

ITCS Year In Review

2008-2009

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Chief Information Officer

Introduction and Overview

That this has been an interesting and unusual year is an understatement. Nearly a third of it involved preparing for and going through several audits, including the state audit of our Banner system, and much of the second half found us working through various budget cutting scenarios and a renovation of the data center. The financial difficulties of the year precluded many new projects, desktop upgrades, etc. Yet through those non-routine efforts, ITCS has retained a stellar record of service accomplishments, most of which are detailed in the accompanying appendices.

CIO Report

This is my fifth report to the Board of Trustees, and after five years in this position and thirty seven years at ECU, I can still say that working in ITCS continues to be an outstanding career experience and nothing short of a joy. The team is innovative, change-prone, service oriented and proud of their accomplishments and it has been my pleasure to represent them to you and ECU's senior management.

On a personal note, it has been an honor to represent ECU as Chair of the UNC CIO Council in a term that runs through December 2009.

Information technology has matured significantly at ECU in the last ten years, growing out of a mainframe oriented group who missed the personal computer revolution to one of the most advanced teams in the UNC system. That growth is no small part attributable to our talented and visionary staff who assembled much of the infrastructure that we all enjoy and take for granted today. Furthermore, the growth and improvements in ECU's technology programs are testimony to their importance in the daily function as well as the future of the University. In order to maintain that momentum it is vital that the IT needs of the University and the expertise of the department be included in the Master Planning process. Accordingly, there will be several departmental initiatives going forward, that will fold upward into the University's Master Planning process.

1. **Data center space and infrastructure planning to accommodate ECU's projected growth.** While the Cotanche data center has been renovated to provide more power and cooling and facilities for more servers, we anticipate an end point of approximately three years for that growth cycle. If the University indeed increases its enrollment to 37,000 students over the next ten years, the technology demands to accommodate that growth as well as new educational and business paradigms will be significant and beyond the capabilities of the present facility. An early step will be an estimate of the basic square footage requirements, a process that has been initiated. Furthermore, the hardware needs for Banner and Blackboard and expansion of the data network and planning for the demands to be placed on that network must be included in the process.

2. **Expanded disaster recovery capabilities.** This item is separated from #1 because it is in fact a distinct space requirement. We currently have a technically sound fail-over site in the Brody Medical Sciences Building, but it only accommodates Banner, Blackboard and selected email servers. Further growth of those systems and the need to address business continuity for some of our clients with server-based applications suggests the need for additional recovery space.
3. **Business plan/funding model.** Information technology is a major support service for the University that must have an appropriate revenue stream if the campus expects to achieve its mission and goals. One time monies will no longer fill the gap between our base operational costs and the need for innovation and growth. Major progress was made with the identification of career banding monies last year and the infusion of some operational dollars but work remains to be done especially as lapsed salary funds become more scarce. The elements of a business plan are yet to be decided but could include limited charge-backs per network port or a graduated capitation fee. Furthermore, there are legacy funding processes in the University that should be reevaluated with regard to technology needs.
4. **Centralization and consolidation of campus information technology.** Dr. Marilyn Sheerer and I co-chair Business Group 9, charged with implementing this directive. The recommendations for consideration by senior management, yet to be finalized, will include elimination of marginally-used general purpose computer laboratories, phasing out as many personal printers as possible and directing people to use networked printers, and reassigning selected outlying support staff to ITCS where efficiencies can be gained in desktop, systems, server and Web support. Position management and cost monitoring (business intelligence applications) will be elements of this effort.

The remainder of this section will feature selected project overviews. More project details are in the appendix. While some aspects of these reports are highly technical, they will give the reader an accurate sense of the scope of the work done by this department.

Healthspan: Don Sweet, our project leader for the Banner implementation, stepped in to lead the BSOM's Healthspan conversion project, including a detailed contractual agreement with University Health Systems, the provider of the new integrated electronic medical record and scheduling/billing system. That project will be completed late in the Fall of 2009 and will include the phasing out of the present clinical systems housed in the ECU data center. The BSOM's inclusion in the Healthspan project will be the catalyst for a regional health record system that will lead to a growing regional health care role for ECU Physicians and for clinical research.

Audit: We were pleased with the outcome of the audit of our Banner system and other policy issues. With the caveat that no one goes through a state IT audit without a finding of some degree, we have responded to all findings, either by changing our procedures or initiating further safe-guard processes so that ECU was not placed on

probation or issued any penalties. The details of this audit have been shared with the Board of Trustees' Audit Committee earlier in the year.

Business Intelligence: Our business intelligence group, a rapidly-growing service that has been discussed in previous reports, is providing reporting tools across the campus in what we euphemistically call "Banner Phase II." In other words, the data storage effort that went into Banner implementation has now become an information rendering effort in most business units. In ITCS, we now have a reporting tool that tracks all IT-banded positions, including funding sources and amounts, across the University. In conjunction with a revision of account codes by our Finance and Planning team, Financial Services and Materials Management, we will have a robust IT cost reporting system for the University, a first in the UNC system. Both of these efforts will directly enhance the Chancellor's mandate to centralize and consolidate ECU's IT programs.

Network projects: With new buildings and renovated facilities, we now have over 30,000 data ports on both campuses and approximately 82% wireless coverage of academic areas. There are also over 3600 voice over IP (VoIP) telephones installed and that systems handle around 28,000 calls per business day.

Web site: The Administration page of www.ecu.edu has been simplified and updated. New search and analytical (Web page usage) tools as well as improved calendaring and personal Web page management applications have been implemented. Google maps with key campus locations have also been added to ECU's Web site.

Virtual Computer Laboratory (VCL): We brought our VCL server blades from their temporary location at MCNC to the Cotanche data center. In addition to the basic VCL application as developed by NCSU, we are implementing a Citrix interface that will enable multiple users per server and thereby improve our cost/benefit ratio.

Server and storage virtualization: We continue to manage costs and contain physical growth by deploying virtualization in our server farm.

This is a limited sample of the many services and efficiencies that ITCS provides to ECU. I again want to emphasize the level of dedication and professionalism exemplified by this department. It is truly an exemplary asset to East Carolina University.

Appendix of Area Reports

Administrative Support Services

- Initiated a new ecuBIC report to track all IT and Administrative positions within ITCS throughout campus. This report will eliminate a variety of spreadsheets and the cumbersome task of updating data in several areas. This report will be generated through Banner which would ensure accuracy and appropriate updates for all positions at all times. Tracking the history of positions will be made easier through this new reporting structure.
- Converted the ITCS New Employee handbook to a Sharepoint site to be viewed by all new employees. This conversion eliminated the old paper process and will save the department funds by alleviating the procurement of paper. New employees will have an opportunity to view this site for policies and procedures, organizational charts, and a host of valuable information pertinent to their employment in ITCS.
- Initiated the development of a new system (Xtender) to send the cell phone bills to various departments on campus. This new system will allow the billing contact person to review and store their bills electronically, approve and maintain copies for their files all on this system. This system will also eradicate the cumbersome process of sorting through paper bills, detaching, and printing and sending multiple emails with different attachments to the billing contact person for each department. This system has now made the filing of paper bills and storage/archiving obsolete but yet advancing us into the future with IT technologies.
- Developed an improved system to update the Embarq and Campus Directory that is more user friendly on the Directory SharePoint site. This site will now allow all departments an enhanced opportunity to update departmental information. There are over 250 users who access and update both directories for accuracy. This site will also provide detailed information on how to update information for the purpose of developing directories that are accurate and concise. This is a great accomplishment in customer service to all users.
- Provided Academic Technologies with the critical information needed to develop the new (web based) inventory database and put procedures in place for users to follow. This database will allow all areas of ITCS to track equipment in one location as opposed to each group having a spreadsheet/database of their own. This new database will also make the tracking process for ITCS's equipment (fixed assets and non-fixed assets) more efficient.

Network Services

New Buildings & Renovations

ECU has undergone several renovations as well and added new buildings including: Cotanche Building renovation, Neurosurgical Clinic, Plastic Surgery Clinic, East Carolina Heart Institute, North Campus Recreation Complex, and the ECU Testing Center.

Network Infrastructure and Design work is currently in review for : Croatan Building, Dental School, Family Medicine, and the Softball Athletic Complex.

This has increased our network port count by approximately 2,050, bringing ECU's total data port count to approximately 32,050 for East and West campuses.

Network Upgrades

Working toward completion of the Voice over Internet Protocol (VOIP) Business plan, we have completed network upgrades for the cutover of the following buildings to VOIP: East Carolina Heart Institute, Mendenhall, Brewster, Messick, Whichard, Eller House, Ragsdale, Bate Taylor-Slaughter, Warehouse, Graham, Rawl, Student Health, Erwin, Joyner East, Joyner Library, Student Recreation Center, Eppes Complex, Jenkins Fine Arts, Moving Services, Todd Dining and Jones Hall. An upgrade to replace eight year old equipment for the residence hall network is also complete. Internal networking changes have improved the performance of the email servers. Finally, open source remote network modules have been installed in our campus network enabling remote traffic monitoring and detecting at a lower cost.

On a personal note, ECU of the few UNC Schools to have representation on NCREN's (North Carolina Research and Education Network) Next Generation Network Design team. That team determines the functional needs and structural design of the educational data network for North Carolina.

A refresh of the wireless network on East and West Campuses is also complete. This upgrade provides expanded coverage and security features as well as supporting connectivity speeds for A,B and G technologies. ECU's wireless network includes 61 new installations for all new construction and renovation, bringing the total to over 627 access points and approaching a saturation total of 82% of academic areas campus wide. The newly-upgraded wireless network will enable future security measures and encryption later this year. Wireless encryption has been implemented for the campus. This project involved collaboration with many areas of ITCS from Desktop Support, Enterprise Applications and Network Services. The West Campus Wireless Network is now authenticating via Cisco Clean Access (CCA) which provides additional security measures for medical applications.

