary	Assigned to IT Director
	Banner patch management	Patch management must be implemented.	Awaiting input from the Banner user group
	Data management & report writing	Develop data dictionary of Banner elements used for reporting	Data Mgt group established and tasked to recommend solutions
	Data security/ownership/privacy	Establish data ownership/access policies Establish data ownership/access policies	Under discussions with stakeholders in functional areas
	Multiple Banner instances – development & sandbox	Determine hardware, software, and staff requirements	Assigned to IT Director
	Banner system improvement/consultant	Request functional areas need to review improvements, changes, and lessons learned over the past year with all stakeholders	To be scheduled
	Payment gateway development/standardization	Determine function of current payment gateway product	Consulting with Business Affairs

Area	Initiatives/Issues	Tasks	Status
New initiatives	Support of new academic programs – ie Cybersecurity	Develop list of new technologies and resources that will need to be reviewed and prioritized for next planning cycle.	Recommendations are being solicited from faculty in Computer Science and Management department.

Summary of Issues/Risks/Opportunities

Mission Critical Operations

The central computing and network resources that support Banner, the Blackboard learning management system, electronic mail, and the IT help desk are considered mission critical resources and services at the University. An uptime goal of 99.97% requires appropriate hardware and software resources along with a competent and reliable technical support staff.

Currently, mission critical systems are operationally stable. However, budget planning for upgrades and replacement of hardware will be an ongoing requirement to keep central computing and network resources functioning within the operational tolerances and service levels required by students, faculty, and staff. Also, there is no Internet redundancy for the main campus or centers and no failover website in place.

Policies/Procedures

The University has limited policies and procedures in place for IT related matters. Specific policies and procedures are necessary to maintain the security profile of the IT operations including End User & Desktop computing, Systems & Network Security, and Academic Technology Environments.

Applications/Services

- A number of applications have been developed in-house by one person, including assessment management system (AMOS), survey development tool (AIMEE), and advisement and transfer credit management system (SAM). Maintenance of these systems is an ongoing concern and planning to replace these systems with commercial products is advised.
- The campus network is managed by two departments – Facilities and IT. The physical and logical network must be managed as one system under IT.
- Technology resources have been allowed to remain in a state of dysfunction without resolution.
- There is no plan for campus wide document management and intranet functions.

Staffing

- The IT department has limited staff to cover the network and systems area. These are mission critical areas that must have qualified and available staff to address daily work and respond to system failures.

- The IT department uses staff assigned to other functions to carry out the tasks of a management information systems (MIS) unit because there is no formal assignment of staff to this area.

Client Services

- The Web content in the IT and Academic Support areas need to be improved for student, faculty and staff use.
- A front-facing, user accessible help desk is needed.
- Service expectations must be established based upon the available resources and communicated to the user community
- Service requests are handled through phone calls directly to IT staff many times through e-mail when they should go through a more formal and defined process.
- User expectations of IT, OASIS, or IR service levels are not established and communicated to stakeholders.

Desktop Computing Resources

Desktop computers are on almost all faculty and staff desk at Athens State. A functional, up-to-date computer system in the office is a necessity for all employees at the University.

- Approximately 71% of the desktop computers used by students and 66% used by faculty, and staff need to be replaced. Many desktop computers are more than six years old and some as old as 9 years. The desktop computers are out of specification for current operating system requirements and software applications run very slowly.

- In student labs and technology classrooms, 29 of the 43 instructor computers (64%) and 176 of the 245 (72%) lab computers are seven to nine years of age and need to be replaced. Approximately 34% (12) of the projectors in technology classrooms are eight years old and will need to be replaced in the next two years.

- Because there has been no formal desktop replacement cycle in place for both the academic and administrative area, replacements have been deferred for a considerable time. With 63% of all computers on campus to be replaced due to age, there will have a tremendous budget impact to replace all that are recommended in one budget cycle. However, deferred replacement of equipment affects the efficiency of faculty and staff due to slow systems and equipment failures.

Meeting Student Expectations for Technology Resources

Athens State, like most other colleges/universities, is attempting to keep pace with 21st century student technology demands. The Educause top 10 IT issues identified by colleges and university includes several issues brought on by the consumerization of technology including the demand for wireless connectivity, transforming the delivery of services with technologies, and the growing demand for online education.

Identified technologies used by student that will impact the campus are:

- Wireless network located in areas where there are classrooms and student activities.
- Mobile interfaces for Blackboard and Banner Self Services.

The IT Security Profile of the Campus

The IT security profile of the University has been reviewed and three issues are seen as priorities:

- Prior to September of 2012, user access levels to the Banner system were assigned without consideration of roles and responsibilities and allowed all users of the system to have access to much of the data. These access levels were pulled back to more appropriate levels based upon decisions of administration in the functional area, thus strengthening data access security. Further documentation and assignment of roles must be completed to provide data security.
- Additional firewall protection between the mission critical, central resources and the outside are needed and will be implemented during the 2013-2014 fiscal year.
- Data security and management policies and procedures are necessary to provide the appropriate framework and guidelines for data access controls.

Banner & ERP Related Applications

- The annual cost of Banner and the applications used with it for application maintenance alone was $250,434 in 2012-2013. This amount only supports the current configuration without hardware upgrades.
- Additional features for Banner have been requested by the functional areas for the 2013-2014 year, including an additional instance of the Banner database for development work space.
- The Degree Works application, scheduled for implementation in 2013-2014 fiscal year, requires the Unix operating system. The current Banner implementation runs on a Windows

platform. Adding another operating system to support for a mission critical application will be a challenge for the IT staff.

- During 2012 – 2013, a number of Banner consultants were employed by the Student and Financial areas to review, modify, and implement system functions and business processes necessary to fully deploy the Banner system at Athens State. There is a potential to lose the investment made for improvements by the consultants if recommended business processes are not implemented through a campus wide adoption of the Banner functions and processes.

Future Technology Needs for the Campus

Several areas should be explored to determine if more efficient and cost effective solutions can be implemented. Technology can be used to leverage the position of the University as a low-cost, quality, institution of higher education. Students have expectations that the technologies they demand will be ubiquitous. Some of the technologies that should be explored are:

- Web content management system
- Mobile computing strategies
- Cloud computing and outsourced technology services
- Dashboards and business intelligence
- Enhanced learning management system tools
- Alternative course delivery methods

Improvements/initiatives

A number of initiatives have been introduced in detailed in the Issues/Initiatives/Concerns section of the IT Strategic Plan. In summary, they are:

- Improve the efficiency of existing staff. Review current processes and techniques used and plan to improve efficiency. Efforts toward this will be carried out with the staff reorganization plan.
- Continue to downsize the physical footprint of the server farm through virtualization.
- Analyze whether IT staff should do internal development of applications when there is a less expensive, easily maintained, off-the-shelf application that can be used instead.
- Establish a central help desk and log all requests in order to gain insight on where there are problems and appropriate solutions can be implemented.

- Review computer lab utilization and determine if the number of workstations is appropriate for the on campus student population.
- Determine how mobile computing can be leveraged to decrease the cost of equipment.
- Look at the budget implications today for equipment renewal and replacement and requested new initiatives.
- Determine if off campus resources can be a cost effective solution for CPU cycles and storage space.

Banner Information

June 21, 2013

Contributed by Debbie Miller, DBA
December 2012

Banner Security

Staff Authorization to Banner forms and processes

Banner (both Self Service and Staff access) password standards

Authorization request system formally adopted (Reviewed routinely for changes in reporting needs)

Reporting

Scrutinize the existing reports for use, authorization, consistency, etc.

Create a report test environment – bring over all existing reports, link to test database, once approved move to production mode

Procedures to develop and test new reports in this test environment before moving them to production. Formally review all report for consistency, efficiency, and, of course, accuracy

Development Standards

Adopt a standard approach to new development.

All proposed new development must be appropriately vetted – (who authorizes, why needed, is there another solution)

Formal naming standards for tables and object standards

Review software deployment options – move away from total dependency on Oracle

Warehouse to MySQL

Adopt a new development environment – perhaps Grails and Groovy to develop new applications

Platform

Move from a Windows platform to a Linux platform

Banner Information

June 21, 2013

Deb Miller has been tasked to provide an ideal Banner hardware environment based on best practices and recommendations to address:

- Production delivery
- Test and development delivery
- Ancillary needs
- Recommended

What is needed to bring Banner PROD8 up to the same level as Banner TEST8:

- Graduation Application needs to be moved to PROD8 (moving, should be complete today, the components not ready for PROD8 can be saved)
- Stakeholders okay the patches and upgrades in Banner TEST8 for move to PROD8:

Module	Current PROD8 Version	Updated Version
AR	8.4.1	8.4.4
General	8.4.2	8.6
General Web	8.4	8.6
Payroll	8.8	8.9
Position Control	8.8	8.9
Student	8.5.5	8.5.7
Web Tailor	8.5	8.6

- Select a date for upgrade (approximately two days of work) – Banner committee discussed among themselves and suggested the period in between the Evisions training, Deb will ask them to select some optional dates when they want it done

Banner Space:

- We have two servers that serve Banner environments for the University:
    - Borc – Prod8:
        - Total space available – 499GB
        - Total space used – 203GB (data)
        - Total space free – 296GB
    - Torc – TEST8 and Caprica, these instances are not archived or backed up daily (limited space):
        - TEST8:
            - Total space available data – 144GB
            - Total space used – 122GB (data)
            - Total space free – 21.9GB
        - Caprica:
            - Total space available – 407GB
            - Total space used – 105 (64GB for data)
            - Total space free - 302

Banner Information

June 21, 2013

Banner Xe:

- Banner Xe is an upgrade for Banner INB, but is not all inclusive and is intended to work alongside Banner 8 (Banner 8 will be supported for an extended period of time because upgrade involves
- See roadmaps below for current and anticipated Banner Xe features
- Currently, when accessing Banner Xe new features:
    - Users select the feature
    - Authenticates into Banner Xe
    - User presented a menu
    - If user wishes to use a feature other than the one they authenticated into, the server will prompt them to re-authenticate when the select a different feature
- A CAS (Central Authentication Server) with BEIS (Banner Enterprise Identity Service) and SSO-Manager will eliminate re-authentications

Technology Resources

The CIO has responsibility for three departments at the University including IT (information technology services), OASIS (academic support and instructional systems), and OIPRA (institutional planning, research and assessment).

The CIO has reviewed the hardware & software, physical facilities, network infrastructure, policies and procedures, user services, staff responsibilities & workloads, reporting lines, and budget for all three departments. This section of the plan will include a description of the physical resources, the services provided, and an overview of the staff in each department.

The technology infrastructure of a campus requires continuous maintenance to sustain its viability. Factors that influence infrastructure health include the age and processing capacity of all equipment; redundancy and backup capabilities that meet mission critical requirements; software requirements matched with appropriate hardware capacity; storage resources sized appropriately for expansion and growth; and the physical network age, speed, cable conditions, logical network configuration and manageability.

Servers/Storage, Network, Academic, & Desktop Resources

Athens State University includes a main campus, the Alabama Center for the Arts, and three centers that deliver classes and house faculty and/or staff. This table includes the central hardware resources and academic facilities used at each of the sites.

	Central resources	**Network**	**Academic Resources**	**Faculty/Staff Desktop Computers**
Main Campus	40 Physical servers 37 Virtual servers 13 terabytes of online storage Technicians & system administrators Help Desk	Fiber Distributed Star Configuration 100 megabit backbone (upgraded to 1 Gbit in May 2013) 10 megabit switched copper distribution to the desktop 50 megabit connection to the Internet – Alabama Supercomputer 35 switches 2 PIX Firewalls Multimode & single mode fiber optic cable between each building	33 Tech Classrooms 8 Tech Classrooms /Teaching labs 5 Dedicated Computer Labs 271 Desktop Computers	150 desktop computers 382 laptop computers

		500 network jacks		
AMSTI		Wireless network	2 workshop /classroom spaces	6 desktop computers (offices)
Alabama Center for the Arts		Wired network	One 4 Seat Computer Lab - 4 Macs	4 desktop computers (offices)
Redstone Arsenal		20 Mbps Internet Access – Alabama Supercomputer	Two – 21 Seat Computer Labs	1 Desktop Computer (Office)
Hanceville			4 Tech Classrooms One - 24 Seat Computer lab	2 Desktop Computers (Offices)

Server Room

Founders Hall, Powers Annex, Second Floor
Redundant air-conditioning units
Power Generator , testing monthly, bi-annual maintenance
No power conditioner
No fire suppression system
False ceiling, no fire breaks between server room and adjacent hallway and offices
Limited physical security - accessed by non-technology staff

Servers

As of the spring of 2013, the server farm has equipment at various ages and specification levels. Equipment has been kept somewhat current and stable and does support the mission critical systems. An ongoing replacement cycle is necessary to replace servers 4- 6 years. Figure 1 shows a list of server, ages, and function.

Server Age			
	Bought	Age in years	
Licensing server (Imaging)	2006	7	
Backup Server (Dell)	2006	7	
Backup Server (Gateway)	2007	6	
DMZ server	2007	6	
IBM Imaging server	2009	4	
IBM Blade Center			
IBM Blade Center	2009	4	
Blades 1 through 5	2009	4	Domain controllers, Hub for email
Blades 6 through 10	2009	4	Email nodes, VM management, VM
Blades 11 through 12	2010	3	Clustered VM
Blades 13 through 14	2012	1	Clustered VM
Borc (Banner Oracle PROD)	2010	3	
Torc (Banner Oracle TEST)	2010	3	

Figure 1-Server Age

Disk storage

Disk storage for general server function, electronic mail, Banner, user files, and web site are provided through both Storage Area Network (SANs) and NAS devices. A total of 20 TB of storage resource now supports the functional requirements of the campus users.

HP Left hand SANs 2009 – RAID with 1.2 TB total storage
Fujitsu SAN 2008 with 6 TB – Exchange
Fujitsu SAN 2009 with 12TB Exchange, backups, virtual servers, private/shared drives

Figure 2 – Disk Storage Ages/Capacity

Network

The network infrastructure in place at the beginning of 2013 was established approximately 11 years ago. The hardware that comprises the physical network has aged out. The implementation of the new VoIP telephone system requires an upgrade of the network to a 1 gigabit backbone. This upgrade was completed in May 2013. The telecommunications manager in Facilities has developed a plan for network redundancy on campus. Details of the redundancy and additional build out of the network will be added as an appendix in subsequent updates of this plan.

Wireless Network

The wireless network was not originally designed based upon a mapping of the campus that would have identified specific wireless service needs of the academic and special events. The expectations of users far exceed the capability of the existing wireless system.

The existing wireless system requires user authentication using the University issued domain username and password. Open guest access is available upon request.

Systems, Network, and Desktop Applications

The following table includes the network, Banner, Blackboard, and web, and resources that support the Athens State campus.

DHCP Server DNS Server AD Domain Controllers SCCM Management Server System Center 2012 Forefront Endpoint Security Windows Update Server Exchange 2007 Client Access Server HUB Transport Server Email Web Access Server ActiveSync Server Mailbox Database Servers Network Drives (Individual and Shared) Certificate Server Office Communicator Server (IM) SCOM 2007 / Windows Updates Server / Forefront SpiceWorks Server (audit) SQL Test Server VMware Management vSphere Management Backup Server	IIS Web Server CLL internal & external servers Banner Job Submission Server Data Warehouse Server Blackboard account creation server BSD Management Server for switches and firewalls P-Counter Print Vending Server Proxy RADIUS Server (Wireless authentication) Weblogic and Fusion MiddleWare Endpoint Wireless (RASM) Management Server Drive Vaccine Server Groopz Server Microsoft campus license for Office and Exchange SPSS SAP Other academic software supporting computer science, art graphics, and business applications	Banner Mobile App Server ASU Backup Servers Barracuda Backup Server Backup to Off-Site Facilities Email Archive Server Web Filter:Web & Virus & MalWare filtering Server Spam Filter SMTP/Edge/Relay server and Spam & Virus & MalWare filtering Server VPN Server: VPN Access Server Extender Imaging System Server / Plasmon Optical Media attached Banner INB Test Banner Production Server Oracle Database Server Banner SSB Server Banner TEST/ Database Server Network Attached Storage Banner HP Storage Area Network Main and Backup Virtual Server Fujitsu Storage Area Network QuikPay Production Payment and eBill Server

Figure 3 – Network & Systems Applications

Technology Expenses

8/15/2013

ORG: 063320	$ 588,855.00	$ -	$ 588,855.00	
Maintenance of Licenses/Services	Budget	Actual	Difference ($)	Difference (%)
AL Supercomputer T1 to RSA Maint	$ 7,000.00		$ 7,000.00	100%
AL Supercomputer DAX Maint	$ 6,000.00		$ 6,000.00	100%
Alchemy NetCOBOL	$ 2,050.00		$ 2,050.00	100%
Alliance ST (Jukebox Service)	$ 3,200.00		$ 3,200.00	100%
Banner Maintenance	$ 108,362.00		$ 108,362.00	100%
Barracuda Maintenance	$ 16,000.00		$ 16,000.00	100%
Barracuda Offsite Backup Storage	$ 8,400.00		$ 8,400.00	100%
BSC Imaging System	$ 11,000.00		$ 11,000.00	100%
Cisco SmartNet Maintenance	$ 3,500.00		$ 3,500.00	100%
Drive Vaccine	$1,700.00		$ 1,700.00	100%
Enterasys Wireless Maintenance	$ 6,800.00		$ 6,800.00	100%
Evisions Argos, E-check, Tax, & Mask	$ 9,500.00		$ 9,500.00	100%
IBS Web Services Contract	$ 60,000.00		$ 60,000.00	100%
Incidental Contractual Services	$ 10,000.00		$ 10,000.00	100%
LogMeIn Remote Access	$ 5,300.00		$ 5,300.00	100%
Microsoft Campus License	$ 20,085.00		$ 20,085.00	100%
Misc Network Software	$ 5,000.00		$ 5,000.00	100%
Nelnet Payment Service	$ 27,295.00		$ 27,295.00	100%
Oracle Maintenance	$ 85,000.00		$ 85,000.00	100%
Runner Technologies	$ 2,600.00		$ 2,600.00	100%
Symantec Backup Exec	$ 5,040.00		$ 5,040.00	100%
TBS Print Solution	$ 3,200.00		$ 3,200.00	100%
Think Education (scholarship)	$ 1,323.00		$ 1,323.00	100%
Verisign Security Certificates	$ 1,700.00		$ 1,700.00	100%
VEEAM VM Backup Maintenance	$ 2,700.00		$ 2,700.00	100%
VMware Maintenance	$ 3,500.00		$ 3,500.00	100%
Total Maintenance	**$ 416,255.00**		**$ 416,255.00**	**100%**
Upgrades/Personnel Needs	Budget	Actual	Difference ($)	Difference (%)
Library 114 Teaching Lab	$ 21,600.00		$ 21,600.00	100.0%
Classroom Equipment Upgrade	$ 20,000.00		$ 20,000.00	100.0%
Labs to Windows 7	$ 7,500.00		$ 7,500.00	100.0%
Mobile Security Software	$ 6,500.00		$ 6,500.00	100.0%
Oracle Tru-Up Licenses	$ 60,000.00		$ 60,000.00	100.0%
Network Infrastructure	$ 15,000.00		$ 15,000.00	100.0%
Incidental Repairs/replacements	$ 15,000.00		$ 15,000.00	100.0%
UPS (Battery backups data room)	$ 12,000.00		$ 12,000.00	100.0%
MS Exchange 2010 Test Environment	$ 15,000.00		$ 15,000.00	100.0%
			$ -	
Total Upgrades/Critical Needs	**$ 172,600.00**		**$ 172,600.00**	**100.0%**
Total Expenses	**$ 588,855.00**	**$ -**	**$ 588,855.00**	**100.0%**