IP Telephony (VoIP):

We continue to deploy VoIP. To date, the current database of IP assigned numbers has surpassed 4800. Approximately 3650 stations have IP sets assigned, over 2500 of which have unified messaging (voice mail into Outlook Inbox). Our VoIP system routes on average over 28,000 calls per day. Network Services' goal is to quickly finish VoIP in order to complete the transition off the old analog telephone switch where there are approximately 200 lines remaining in production. These analog lines are used for internal communications services, security systems, fire alarms, FAXs, modems, elevators, and etc., all of which will be converted over to VoIP within a 3 month period.

IP telephony will continue to be a framework for new services, including a recently-deployed outdoor emergency notification system. This system provides the campus community with up to date emergency information, unlike other campus siren systems.

IT Support Services

ECU Search

A Google mini search appliance was installed to enhance the search capabilities on the ECU Web site. This application enables continuous re-indexing of our Web site, thus reducing the occurrences of broken links and pages are updated and new pages are added. The appliance also enables site-specific searches rather than defaulting to the entire www.ecu.edu. There are over 131,400 documents indexed, and on average there are over 100,000 search results returned per hour.

Google Analytics

We also implemented the free Google Analytics tool to monitor our Web page usage.

Google Maps

Google maps of campus showing the location of computer labs, Smart Cassrooms, and wireless access have been created. Future plans are to incorporate other destinations into the maps.

Virtual Computing Lab (VCL)

We have moved our VCL infrastructure from MCNC to ECU which will give us more flexibility on the images we offer and allow us to better accommodate the needs of our academic departments. In addition, we are developing a Citrix-based access system that (1) works better with some applications and (2) unlike the original VCL software, allows multiple users per server.

Lite Version of ECU Home Page

A lite version of the ECU home page was developed for use in emergencies. Approved users can easily convert the current home page to a non-graphical version that focuses on alert information.

SharePoint

SharePoint was upgraded to improve integration with Office 2007. SharePoint is a well-used resource at ECU, where external researchers can collaborate with faculty. New tools will enable senior leadership dashboards and executive reporting tools via ITCS' business intelligence applications.

PiratePanel

PiratePanel was developed and implemented for greater ease of personal Web page deployment. This control panel will give our campus community the ability to manage their own space by allowing each person to request space, manage files, and set permissions.

Blogging

Blogging software was piloted and is in the process of being rolled out. The increased capabilities will be used by departments, faculty and staff pages, and student organizations.

Alerts

ITCS is delivering ECU alerts on Twitter and via RSS feeds.

Student Timekeeper

Timekeeper, an online application for tracking work hours, was implemented on the East Campus and the Health Sciences campus for all SCTF-funded and Smart Classroom student employees. This application replaced a fill-in-and-print form. In addition to streamlining the process, Timekeeper has also removed the potential for reporting time that was not worked as the student can only access the clock-in and -out functions from the actual work location. Supervisors have the ability to check, verify and approve the number of hours worked from any computer with Internet access. The application has been well-received by student employees, their supervisors and the administrators.

Inventory System

An on-line inventory system was created to consolidate an otherwise huge paper-based system.

University Calendar

A University Calendar was created so various groups on campus can enter events, create an approval process, and pull events from Resource 25.

Student Computing

Education and Technology Fee

The Education and Technology fee is centrally managed by ITCS and supports technology throughout campus. Over 100 computer labs across campus are on a four-year computer refresh rotation; nine of these labs are general purpose labs and funding support for student staff and software licenses are provided. Numerous part-time student staff are employed to support the 24x7 computer lab, the student support center, general purpose labs throughout campus, and computer lab repair technicians that maintain computers and peripherals in over 100 labs. The fee supports the ACE Student Computing support center, a walk-in site that provides trouble shooting and support for student owned computers. A number of student home use site licenses are funded including SPSS, NVivo, Mathematica, and Symantec. The technology fee support also includes spam software, email for students, Microsoft products for the computer labs, shared storage space, virtual computing lab, Centra, Blackboard, and other student technology tools. The fee funds a portion of the networking infrastructure, specifically wireless upgrades in student academic areas. Support is provided for printing through the purchase of paper and toner, plus the upgrade and maintenance of printers. Wireless printing is provided as an additional benefit. The Help Desk and after hours Student Help Desk is also sponsored in part by this fee.

Altiris

We now use Altiris to as an efficiency tool to push all updates to software packages and operating system patches, and to edit image and software settings.

Apple Roll-out

Between fall and spring semester, we rolled out 250 Apple computers to labs on campus. Approximately 75 Apples were distributed as cascade use to colleges and departments. Total savings for this project over retail price was \$144,092.52. Total saved from projected cost \$86,548.72.

Lab Support

Over 1000 service calls were completed for campus computer lab projects.

Service Level Agreement (SLA) for Labs

A Service Level Agreement was created and sent to the lab coordinators for review. They now have a detailed list of the services and level of support provided to them by SCTF Labs.

Communications and Training

The communications and training team consults on a wide variety of software products, services Help Desk tickets, conducts training, and is responsible for communications on a multitude of projects. Below are the team's highlights from the past year.

- Pirate Essentials Newspapers (July 2008; 10,000 distributed)
- Pirate Essentials CDs for dorms (August 2008; 5,500 distributed)
- Connect2ECU Tutorial for Pirate Essentials CD (August 2008)
- Pirate Preview ad – newspapers sent to homes of incoming students - Technology Resources (August 2008)
- Back-to-School ads in The East Carolinian – File Sharing, Technology Resources (August 2008)
- New Faculty Orientation ITCS Session (August 2008)
- Technology Distinctions Slick Sheet for UNC GA visit (September 2008)
- ACE ad in The East Carolinian (September 2008)
- Internet Security training for Residence Advisors (September 2008)
- Microsoft Communicator Web site (September 2008)
- Microsoft Exchange 2007 Web site for ITCS (September 2008)
- IT Security Awareness posters and Video Contest promotional ad (October 2008)
- Technology Think-In (November 2008)
- File Sharing and Communications presentations at UNC CAUSE Greensboro (November 2008)
- ITCS Security & E-mail seminars (HR-sponsored; September 2008, February 2009)
- Trained the Office of Student Financial Aid staff on Communicator (February 2009)
- File Sharing Web Page and University Response to Higher Education Opportunity Act
- Banner Online Portal

- ECU Telephone Directory, Cover Design
- CommonSpot Training
- Faculty Orientation (August 2008)
- Graduate Student Orientation (August 2008)
- Focus Group Facilitation (October 2008, February 2009)
- Student Orientation assistant (summer 2008 and 2009)
- Open House representative (spring and fall 2008 and 2009)
- SharePoint manual update (September 2008)
- Smart Classroom Web Redesign (May 2008)
- Wireless Documentation Update (April 2009)
- ITCS Web site redesign (January 2009 thru ongoing)
- New Student Orientation documentation for flash drives (June 2009)
- Virtual Computing Lab Web documentation and site update (January 2009)
- Technology Digest and migration to blog format

Summer Orientation

We conducted three separate presentations in the Hendrix Theater during each of the 2008 summer freshman orientation sessions to convey technology information to the parents of incoming students. Topics addressed included ECU's computer requirements/recommendations and information to assist parents in making decisions about purchasing a computer for their student; each session was followed up with extensive Q&A time. In all nearly 2000 parents attended these sessions

The IT staff and student staff also conducted numerous hands on sessions with nearly 2400 freshmen. These sessions focused on educating freshmen on IT services (email, Blackboard, Onestop, security, computer labs, support, etc). Time was also spent instructing students on the use of the Self Service Banner class registration system so they could register for classes while at orientation.

We also worked very closely with the ECU First Year Center to assist faculty and advisors with issues related to new students registering in Banner, accessing systems, getting PirateID and Passphrase information, etc.

ACE Student Computing Support Center

The ACE Student Computing Support Center completed approximately 5,400 service calls this year. Internet and network connectivity continues to be the primary customer service call, most of which are related to hardware failure, virus and/or spyware problems or missing updates (either Windows or Symantec Antivirus), all of which are addressable issues in the support center.

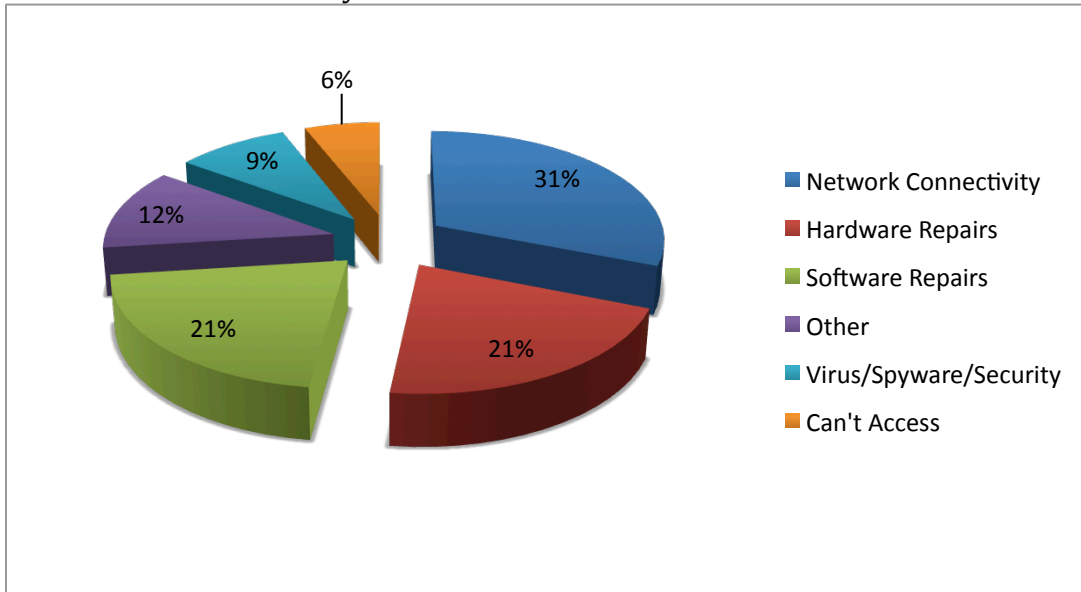
Our support numbers trend very high at the beginning of each semester and gradually decrease over the remainder of the term. Our goal is a 3-5 day turnaround with the exception of our peak periods at the beginning of each semester.

ACE continues to be both an Apple Authorized Service Provider and a Lenovo Self-Maintainer. This allows us to offer on-site hardware repair to both our Apple and

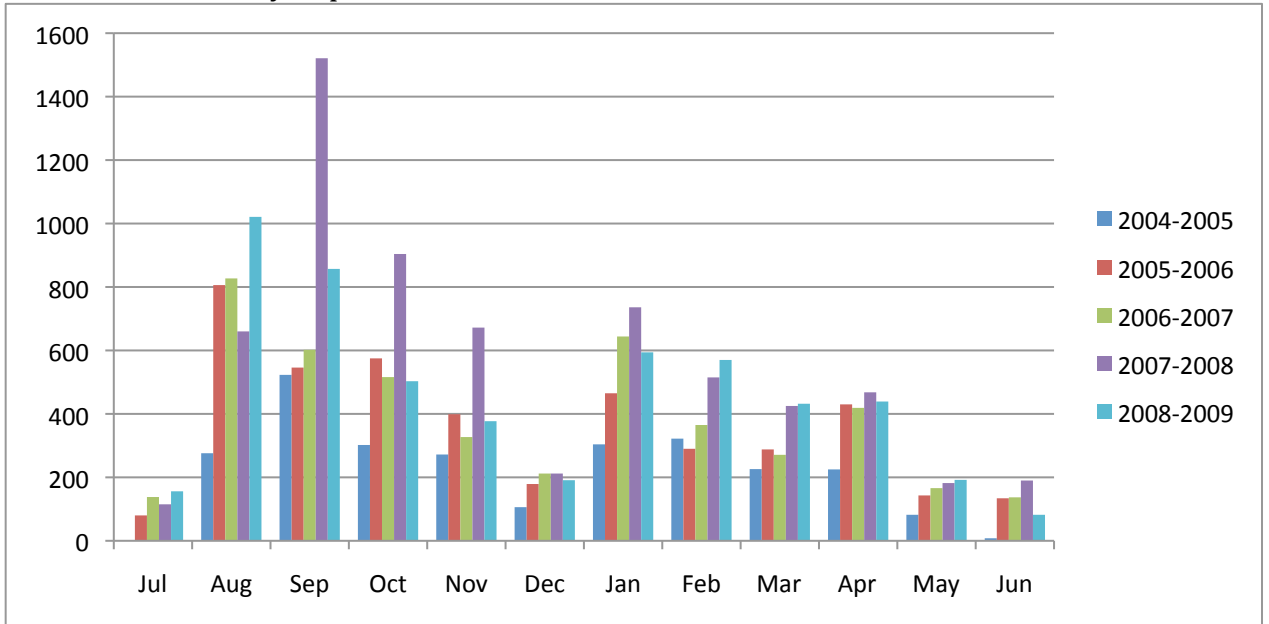
Lenovo users (for computers covered under warranty). The charts below illustrate our volume and type of repairs.

** Data for June 2009 covers the dates 06/01 – 06/11.*

ACE 2008 – 2009 Monthly Incident Trends



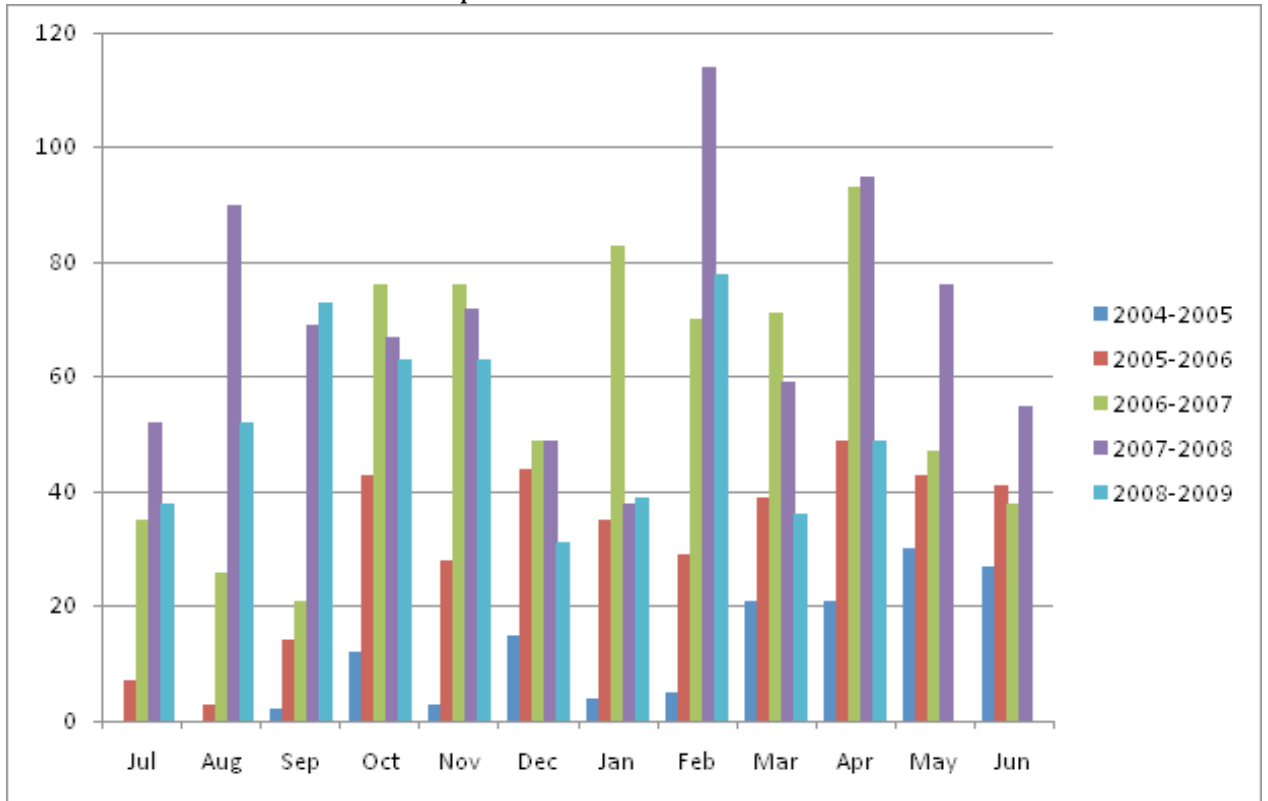
ACE Overall Monthly Repairs



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
04-05	0	276	523	302	272	106	304	322	226	225	82	8	2646
05-06	80	806	546	575	399	179	465	290	288	430	143	134	4335
06-07	138	827	602	516	327	212	644	365	271	419	166	137	4624
07-08	115	660	1521	904	672	212	736	515	425	468	182	190	6410
08-09	156	102	857	503	377	191	594	571	432	440	192	82*	5416

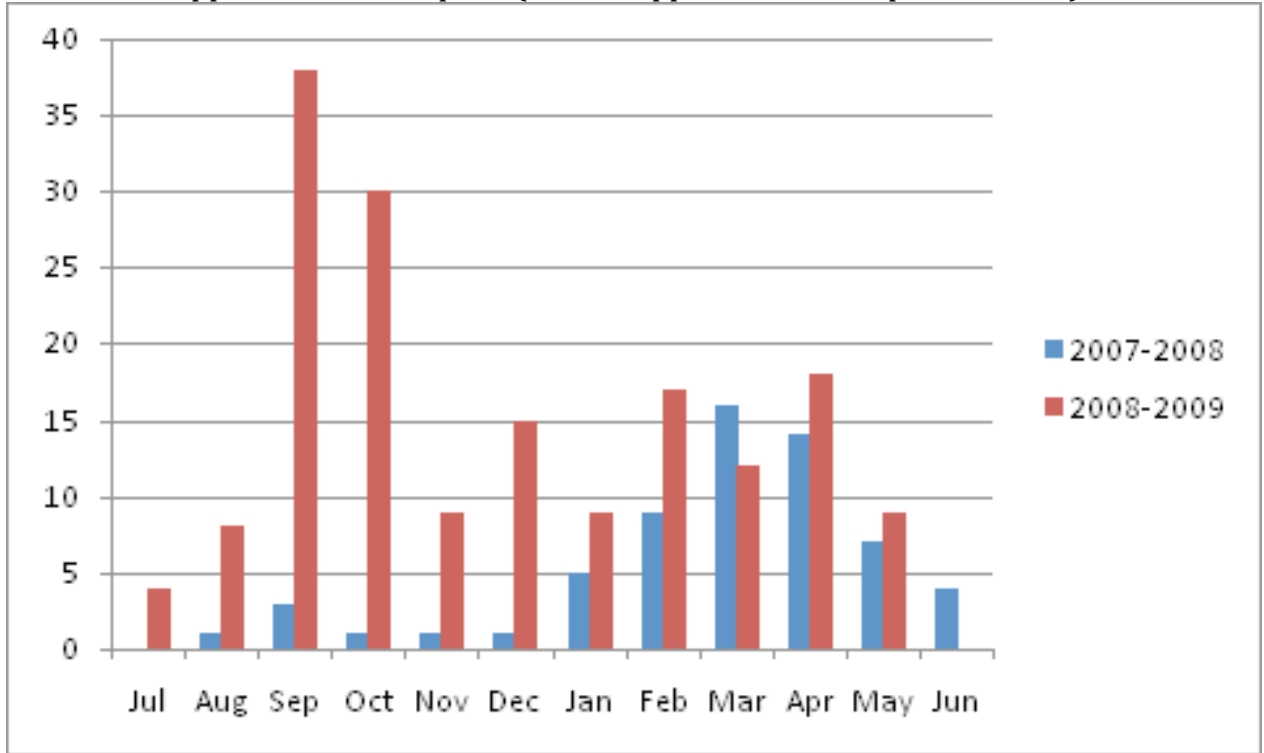
* High spike in number of repairs for Sep. 2007 was due to the conversion from the Magic help desk application to Tech Excel in ACE. The tickets at that point were still entered by hand and were then entered into Tech Excel at a later date (Sept. 2007).