Athens State University
FY2013

Distance Learning Expenses

8/15/2013

ORG:	$ 397,383.75		$ 397,383.75	
Maintenance of Licenses/Services	Budget	Actual	Difference ($)	Difference (%)
Acxiom Student Identity	$ 26,250.00		$ 26,250.00	100%
Blackboard Community Sys	$ 28,034.00		$ 28,034.00	100%
Blackboard Course Delivery	$ 43,870.00		$ 43,870.00	100%
Blackboard Data Integration	$ 7,500.00		$ 7,500.00	100%
Blackboard Additional Bandwidth	$ 19,260.00		$ 19,260.00	100%
Blackboard Additional Storage	$ 25,680.00		$ 25,680.00	100%
Blackboard Hosting LS	$ 67,089.00		$ 67,089.00	100%
Blackboard Student Orientation	$ 5,350.00		$ 5,350.00	100%
Global Synergies	$ 5,350.00		$ 5,350.00	100%
NBC Learn	$ 4,280.00		$ 4,280.00	100%
Perceptis	$ 42,800.00		$ 42,800.00	100%
Perceptis Remedy Maintenance	$ 1,284.00		$ 1,284.00	100%
Respondus Lockdown	$ 2,562.65		$ 2,562.65	100%
Respondus Campus-wide	$ 1,813.65		$ 1,813.65	100%
SmarterServices	$ 2,375.00		$ 2,375.00	100%
SmartThinking	$ 2,824.80		$ 2,824.80	100%
SoftChalk	$ 3,210.00		$ 3,210.00	100%
Tegrity	$ 68,474.65		$ 68,474.65	100%
WebEx	$ 1,926.00		$ 1,926.00	100%
Wimba	$ 37,450.00		$ 37,450.00	100%
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
Total Maintenance	**$ 397,383.75**		**$ 397,383.75**	**100%**

Unit Responsibilities & Staffing

Information Technology Department

The service mission of the Information Technology department is to support instruction and business services at Athens State University. This will be accomplished by providing and continuously enhancing the technological and human resources required for the design, implementation, management, maintenance, backup, and security of the central and desktop technology resources.

The Information Technology (IT) department is a rather flat organization with five staff members reporting directly to the director. The director is also the lead technical person on many systems including the network and Banner system management. Most mission critical systems and functions of the department are staffed one person deep. The following are the staff positions in IT.

1 Director, Information Technology
1 Special Assistant to Director
1 Network Engineer
1 Software analyst
1 PC Coordinator
3 PC Technicians
1 Data Base Administrator
1 AV Coordinator

OASIS & CIT

The Office of Academic Systems and Instructional Support (OASIS) and the Center for Instructional Technology (CIT) supports University faculty to find innovative ways of using technology to improve teaching and learning. Staff assists instructors with the use of Blackboard, Tegrity, Wimba and other technologies; promote effective teaching practices; and work with faculty to examine the effects of technology on student outcomes. Technical support is also provided by these units to students using the learning management system and other technologies.

OASIS and CIT each have one staff member assigned to manage and support the learning management system Blackboard and other applications/services described later in this document, course development, and faculty training. The following are staff positions in OASIS and CIT.

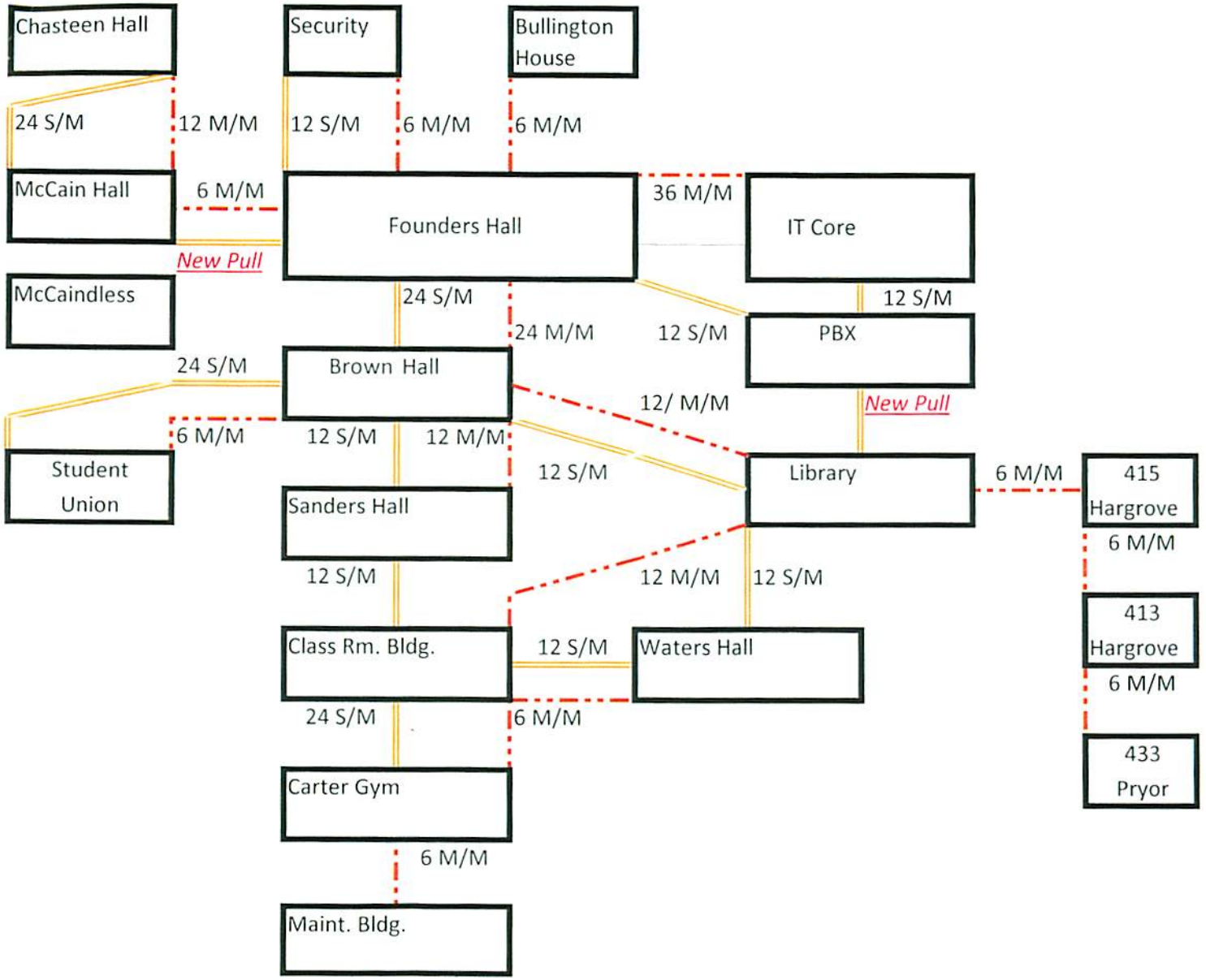
1 Instructional Designer
1 Academic Systems Coordinator

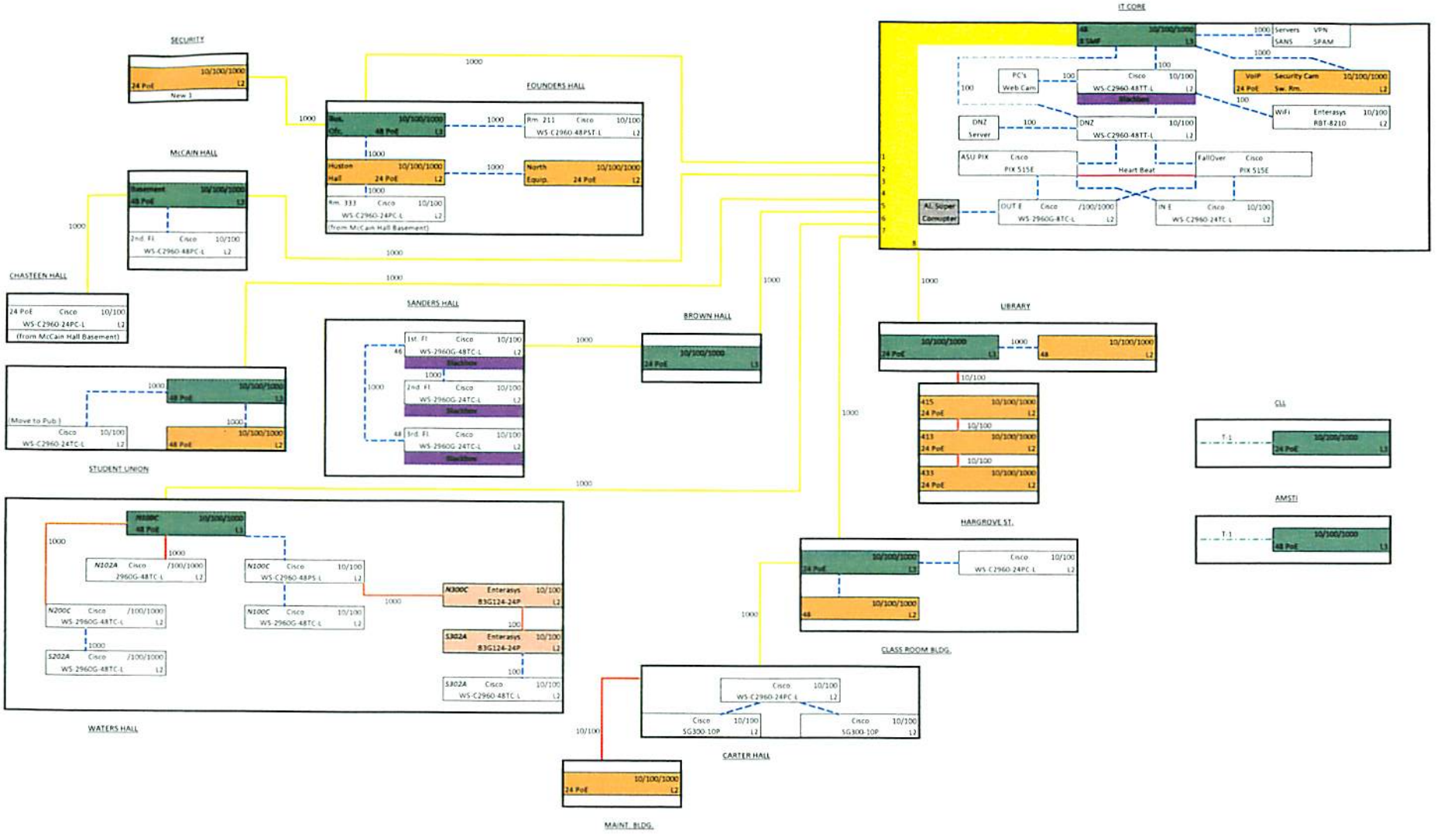
OIPRA

The office of Institutional Planning, Research, and Assessment (OIPRA) is responsible for the common data set used for institutional research for state and federal reporting and management information for the University. OIPRA also uses two primary systems in their work involving institutional assessment management – AMOS and AIMEE. These systems were developed in-house and are supported by one IT staff member. University accreditation efforts are supported by OIPRA including document management and contributions of report narrative pertaining to assessment and institutional effectiveness efforts. The staff positions in OIPRA are listed below.

1 Director
1 Coordinator, Institutional Research
1 Policy Analyst
1 Full-time administrative assistant
1 Part-time administrative assistant

A re-alignment of staff and functions has been recommended to improve efficiency and functional effectiveness of the three units with the primary goal being to continuously improve customer service and maintain the mission critical applications and services provided by each.


Chasteen Hall
Security
Bullington House
24 S/M
12 M/M
12 S/M
6 M/M
6 M/M
McCain Hall
6 M/M
Founders Hall
36 M/M
IT Core
New Pull
McCaindless
24 S/M
12 S/M
24 M/M
12 S/M
PBX
24 S/M
Brown Hall
12/ M/M
New Pull
6 M/M
12 S/M
12 M/M
Student Union
12 S/M
Library
6 M/M
415 Hargrove
Sanders Hall
6 M/M
12 S/M
12 M/M
12 S/M
413 Hargrove
6 M/M
Class Rm. Bldg.
12 S/M
Waters Hall
24 S/M
6 M/M
433 Pryor
Carter Gym
6 M/M
Maint. Bldg.


IT CORE
SECURITY
New 3
FOUNDERS HALL
McCAIN HALL
CHASTEEN HALL
(from McCain Hall Basement)
SANDERS HALL
BROWN HALL
LIBRARY
STUDENT UNION
(Move to Pub.)
HARGROVE ST.
CLASS ROOM BLDG.
CARTER HALL
WATERS HALL
MAINT. BLDG.
CLI
AMSTI
Servers
SANS
VPN
SPAM
PC's
Web Cam
DNZ
Server
ASU PIX
PIX 515E
Heart Beat
FailOver
AL Super
Computer
WiFi
Enterasys
RBT-8210
Security Cam
Sw. Rm.
VoIP
Cisco
WS-C2960-48TT-L
WS-C2960-24PC-L
WS-C2960-48PC-L
WS-C2960-24TC-L
WS-C2960G-48TC-L
WS-C2960G-24TC-L
WS-C2960-48PS-L
Enterasys
B3G124-24P
Cisco
SG300-10P
1000
100
10/100

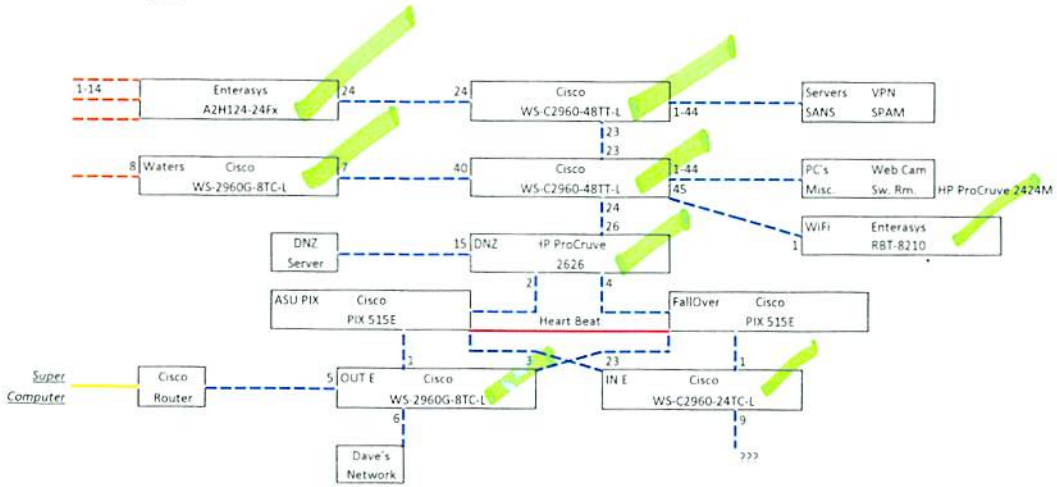
IT CORE

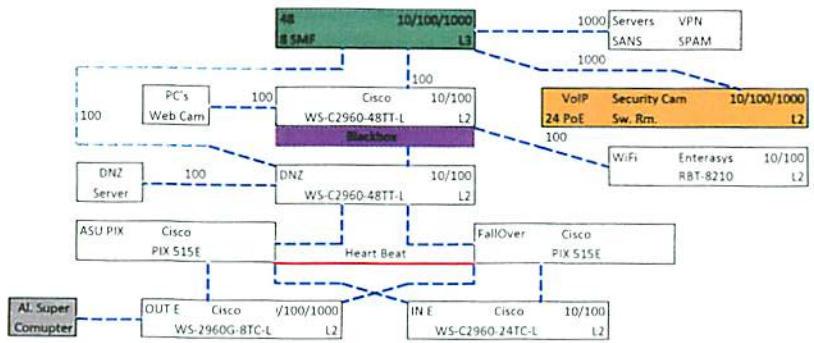
In Place Equipment

		Data Ports	IP Phones
Enterasys FIBER SWITCH	A2H124-24FX		
Cisco Catalyst 2960 To Servers	WS-C2960-48TT-L		
HP ProCruve 2626 DMZ			
Cisco Catalyst 2960 IN E	WS-C2960-24TT-L		
Cisco Catalyst 2960 OUT E	WS-C2960-8TC-L		
Cisco Catalyst 2960 To PC's	WS-C2960-48TT-L		

Upgrade Equipment

New 1	*Brocade*	*ICX6610-48E* or *ICX6610-24E*
New 2	*Brocade*	*ICX6430-24P*



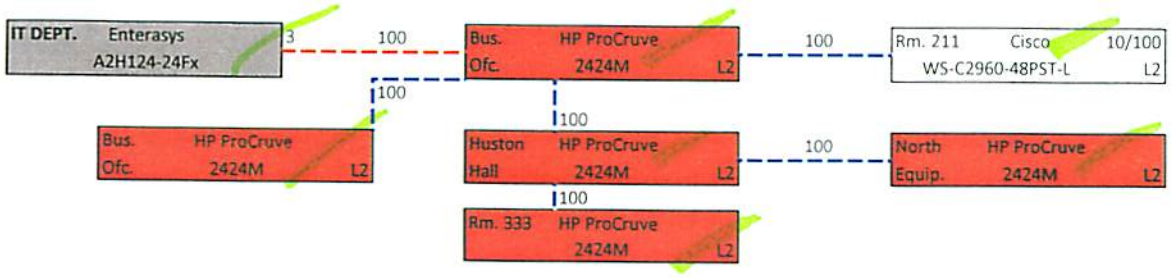


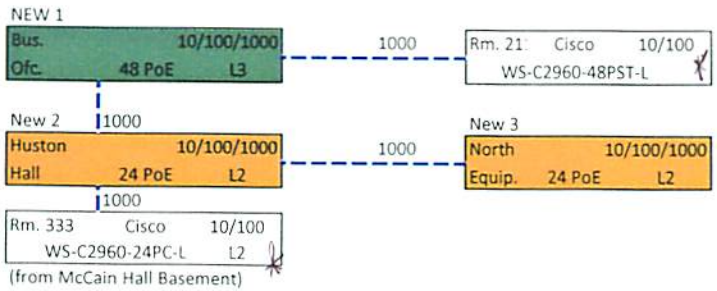
FOUNDERS HALL

In Place Equipment

Floors

Bussiness Ofc.	HP ProCruve 2424M	
	HP ProCruve 2424M	
Rm. 211	Cisco Catalyst 2960	WS-C2960-48PST-L
Rm. 333	HP ProCruve 2524M	
North Equip.	HP ProCruve 2424M	
Basement	HP ProCruve 2424M	