ACE Overall Lenovo Hardware Repairs



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
04-05	0	0	2	12	3	15	4	5	21	21	30	27	140
05-06	7	3	14	43	28	44	35	29	39	49	43	41	375
06-07	35	26	21	76	76	49	83	70	71	93	47	38	685
07-08	52	90	69	67	72	49	38	114	59	95	76	55	781
08-09	38	52	73	63	63	31	39	78	36	49	24	6*	

ACE Overall Apple Hardware Repairs (started Apple hardware repairs in 2007)



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
07-08	0	1	3	1	1	1	5	9	16	14	7	4	58
08-09	4	8	38	30	9	15	9	17	12	18	0	4*	164

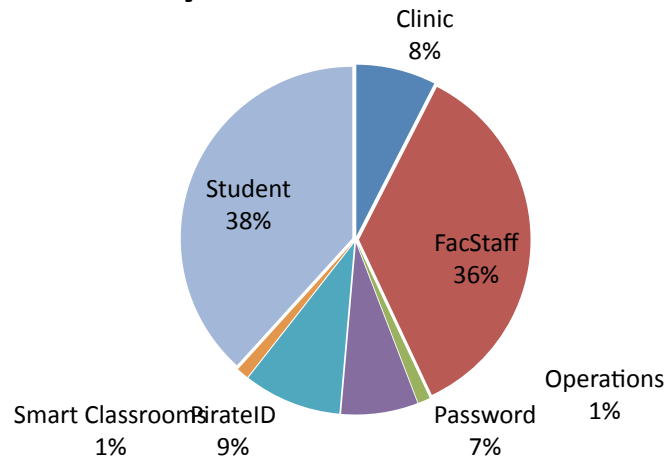
Help Desk

The Help Desk service received over 50,000 calls this year. Call volume is down slightly (please note June 2008 statistics only report calls for half of the month) for the past year. The Help Desk was able to greatly reduce the number of abandoned calls, dropping the rate from 11% down to 7%. Phone call distribution shifted slightly to a higher percentage of the calls coming from faculty and staff, and a slightly lower percentage coming from the students. We believe this is due to an increase in online ticket usage. Usage of chat software to resolve customer problems is used by both Help Desks as an alternative method.

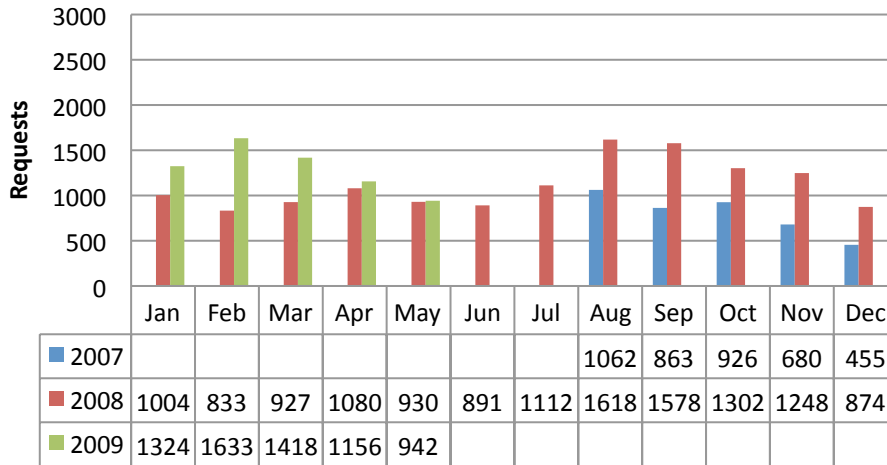
	FY07	FY08	FY09
Help Desk	47900	53624	45780
Student Help Desk	7745	7703	4002
Operations	896	757	580

The numbers are slightly down because of the increased use of online requests, also there are about 2000 calls that are missing due to a data gap in the VoIP reports system (from first half of June 08).

% of calls by Menu Choice Jun08-May09



Online requests via Tech Excel



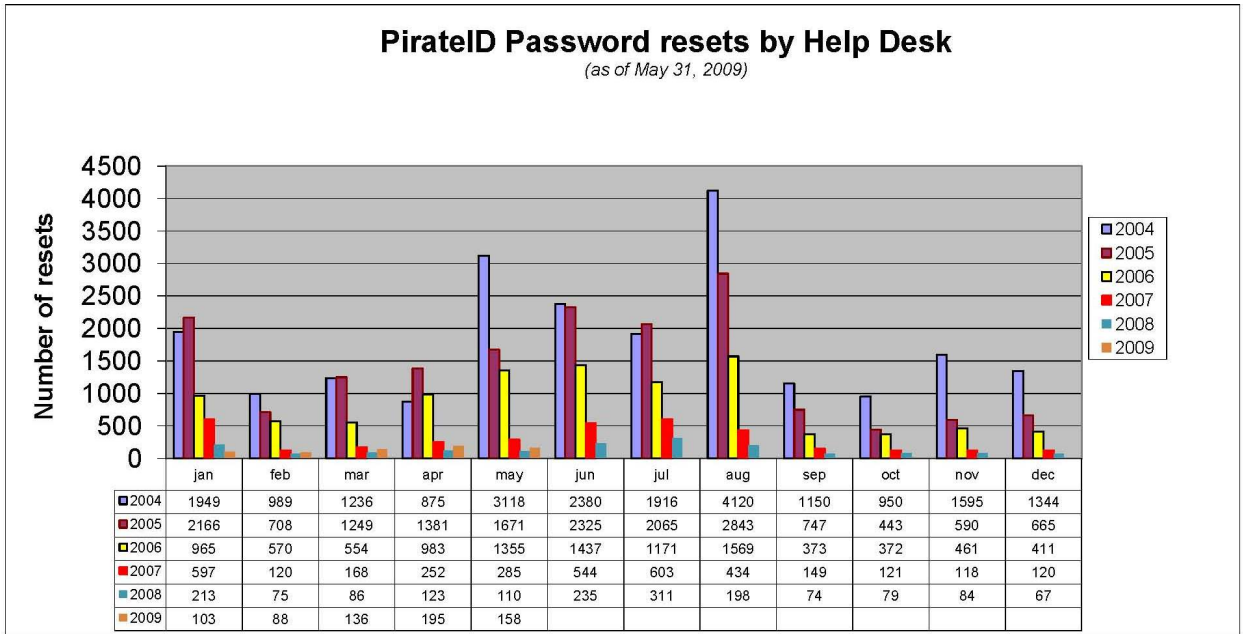
Help Desk calls volume and abandonment rate for June 08-May 09

	Calls Presented	Calls Handled	Calls Abandoned	%
June 08	1817	1720	97	5.3%
July 08	4617	4365	252	5.5%
August 08	6493	5885	608	9.4%
September 08	4128	3903	225	5.5%
October 08	4025	3830	195	4.8%
November 08	3318	3151	167	5.0%
December 08	3786	3559	227	6.0%
January 09	4228	3914	314	7.4%
February 09	4833	4411	422	8.7%
March 09	4236	3913	323	7.6%
April 09	4737	4311	426	9.0%
May 09	4144	3853	291	7.0%
Total	56277	52115	4162	7.4%

Customer service ratings for the Help Desk continue to increase over time. On a scale of 1 to 5 where 1 is poor and 5 is excellent, the Help Desk receives overall average ratings above 4. Ratings are higher than prior years.

Customer Service Ratings (scale 1-5) June 08-May 09							
Customer	Count	timely	courtesy	knowledge	ability	quality	Average
faculty	578	4.74	4.85	4.79	4.71	4.73	4.76
other	56	4.46	4.76	4.62	4.51	4.58	4.59
staff	1135	4.83	4.89	4.88	4.85	4.86	4.86
student	173	4.52	4.61	4.48	4.32	4.43	4.47
(blank)	18	4.53	4.53	4.47	4.54	4.50	4.51
Grand Total	1960	4.76	4.85	4.81	4.75	4.78	4.79

Password resets continued to be a low percentage of Help Desk calls as a result of the online reset system implemented in 2008. This dramatic reduction in password resets has enabled the Help Desk to concentrate its efforts in other call volume areas.