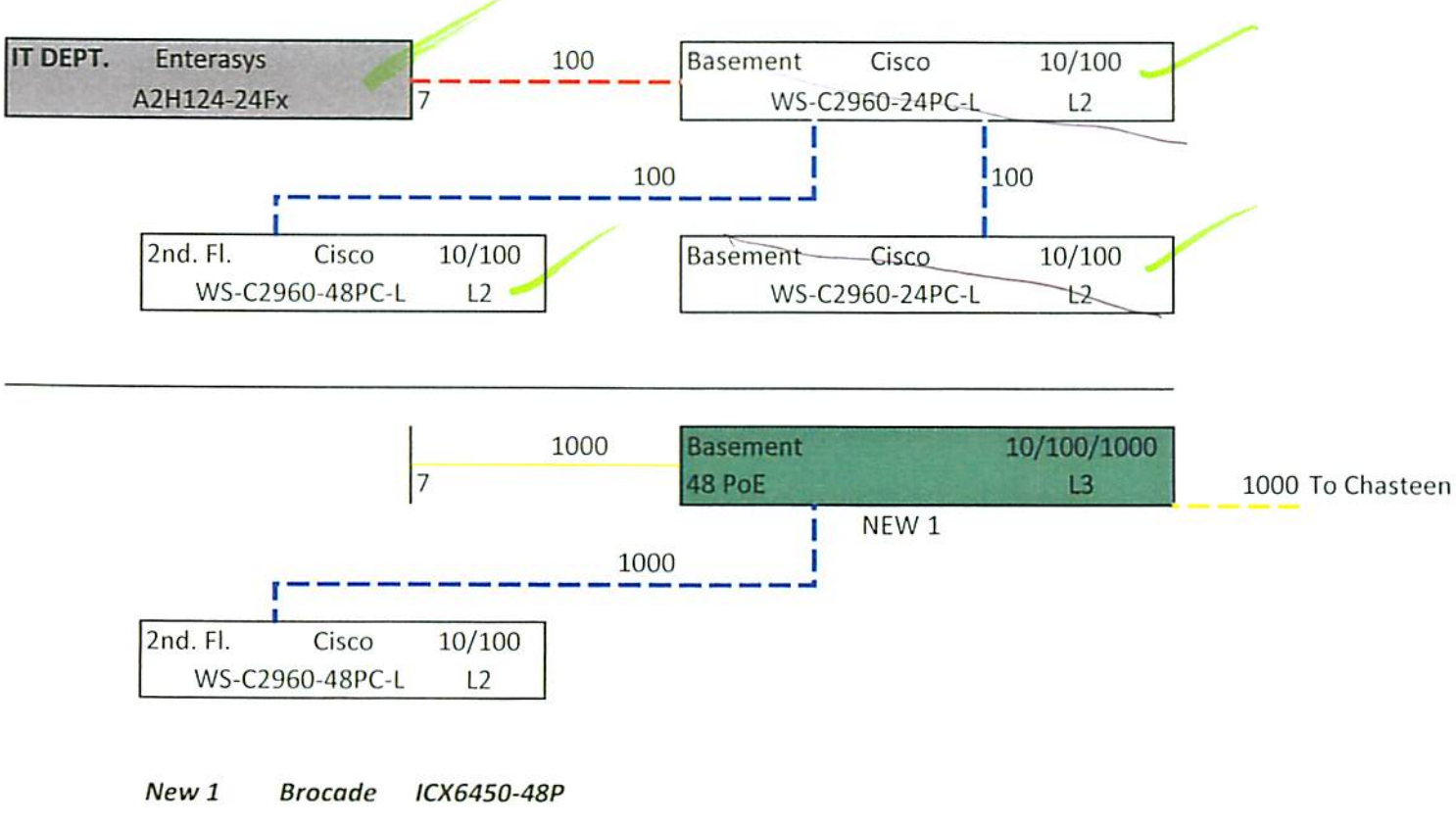
New 1	*Brocade*	*ICX6450-48P*
New 2	*Brocade*	*ICX6430-24P*
New 3	*Brocade*	*ICX6430-24P*

McCAIN HALL

In Place Equipment

Upgrade Equipment

Floors			Data Ports	IP Phone	
Basement	Cisco Catalyst 2960	WS-C2960-24PC-L	24	8	Move 1St. Fl. switch to Basement
1st.	Cisco Catalyst 2960	WS-C2960-24PC-L	9	9	Extend drops to 2nd. Fl.
2nd.	Cisco Catalyst 2960	WS-C2960-48PC-L	24	24	



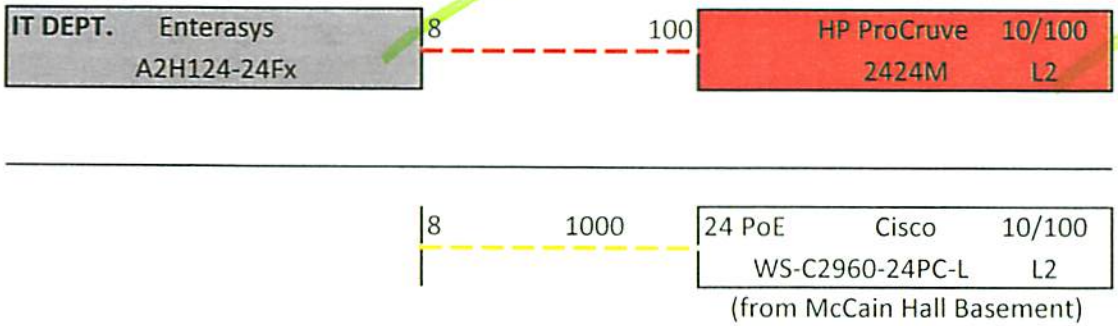
New 1 Brocade ICX6450-48P

CHASTEEN HALL

In Place Equipment

Floors		Data Ports	IP Phone
1 st.	HP ProCurve 2424M	6	0

Note: S/M Fiber to McCaim Hall



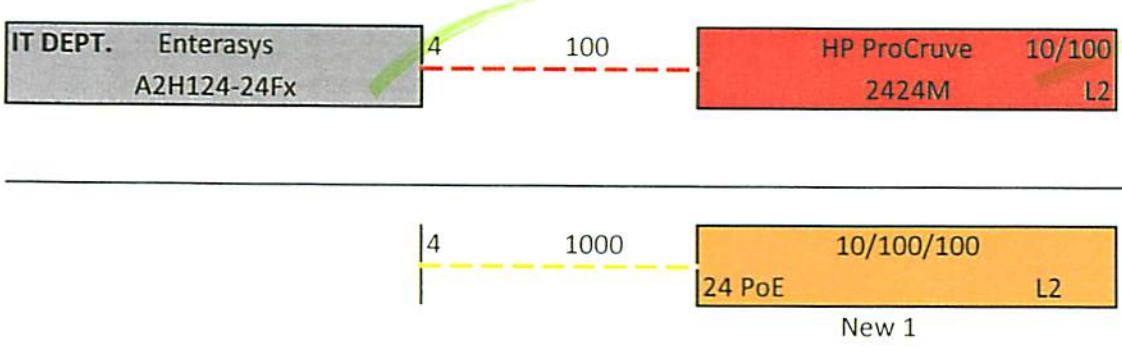
SECURITY

In Place Equipment

Floors

		Data Ports	IP Phone
1st.	HP ProCurve 2424M	6	4

Note: S/M Fiber to IT



New 1 Brocade ICX6430-24P

BROWN HALL

In Place Equipment

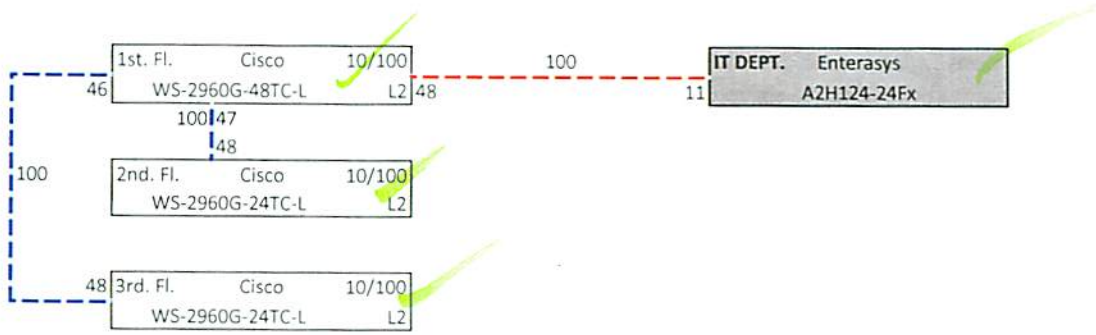
Floors		Data Ports	IP Phones
Basement	HP ProCurve 2424M	1	0
Note:	S/M Fiber to IT		
1st.		6	5
2nd.		6	6

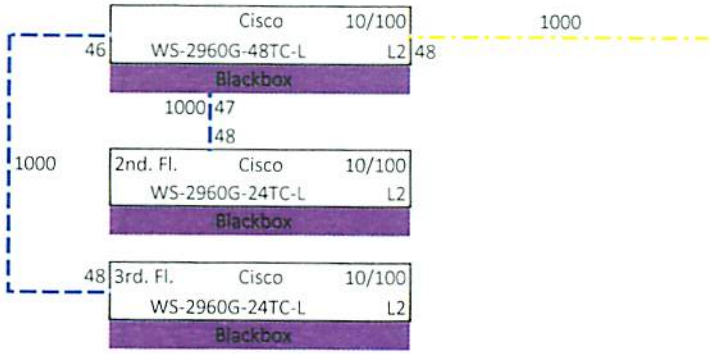
New 1 Brocade ICX6450-24P

SANDERS HALL

In Place Equipment

Floors			Data Ports	IP Phones
1st.	Cisco Catalyst 2960	WS-2960G-48TC-L	13	8
2nd.	Cisco Catalyst 2960	WS-2960G-24TC-L	18	14
3rd.	Cisco Catalyst 2960	WS-2960G-24TC-L	23	14
	Linksys SRW 208		0	0