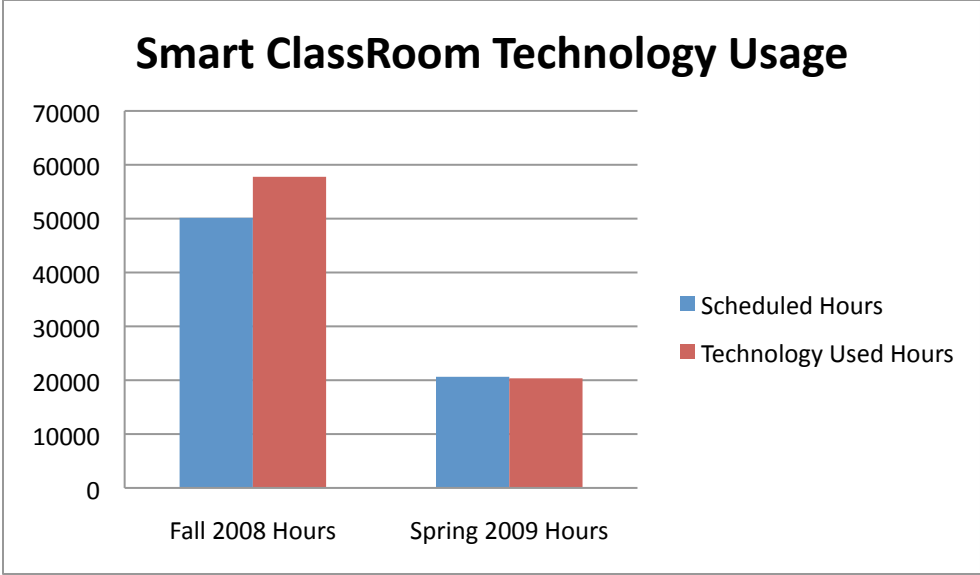


Technology-Enhanced Classrooms

We have approximately 350 technology-enhanced classrooms, all of which are in high demand. We are continuing to perform preventive maintenance and make repairs with the goal of making systems more reliable and minimizing class downtime.

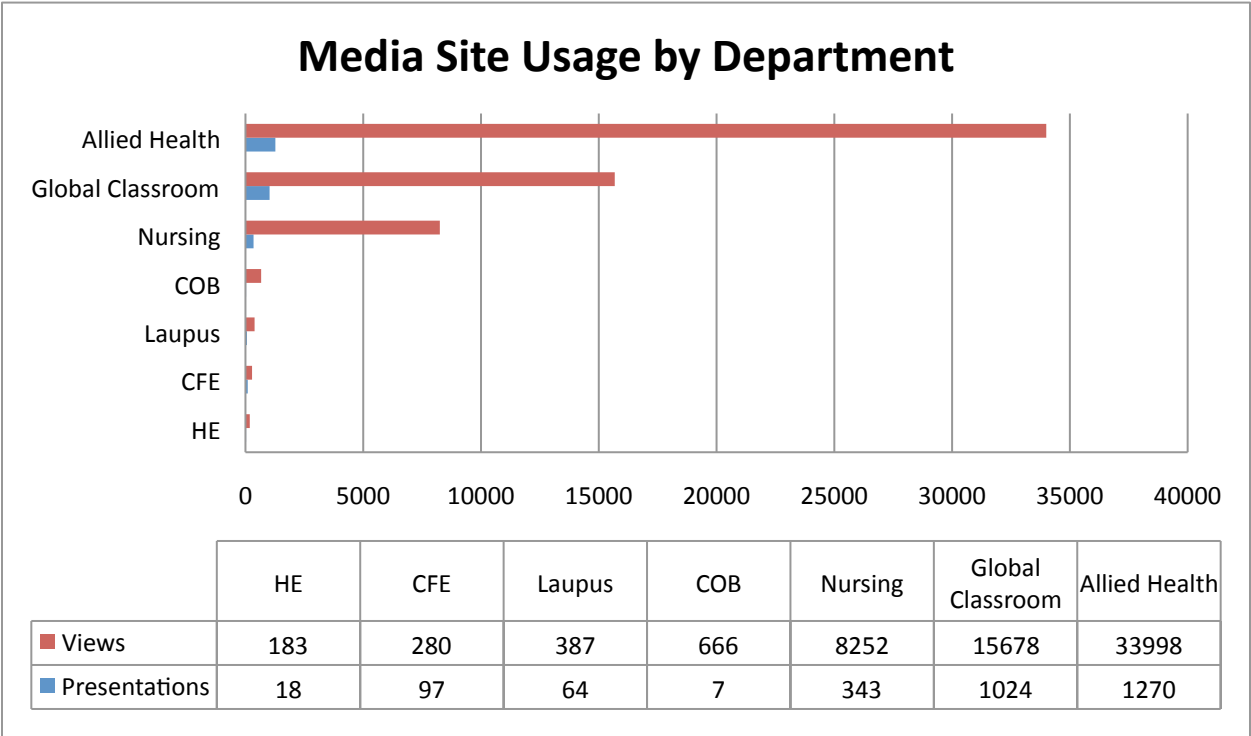
Overall, there were over 1,000 Smart Classroom support calls this year. We have implemented better call routing through the Help Desk and a special Smart Classroom hotline. As a result, we are able to optimize resources and reduce response time.

We are implementing several methods to capture Smart Classroom usage. One method is to compare the class schedule provided by the registrar for the rooms, with lamp hour/ projector usage. During the fall 2008 semester, those rooms categorized as Smart Classrooms were Scheduled 50,150 hours while the technologies in these rooms were used 57,768 hours. In other words, technology was used 115% of the scheduled classroom time. During the spring 2008 semester, the rooms were scheduled 20,635 hours and the technology was used 20,351 so the technology was used 99% of class scheduled time. Crestron Roomview implementation is underway to help make this tracking more accurate and determine what pieces of equipment are being used.



Mediasite Usage

There were approximately 57,000 presentation views and 2,700 presentations via Mediasite this year, and the usage of existing equipment continues to grow.



Building Projects

New construction completed this year with significant technology enhancements includes the East Carolina Heart Institute which has been in use for about six months. We are also working on the Kitchen for Human Ecology, the Dental School, and the Family Practice Center projects. As the budget allows, we will continue creating new Smart Classrooms and upgrading existing rooms as we receive requests through the registrar.

Clinical Upgrades

Collaborative efforts of ITCS and Health Information Systems teams focused on several key initiatives including Healthspan preparation and the opening of East Carolina Heart Institute (ECHI).

Healthspan preparation included: retrofitting the old Health Sciences Library to create a training facility for BSOM staff; preparing the Firetower Medical Office clinical operations as the first ECU clinic to come up on the new Healthspan electronic medical record system and ensuring printing capabilities with the pending Healthspan Revenue and Scheduling modules implementations.

ITCS participated in the relocation or installation of workstations for several clinical projects including 300 new workstations and printers for the ECHI.

In addition, ITCS staff assisted vendors with the installation of a Heartlab cardiovascular PACs system, nuclear cameras, and Ultrasound equipment. Other projects included: deployment of 42 prescription printers; installation of workstations for the new Internal Medicine Sleep Center; and the installation of the newly acquired Eastern Neurosurgical & Spine clinic on to the ECU network.

Web Site Improvements

The 'top two tiers' of the primary university web site were moved to a Linux servers to provide improved performance and reliability. This shift in strategic direction from the Windows platform has allowed ITCS to further explore web technologies running on alternate platforms and has accounted for a continued strong web presence for the University.

Enterprise Messaging – Instant Messaging and Email Enhancements

ITCS secured funding from Microsoft to be a participant in their Lighthouse Pilot program. This program provided ECU with \$40K worth of consulting and design work performed by a Microsoft Partner. The initiative involved implementation of the Microsoft Unified Communications (UC) platform (fully by ITCS with plans to deploy to various components to other business units on campus). The UC platform is built around the Microsoft Exchange email systems, Instant Messaging, Live Meeting and includes VOIP integration, a possible alternative to the more expensive Cisco unified messaging system.

Participation in the Microsoft Lighthouse Pilot ultimately laid the groundwork for the recent Exchange 2007 upgrade for faculty, staff and students which doubled mail box

sizes, 500MB for faculty/staff and 100MB for student mailboxes. In addition, the new Student Email servers were implemented via blade technology utilizing state-of-the-art storage technologies. New features of Exchange 2007 include a much improved functionality and user interface in the web client primarily utilized by students.

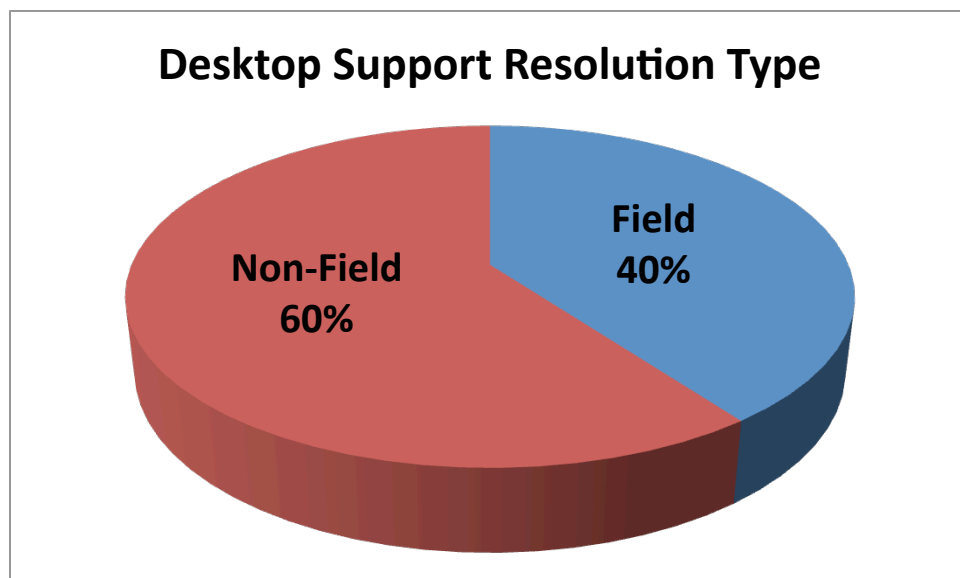
An effort is under way to educate the user community regarding the elimination next fall of the @mail.ecu.edu email suffix. Approximately 92% of INCOMING email destined to @mail.ecu.edu addresses is flagged and quarantined by Mailmarshal as spam. Eliminating that overhead is necessary to maintain an efficient spam filtering system and ensure timely delivery of processed email.