ADD 2 Blackbox LPJ024A-F

LIBRARY

In Place Equipment

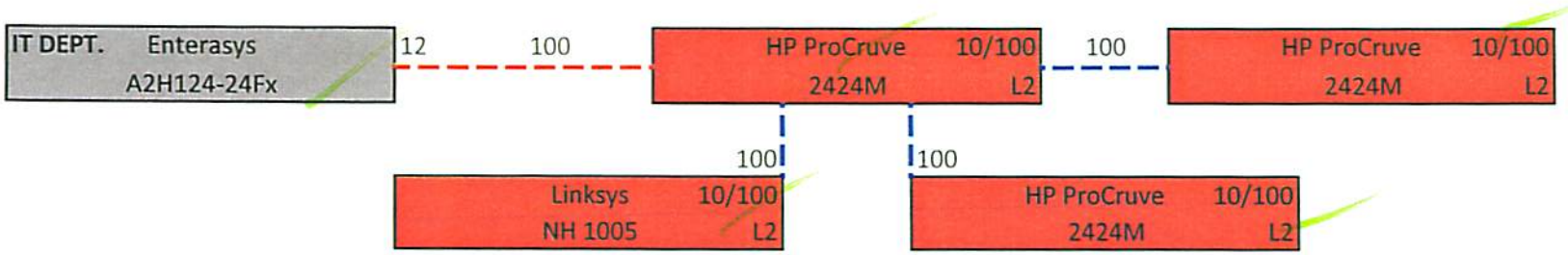
Floors

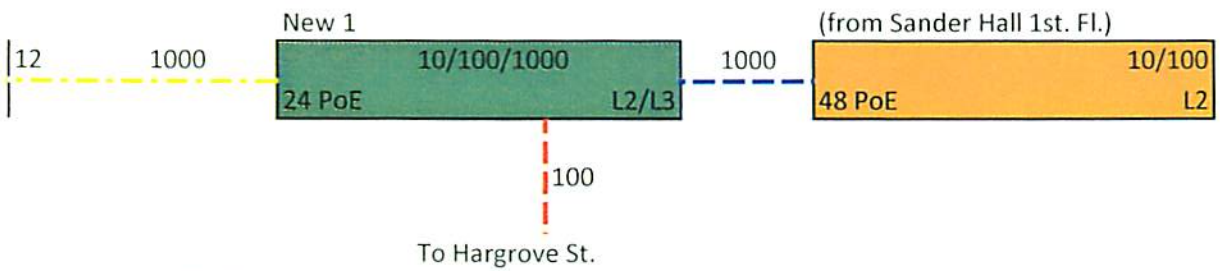
Data Ports IP Phones

1st. HP ProCruve 2424M

Note: S/M Fiber to IT

HP ProCruve 2424M
HP ProCruve 2424M
HP ProCruve 2524M
Linksys NH 1005



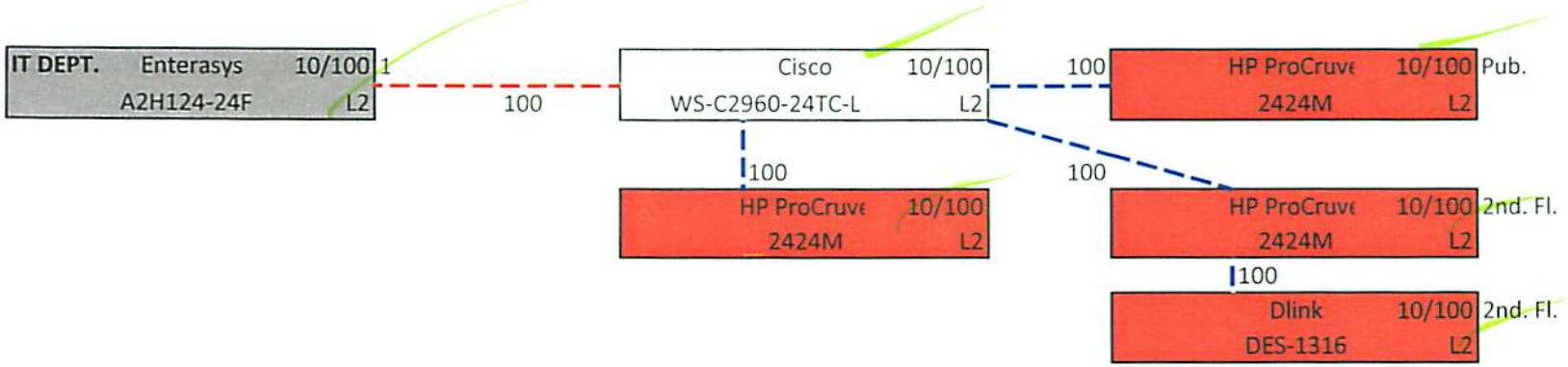


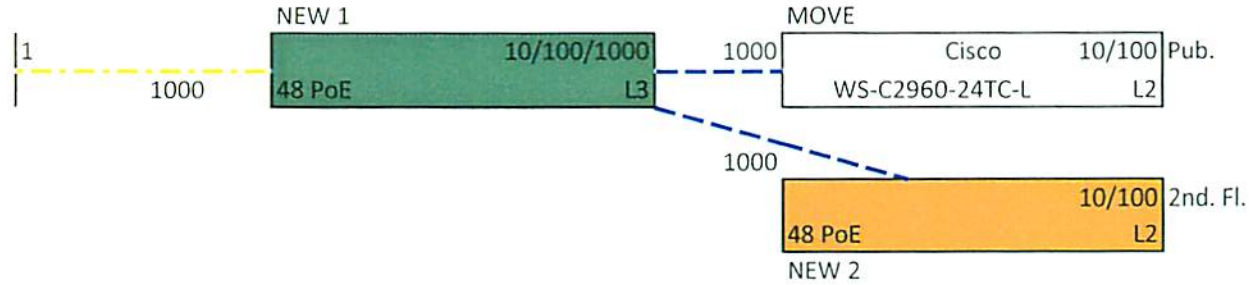
New 1 ***Brocade*** ***ICX6450-24P***
New 2 ***Brocade*** ***ICX6430-48P***

STUDENT CENTER

In Place Equipment

Floors			Data Ports	IP Phones
1st. HVAC	Cisco Catalyst 2960	WS-C2960-24TC-L		
	HP ProCruve 2424M			
Publications	HP ProCruve 2424M			
2nd.	HP ProCruve 2424M			
	Dlink	DES-1316		





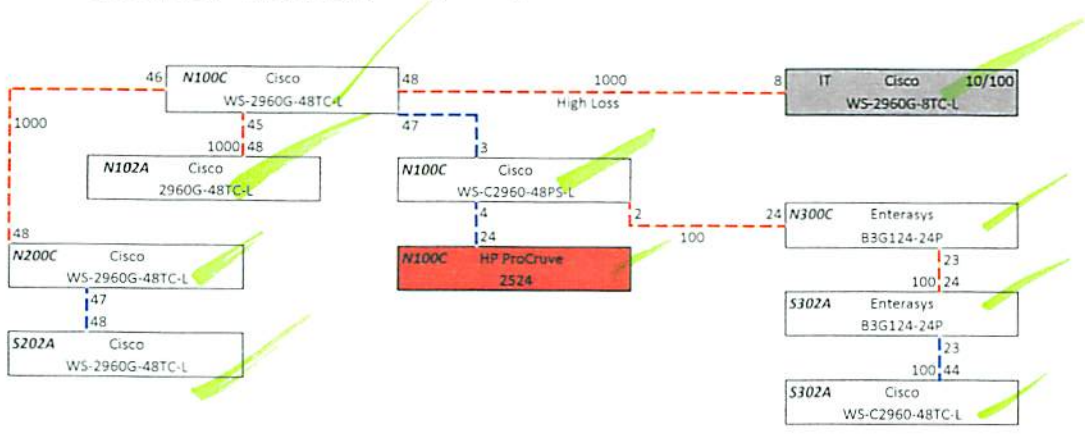
New 1	*Brocade*	*ICX6450-48P*
New 2	*Brocade*	*ICX6430-48P*

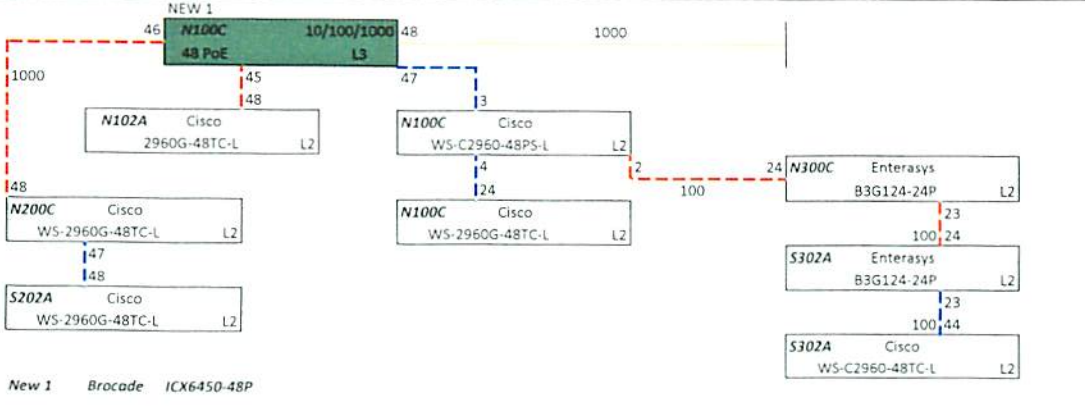
WATERS HALL

In Place Equipment

Floors

			Data Ports	IP Phones
N100C	Cisco Catalyst 2960	WS-2960G-48TC-L	48	0
	Cisco Catalyst 2960	WS-C2960-48PST-L	48	1
	HP ProCruve 2524		15	0
S102A	Cisco Catalyst 2906	WS-2960G-24TC-L	27	6
N200C	Cisco Catalyst 2960	WS-2960G-48TC-L	42	0
S202A	Cisco Catalyst 2960	WS-2960G-48TC-L	13	5
N300C	Enterasys	B3G124-24P	9	0
S302A	Enterasys	B3G124-24P	2	0
	Cisco Catalyst 2960	WS-C2960-48PST-L	42	5



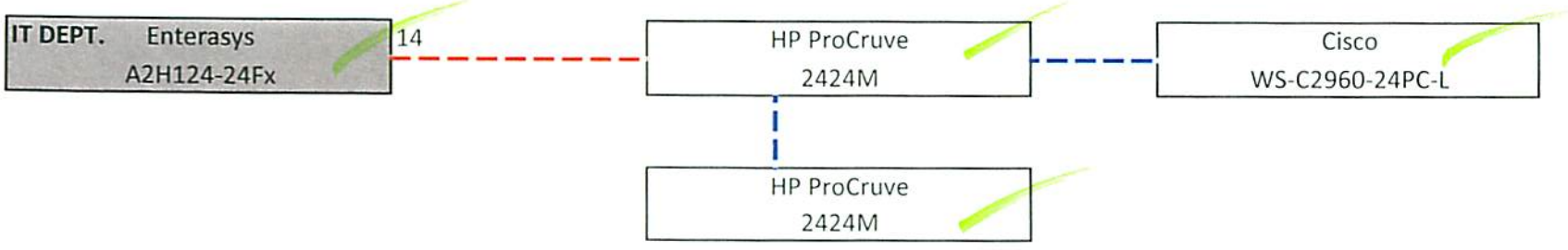


New 1 Brocade ICX6450-48P

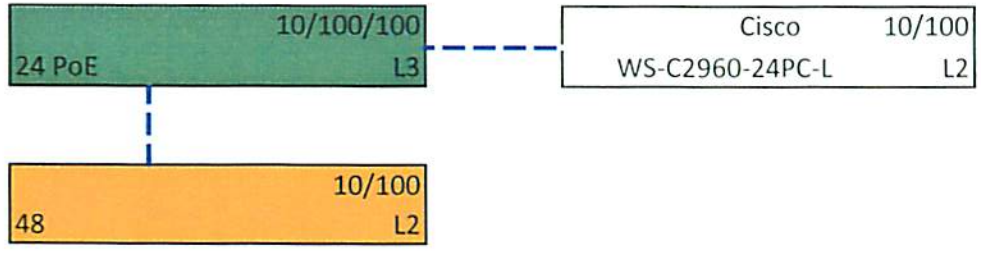
CLASS ROOM BLDG.