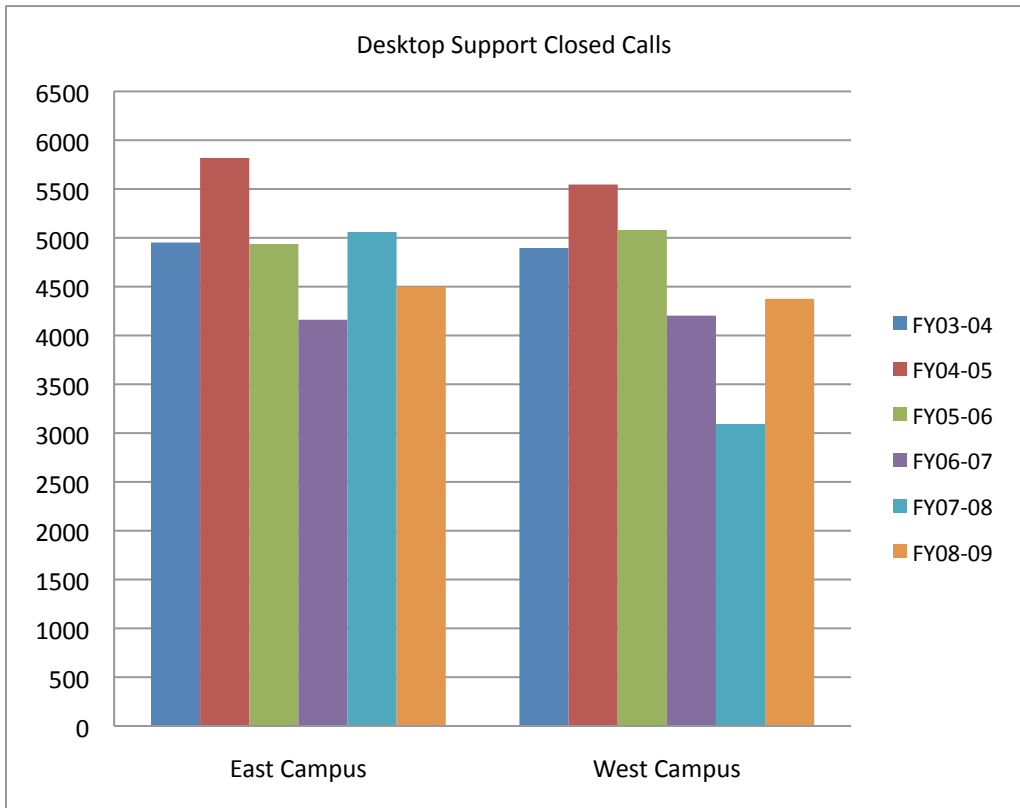
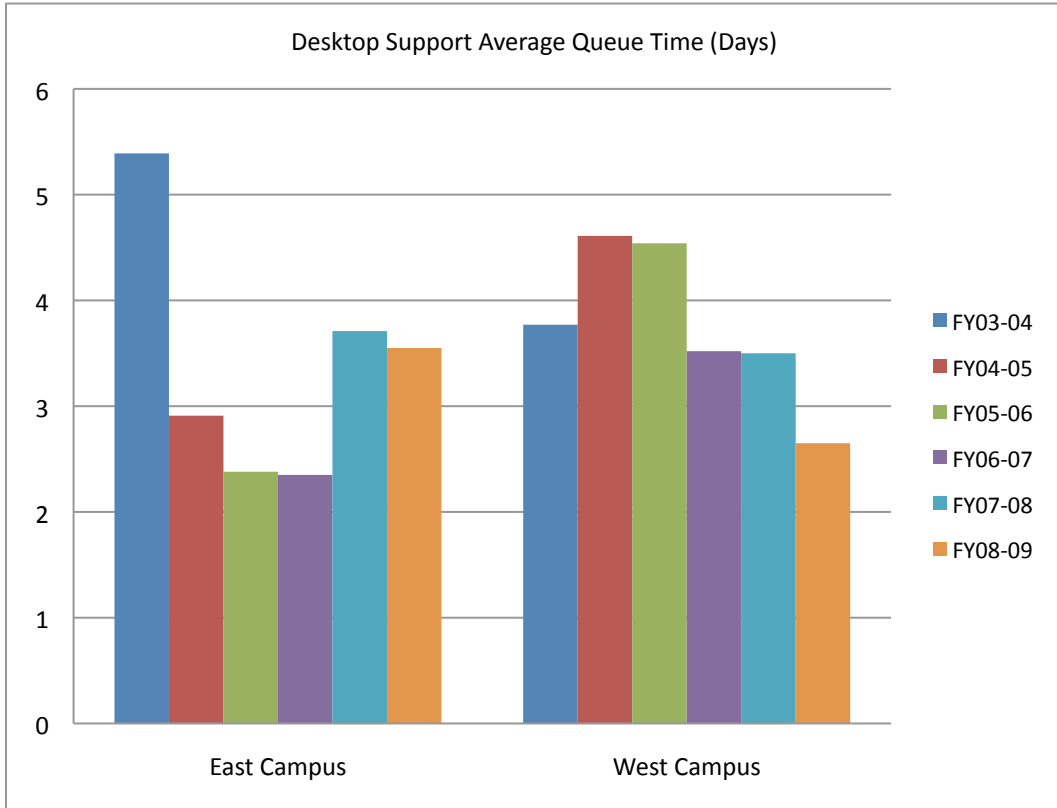
Identity Management

ITCS has been working with UNC-GA on implementing Shibboleth, a multi-institutional authentication capability that allows single sign-on access across organizational boundaries. This will ultimately allow users at ECU to access resources hosted by other UNC entities via their PirateID, thus eliminating the need for an additional userid/password for those resources. The first phase of the project scheduled for this summer is UNC-GA's RAMSeS (Research Administration Management System and eSubmission) database.

Desktop Support Service Call Volume

ITCS continues to make great strides in reducing the need to dispatch desktop support staff to faculty and staff offices thus minimizing client downtime, saving staff time and gas in state vehicles. Sixty percent of Tier 2 (non-Help Desk resolved) desktop support calls were resolved via remote control, phone, email, or client walk-in. This capability largely stems from 'remote control' software that ITCS deployed campus-wide four years ago. The growth of campus computing resources necessitates support models that minimize the need for field visits. The deployment of the remote control software has allowed us to meet that need.





Security

The following initiatives were implemented this year in order to better protect critical ECU computing assets from various security threats such as viruses and hacking attempts:

- Began the remediation phase of removing data identified in an independent 'sensitive data' scan. This process involved searching selected production file servers, selected departmental file servers and approximately 2500 desktops for EPHI (Electronically Protected Health Information), PII (Personally Identifiable Information – SSN, etc.) and PCI (credit card) data that could present a potential exposure risk to the university. ITCS staff worked with file server administrators, workstation owners and department chairs to implement a plan to remove the identified data.
- Identified and quarantined approximately 147 million out of over 202 million emails containing identifiable triggers that represented potentially malicious content such as spam, viruses or other industry identified threats.
- Disabling of the AUTOPLAY feature on desktop computers to avert new and emerging virus threats.
- Networking Services deployed a separate Encrypted Wireless solution to campus. All campus laptops were remotely configured to enable them to connect to the new network without user intervention. For security reasons, in the future, access to critical resources will be restricted to the encrypted network.
- Implementation of 'Secure Workstation' configurations, modeled after the Brody School of Medicine Workstation Security project, was implemented in pilot phases for various business and academic units. These measures provide centralized management of a more secure, reliable and maintainable workstation for end users.
- Upgraded desktop operating systems running Windows XP to the latest service pack (SP3).
- Upgraded the majority of campus workstations to the latest Microsoft Office suite of productivity applications, Office 2007.
- Upgraded desktop Antivirus software to the latest version (SAV 10.1.7)
- Worked with ITCS Security to ensure HIPAA compliance of nearly a dozen new clinical applications.
- Implemented 'software restrictions' on campus workstations that implemented blocking mechanisms to prevent known malicious software from being downloaded and installed.
- Upgraded desktop Web browsers to Internet Explorer 7, thus taking advantage of the latest security technologies in the ever expanding Web world.

Data Center Reorganization

In our shift from the mainframe system to a server-based environment, the associated "operator" staff responsibilities dramatically changed from their traditional roles, necessitating a functional realignment. In the larger context of data center operations and combining with the network operations center, the old working titles were changed to support the "Enterprise Operations Center or EOC". The EOC now focuses on

virtualization and consolidation, energy efficiencies, security, business resiliency and IT service delivery.

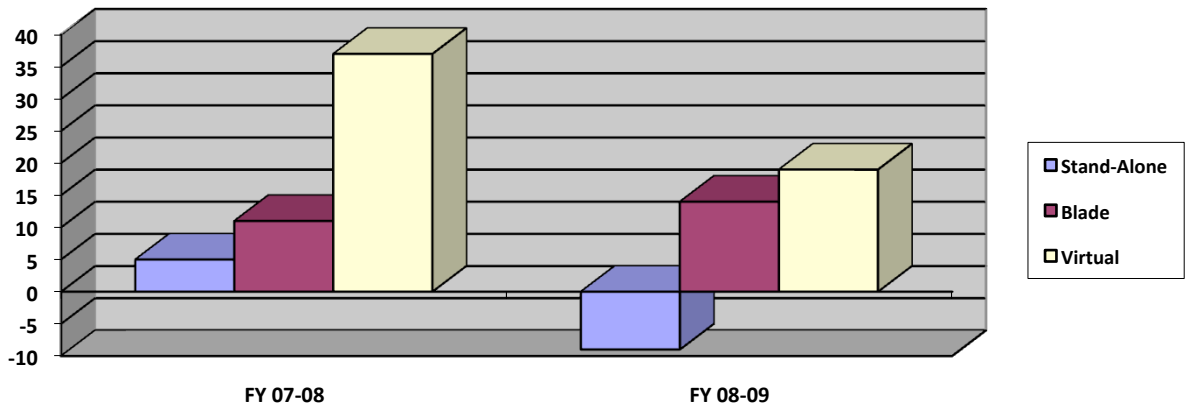
Production Control, also a functional relic of mainframe computing, has seen their jobs repurposed to better suit the needs of our evolving department.

Virtualization and High Density Computing Infrastructure Expansion

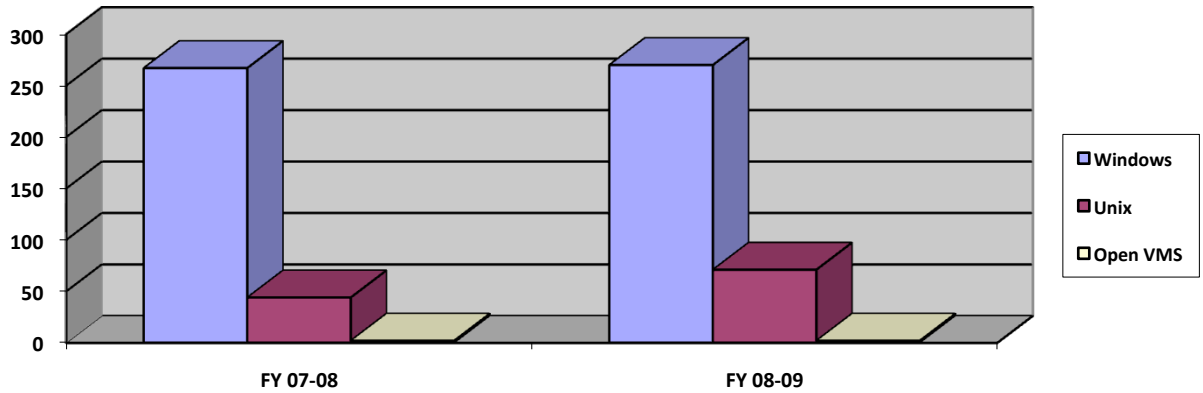
With a growing campus and its associated technical needs, ITCS continues to closely manage the space and infrastructure environment of our datacenters to host over 500 servers used in support of the university. Since 2007, ITCS has consolidated servers through virtualization, and due to the limited capacity of our data center, physical growth was kept to a minimum. In-fact the number of single purpose servers that we removed nearly equaled the number of virtualizable, multifunctional servers that we installed. We have provisioned the following systems this year:

Server Type	New Servers	Deployment Cost Average	Cost Avoidance	Projected Savings
Stand-Alone	-9	\$7,500	0	0
Blade	14	\$8,200	(700)	(9,800)
Virtualized	19	\$2,000	5,500	104,500
Total				\$94,700

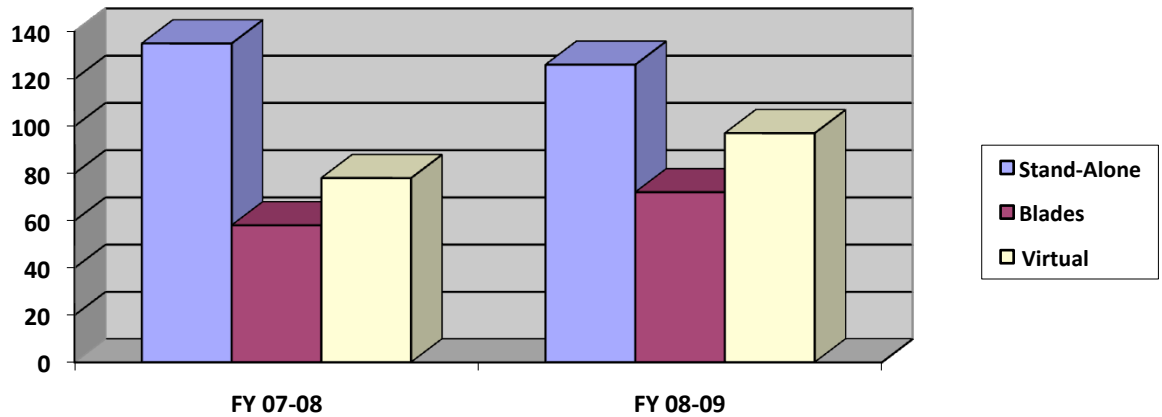
2008-2009 Server Growth



2008-2009 Server Growth By Platform



2008-2009 Servers Supported By ITCS



Vendor and Team Projects

Working with our environmental vendors during the Data Center renovation, we deployed in-row cooling versus conventional under the floor air conditioning, and began utilizing state of the art UPS battery systems and power management devices that are energy effective in our new blade center. We are working with our application vendors to develop a Performance Monitoring and Management Solution that will enable decision makers to do better planning by being more informed about infrastructure usage and performance. We are now seeking a performance management tool that will enable us to monitor and manage a complex virtual server environment with its multiple operating systems and reduce the individual personal effort now needed to maintain those servers.

IT Audit

The Office of the State Auditor conducted our Information Systems (IS) audit for the University during this period. The scope of their general controls control audit included general security, access controls, systems software, systems development, program maintenance, physical security, operations procedures, and disaster recovery. They

specifically reviewed access controls to our critical systems, such as the Banner environment. Their audit did not find any significant weaknesses in these areas.

Disaster Recovery Testing

ITCS coordinated and completed our annual DR testing. Over the last several years, ITCS has evolved from a traditional strategy of recovering critical information systems and data from one server to another server in the event of a disaster or system failure. The current strategy is based on redundant computer hardware, data storage, and infrastructure elements located in multiple data centers, thus enabling failover. This year's testing included some real world events including total power loss to our primary data center, test scenarios for the Blackboard Distance Learning systems, the campus e-Mail systems, the campus Web site and services, various School of Medicine systems, and the Oracle Database used with SCT Banner ERP System. Testing was highly successful and verified by our Internal Audit.

Data Center Renovation

"Power and Cooling is a pandemic in the world of the data center." That was the message from Gartner in 2007, which concluded that by 2008, about half of the world's data centers would be functionally obsolete due to insufficient power and cooling capacity to meet the demands of high-density equipment (blade servers). ECU's data center located in a building that was formally a newspaper facility for the Greenville area. Given the increasing utilization of technology by increasing numbers of faculty, staff, and students, the campus quickly outpaced a facility that was not designed to serve as a data center for a campus of our size. By 2007, as predicted by Gartner, ITCS was unable to fulfill any additional requests for new or replacement servers, and in no position to support blade technology because of power and cooling limitations. Additionally, there were no physical and/or financially prudent ways of increasing the raised floor space, thus eliminating the opportunity to achieve a higher density necessary to support the growth of the University to 2011.

In the short term, the University selected a design firm that would renovate some of the existing space previously used for mainframe printers. ITCS has been able to add both electrical capacity and cooling capacity to support a new IBM blade center, which would allow for the growth of over 300 high-density blade servers. The addition of a 250 KW UPS and a second 500 KW Generator provided capacity to the infrastructure for additional growth. Since our existing chillers could not be expanded, we installed "in-row" cooling between server racks to provide cooled air to the blade server equipment more efficiently.

This bought the IT data center some time while emphasizing the need for space planning to meet the University's IT needs beyond 2012.

Blackboard Hardware Refresh

Blackboard is the University's application for delivering its distant education courses, and rapid growth in that arena is expected to continue. To meet existing application performance demands and to ensure that we are well positioned to accommodate growth, ITCS analyzed the current and projected needs to design a cost effective

hardware replacement option that will accommodate future needs. The hardware is currently being configured with an actual “go-live” of the new systems in December 2009.

Storage Virtualization

ITCS expanded our implementation of storage virtualization using the Universal Volume Manager product from Hitachi. Virtualization of storage allows us to migrate data from costly high performance storage to less expensive mid-tier storage when appropriate with minimal impact on the host. Utilizing storage virtualization for secondary copies of mission critical data will potentially save the university \$500k through cost avoidance of expensive tier 1 storage expansion.

Email and NAS Archiving

ITCS continued implementation of our information lifecycle management project. Enterprise Vault allows us to archive old email from our production Tier 1 storage to our less expensive content addressable storage. Rainfinity allows us to archive aged data from the enterprise network attached storage (Piratedrive) to our content addressable storage. Together these products have removed almost 20TB of aged data from our production storage arrays. Archiving has shown a great return on investment not only in the initial cost savings of production storage capacity but also in the efficient utilization of our backup and restore resources for current relative data.