In Place Equipment

Floors			Data Ports	IP Phones
1st.	HP ProCruve 2424M			
	HP ProCruve 2424M			
2nd.	Cisco Catalyst 2960	WS-C2960-24PC-L		



New 1	*Brocade*	*ICX6450-48P*
New 2	*Brocade*	*ICX6430-48P*

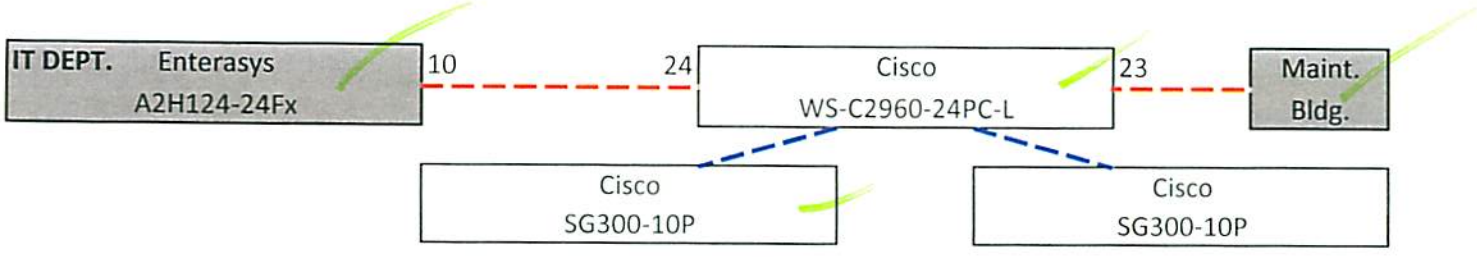


CARTER GYM

In Place Equipment

Floors

			Data Ports	IP Phones
Basement	Cisco Catalyst 2960	WS-C2960S-24PC-L		
	Cisco	SG300-10P	6	0
	Cisco	SG300-10P	6	0



No Change

MAINT. BLDG.

In Place Equipment

Floors

		Data Ports	IP Phones
1st.	HpProCruve 2424M	5	9

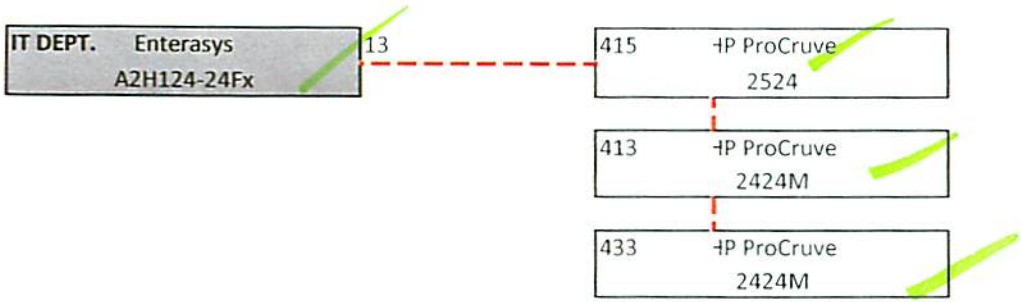
New 1 ***Brocade*** ***ICX6430-24P***

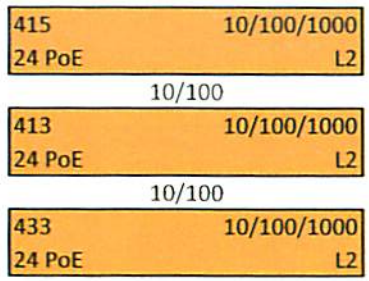
HARGOVE STREET HOUSES

In Place Equipment

Floors

		Data Ports	IP Phones
415 Hargrove St.	HP ProCruve 2524	4	3
413 Hargrove St.	HP ProCruve 2424M	1	1
433 Pryor St.	HP ProCruve 2424M	7	6



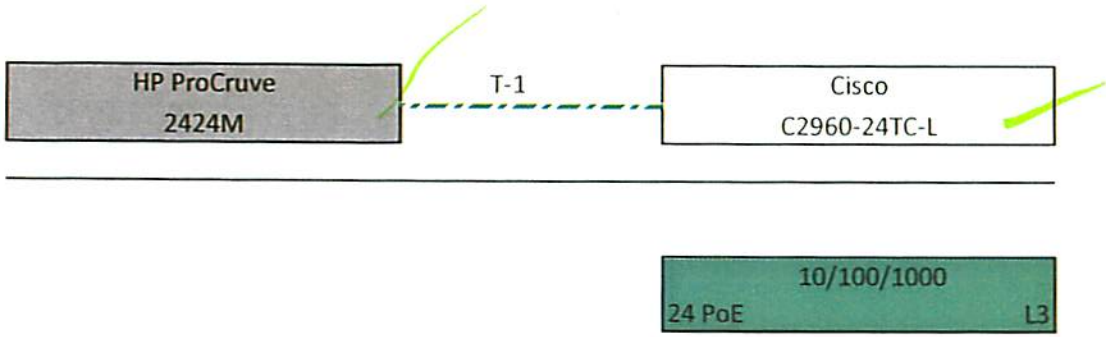


New 1 ***Brocade*** ***ICX6430-24P***
New 2 ***Brocade*** ***ICX6430-24P***
New 3 ***Brocade*** ***ICX6430-24P***

In Place Equipment

CLL

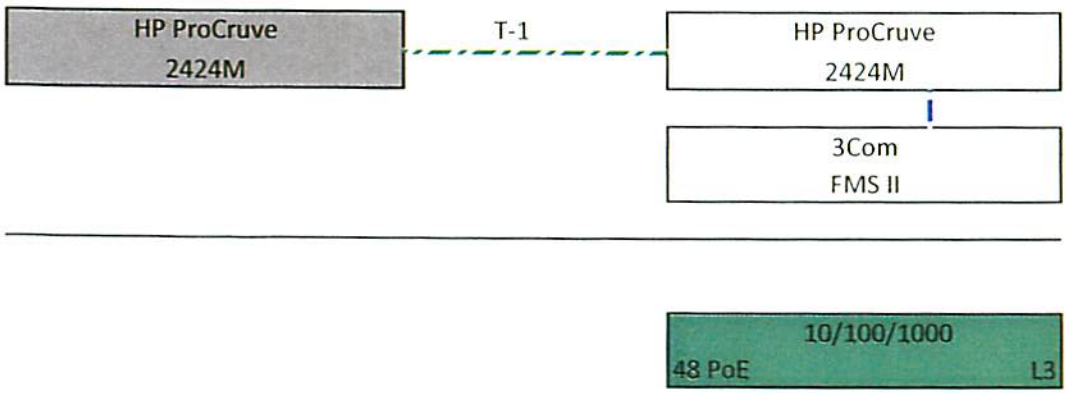
			Data Ports	IP Phones
Basement	Cisco Catalyst 2960	WS-C2960-24TC-L	6	7

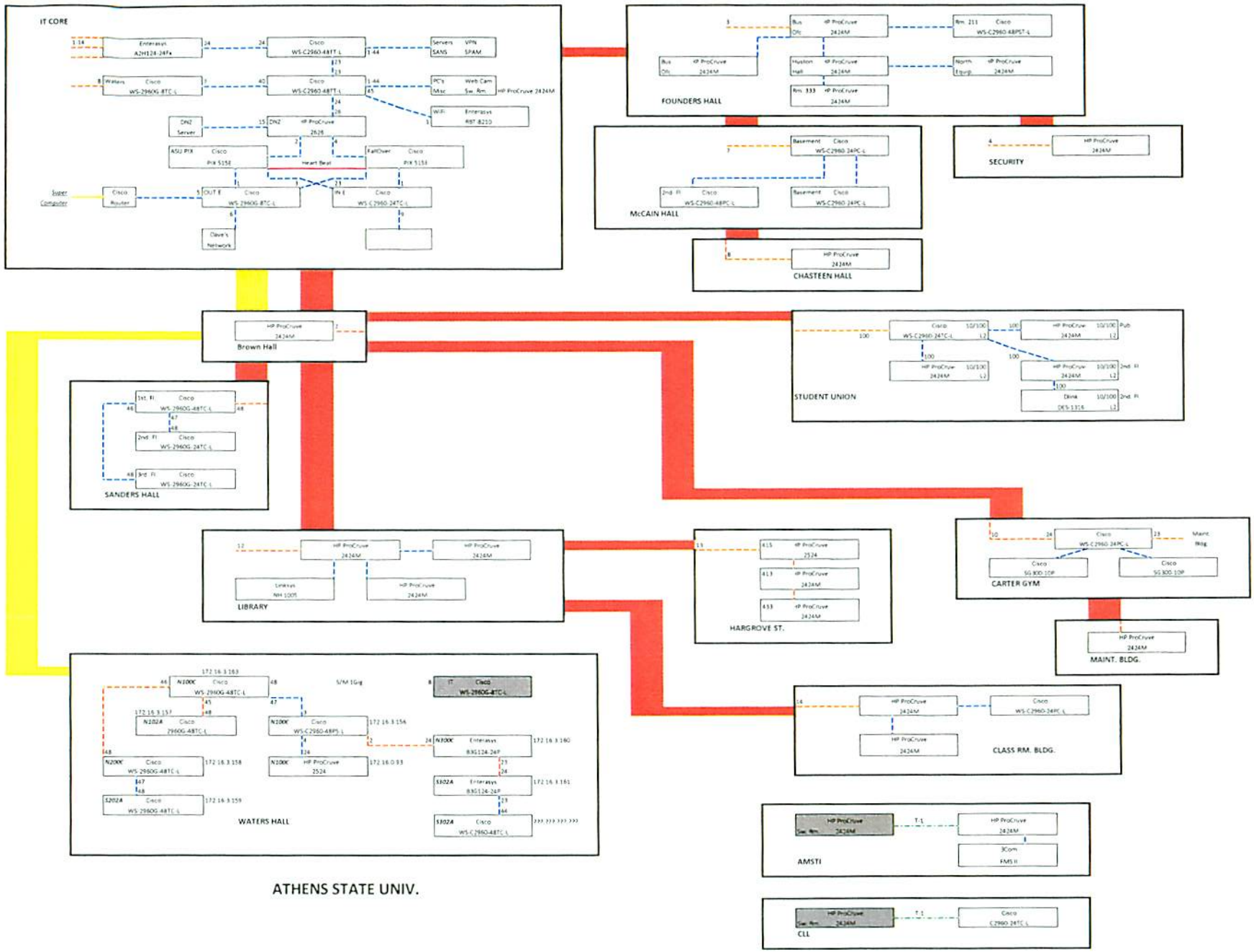


In Place Equipment

AMSTI

			Data Ports	IP Phones
	HP ProCruve 2424M			
	3Com Link Builder FMS II			





ATHENS STATE UNIV.

CIO Responses to the *IT Study Final Report & Recommendations*

The following are responses compiled by the CIO to the **Observational Comments** on pages 10 – 13 of the ***IT Study Final Report & Recommendations*** provided by the consultant, J. Reid Christenberry.

1a, b., f., h., ITD and OASIS team building is underway. Bi-monthly, management meetings are held with staff from ITD and OASIS where report are given on the following areas: network/systems, Learning systems/spaces, desktop computing, and Help Desk.

1c., e. IT Strategic plan is underway. The current information technology resource requirements will drive the strategic plan and should be in line with the University strategic plan. Input will be provided by ITD, OASIS, and IR along with the academic requirements for supporting the curriculum and student service needs.

1d. The CIO, through this report, is filling the need for leadership in IT and the articulation of the "domain of activities, external and internal change factors, and the rationalization of costs in relation to those activities.

1g. Training programs are needed in all areas of the campus. A training curriculum should be developed and communicated to the campus that will establish the necessary technology skill sets required of faculty and staff.

1i. Funding requirements for all areas of IT are a major deliverable of the CIO to the Cabinet and Administrative Councils. The first priority is the recommended desktop replacement lifecycle funding requirements and plan.

1j. Accountability for IT, Instructional Support, and Information Services are established by setting service level agreements and determining where there are gaps between actual and planned.

2. Steps toward improving IT Governance are underway including the formation Technology Advisory Committee formed. First meeting will be scheduled this month. This advisory committee will use input from faculty on classrooms, learning management systems and associated tools, and standards for instructional spaces. The Banner steering committee is already in place and has been tasked to develop a Banner upgrade and project implementation schedule with required deadlines communicated to IT and stakeholders so that the technical installation, testing, and implementation into production can be completed successfully.

3a. Off-campus access to network resources is available; however, it has not been communicated because there were no guidelines or policies in place for use. This is being addressed by IT.

3b. Overall improvements are underway to improve the soft skills and meeting end user needs. The CIO has tasked both ITD and OASIS with reviewing their front facing information resources, response times to requests, closing the loop on requests, and being more visible on campus through relocation of the Help Desk for students in the Library Commons, ongoing training, establishing routine communications in person with the faculty at college meetings.

3c. The depth of one in key technical areas is known and a concern. Shifting of responsibilities in ITD and OASIS will contribute positively to this issue. The approved IT staff request for 2012-2013 will be used to fill in the gaps in technical staffing.

4a. The eLearning symposium for 2012 had more presentations by academics than previous years. There is a synergy provided through this event that is encouraging for its continued growth as a north Alabama learning resource.

4b. The role of the individuals in the OASIS unit is to provide the backside support of the learning management system along with IT; provide telephone/in-person/e-mail/afterhours assistance to students on the LMS and associated tools; and to provide a resource to faculty for online course development and improvement based upon best practices brought to campus by the staff; consult with faculty and staff on how to utilize best practices for delivering instruction and training. The technology advisory committee will be involved with guiding the process of identifying and communicating the instructional support needs of academics and OASIS will respond to those needs accordingly.

4h. There are two groups of users of technology at any university - academic and administrative. Individuals working in IT and OASIS have common skill sets that can be applied to any IT problem, yet, there are specific knowledge and skills required to support online learning environment or the University ERP system and network infrastructure. The CIO is encouraging team approaches by having the two groups meet routinely to share common issues and develop solutions together.

5. There are several activities for developing a data administration strategy including:

- The CIO has the IT director and DBA meeting with OIPRA routinely to discuss data management strategies and construct a framework for data management.
- The data warehouse data dictionary and report processes are being documented and improved along with implementing data integrity and verification checks.
- Data freeze dates have been established and timelines for all standing reports and publications produced by institutional research are documented.
- The review of Banner processes in the functional area of Student will identify some of the data elements not previously used which will in turn drive the improvement of data stewardship in that area. Already, access to Banner has been vastly improved by assigning specific access rights to designated individuals within each functional area that will allow consistent processes to be used and eliminate some of the data integrity and validity problems.

6. Change management in both IT and OASIS must be foundational in the operations of these two areas. The criteria for upgrading software in both Banner and OASIS must be planned on two fronts. The impact on users and the technical necessity of the upgrade must be assessed first and a plan for communication and support in place before the changes can be completed. OASIS has been tasked to review and document the user impact the next Blackboard upgrade will have and to provide technical justification for the upgrade.

7. Client service quality related to network speed, access, storage, backup, instructional technology, multi-platform desktop support, mobile computing, and leveraging technology for recruitment/social interactions are each individual issues that require decisions to be made on how to improve or provide within the limited resources available including:

7a. Internet and campus bandwidth: There is a need to improve campus network capacity and will be addressed with the planned network upgrade. The speed of the connection to the Internet for main campus, Redstone, Hanceville, and the Arts Center must be evaluated and the cost considerations presented.

7b. A VPN is available now for remote access to the Athens network.. The criteria and policies for use are being developed. There are software licensing issues that must be considered when allowing virtual access to any campus computing resources. More information will be forthcoming on this issue.

7c. A shareable storage space where faculty, staff, and students can easily store data to share and collaborate on complex projects 7 problems. A proposal for implementing a solution for shared/collaborative space will be developed.

7d. The backup of workstations can be explored, however, at present, there is network space allocated to users that can be used to store critical and is backed up routinely.

7e. After hours technical support is available at this time. Contact information has been made available to the campus.

7f. The suite of available instructional technologies will be reviewed through the Technology Advisory committee based upon a set of criteria for quality and effectiveness of the tool.

7g. All teaching spaces have been inventoried and a replacement plan for instructional technology is under development. The Technology Advisory Committee will be apprised of the current state of the technology quality and function.

7h. The support of multiple platform for desktop computing does stretch existing staff resources. However, supporting Apple computers is common on most campuses and can be absorbed.

8. Services to Students.

The student experience when attempting to use campus information and technology resources is impacted by many factors. Initial efforts to improve the student experience will use existing resources such as the web to provide accurate and useable information for students. OASIS has been tasked with logging student issues in order to identify those tools that are either not functioning correctly or do not have clear and understandable directions on how they are used. Mobile computing is a realm that Athens must address because the expectations have been set by the consumer electronics world and the benefits can be realized by education.

Issues and Trends Affecting IT in Higher Education

A review of the current issues affecting IT in higher education provides a backdrop for developing a meaningful and relevant IT plan for the University. Educause surveys thousands of higher education institutions annually and publishes the Top 10 IT Issues List[1]. The issues on the list for 2013 affect the entire University due to the strong dependency on information technologies and increased demands of students for IT based services.

Educause Top 10 IT Issues - 2013

1. Leveraging the wireless and device explosion on campus
2. Improving student outcomes through an approach that leverages technology
3. Developing an institution-wide cloud strategy to help the institution select the right sourcing and solution strategies
4. Developing a staffing and organizational model to accommodate the changing IT environment and facilitate openness and agility
5. Facilitating a better understanding of information security and finding appropriate balance between infrastructure openness and security
6. Funding information technology strategically
7. Determining the role of online learning and developing a sustainable strategy for that role
8. Supporting the trends toward IT consumerization and bring-your-own device
9. Transforming the institution's business with information technology
10. Using analytics to support critical institutional outcomes

1 The Educause Top 10 IT Issues for 2013 was taken from Educause website at: ww.educause.edu/ero/article/top-ten-it-issues-2013-welcome-connected-age**.**

Accomplishments and New Initiatives – 2012-2013

1. The technology advisory committee was appointed in Fall 2012 and has met several times over the past academic year.

2. Through the assistance of the technology advisory committee, faculty are reviewing the functions of the learning management system and associated applications currently implemented at Athens State and making recommendations of the functions the faculty determine is needed for online learning. This information will be used to write the RFP for the learning management system renewal in 2014.

3. The upgrade of the network in the summer of 2013 increases the backbone speed from 100 mbits to 1Gbit and replaces equipment that was approximately 10 years old.

4. Funding for critical needs in the amount of $230,000 is under consideration the 2013-2014 fiscal year.

5. The average age of the servers in the central server farm is 4 years; the majority of systems with 3 or less years of use.

6. Forward thinking and good planning by the IT department has built redundancy in the central infrastructure and staff skill sets.

7. Service level agreements are under development that will establish the user expectations for service and allow IT to set priorities based upon the categorization of resources as mission critical, mission central, non-mission critical, or new initiatives/projects.

8. The adoption of a central help desk philosophy is taking shape through staff re-alignments between academic services and the IT department.

9. A staffed, handicapped accessible physical help desk is planned to be established during the 2013-2014 academic year.

10. Help Desk support for distance education will be merged into the existing help desk responsibilities for university business hours of 8 – 5. Evening services will continue with the outside services.

11. The new ShoreTel telephone system will become the newest mission critical IT resources. The system has been received and is scheduled for implementation in July 2013. This new system will bring many years of dependable service and is a technology that is easily managed releasing staff resources previously devoted to telephone services to move into the backside of central system and network management.