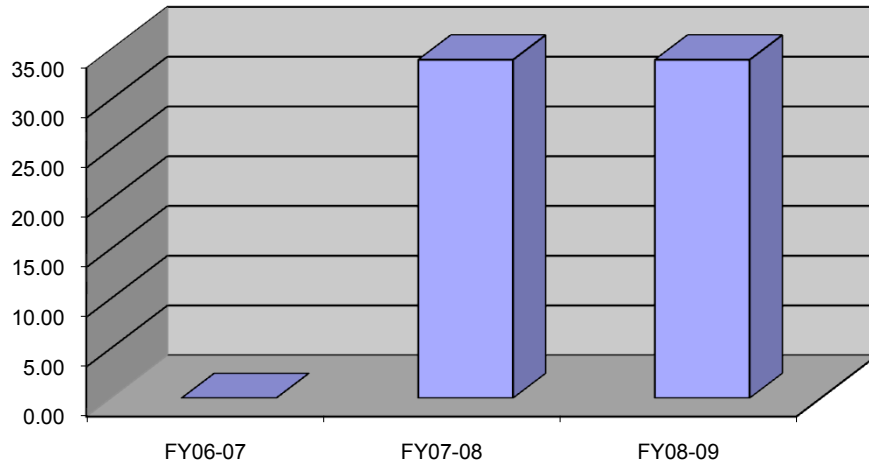
Backup to Disk DeDuplication

ITCS is in the process of moving from backup-to-tape for our enterprise backup solution, to backup-to-disk with deduplication using Symantec Puredisk. Deduplication technology will allow us to continue to protect critical university data in a cost effective manner by minimizing multiple copies of the same data. Currently we are backing up 202 servers, 123 of which are backing up to disk. Seventy-three of those servers are being deduplicated on disk. Within the next two years we anticipate full implementation of backup to disk with deduplication.

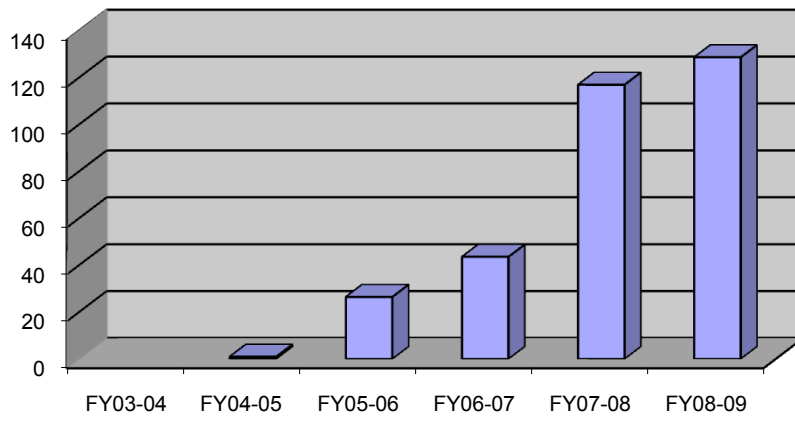
Storage Growth

Our infrastructure replacement from the previous fiscal year allowed us to continue to meet growing storage demands with current equipment. Additional capacity was added to our tier 2 and backup-to-disk storage pools to ensure our ability to meet storage needs for the university for next fiscal year. Our raw tiered storage capacity now totals 520 TB and breaks down as follow: Tier 1 – 34 TB, Tier 2 – 128.7 TB, Tier 3 – 4.7 TB, NAS – 151.75 TB, CAS – 87 TB, and Backup to Disk 114.25 TB.

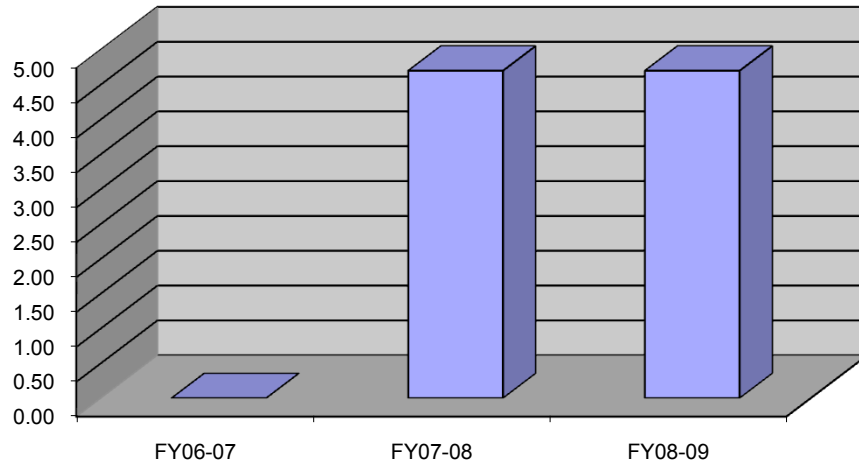
**Tier 1 SAN Raw Disk Capacity
In Terabytes (TB)**



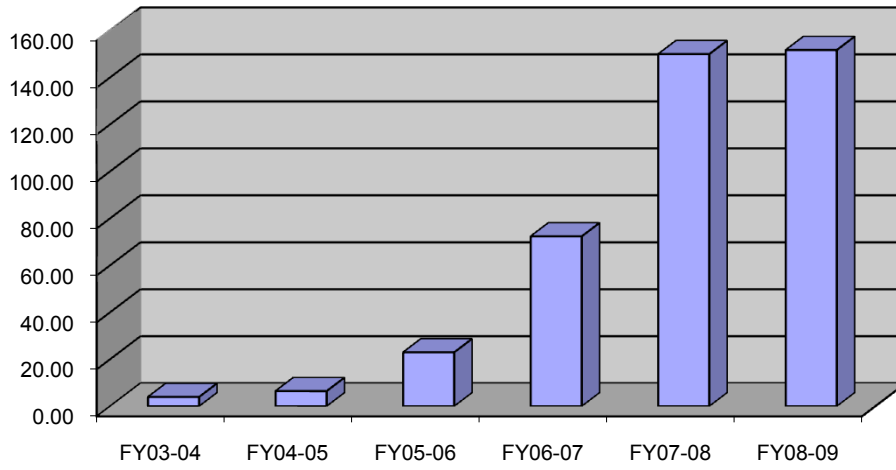
**Tier 2 SAN Raw Disk Capacity*
In Terabytes (TB)**



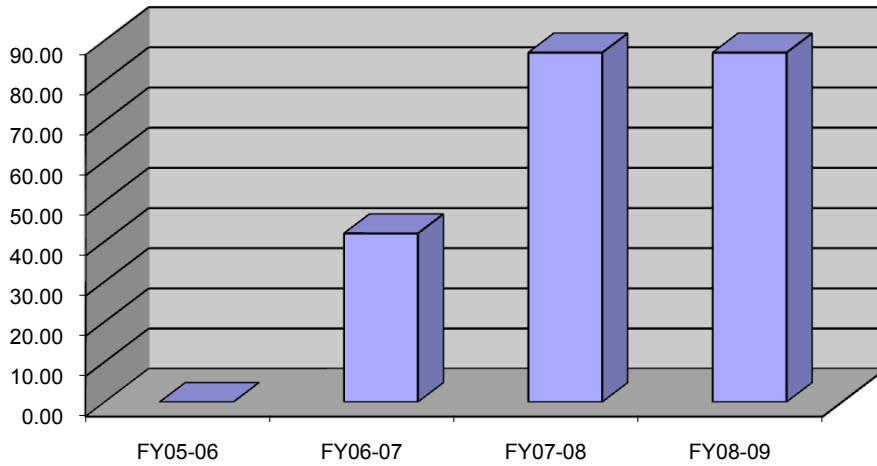
**Tier 3 SAN Raw Disk Capacity
In Terabytes (TB)**



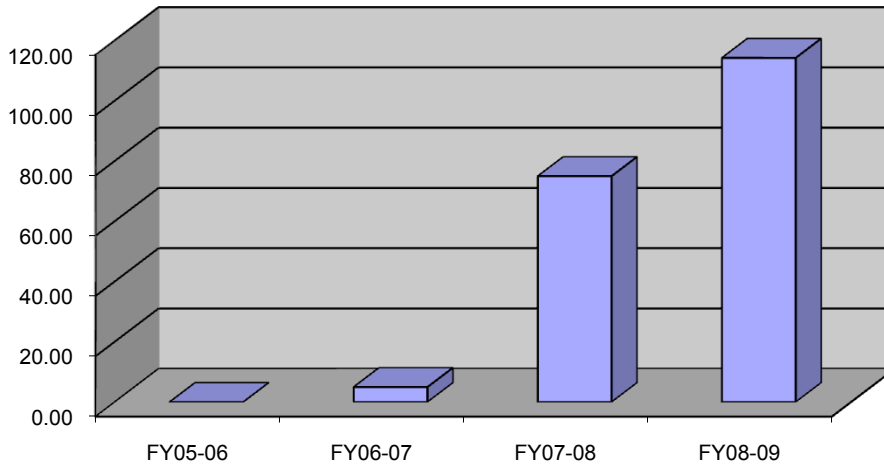
**NAS (PirateDrive) Raw Disk Capacity*
In Terabytes (TB)**



**CAS (Archive) Raw Disk Capacity*
In Terabytes (TB)**



**Backup to Disk Raw Capacity
in Terabytes (TB)**



**Raw Disk Capacity represents total managed space including system overhead needs for Operating System, High Availability, Fault Tolerance, and Data Recovery capabilities necessary for proper management.*

Awards

ITCS was honored with a finalist award from the Best Practices in Storage Awards Program from Computerworld magazine for Planning, Design, and Building a Strategic Storage Infrastructure.

Storage Semi-Annual Meeting

The Enterprise Storage Team coordinated the second Storage Administrators meeting for the University of North Carolina system in conjunction with the annual UNC Cause conference. Storage representatives from the majority of the schools in the UNC system participated in an open forum discussion of recent and upcoming projects in the storage field.

Proof of Concepts

ITCS participated in a cloud computing proof of concept using the Mozy backup product from EMC. The project was very successful with a 95% approval rating from the participants. We look forward to implementing this solution for backup of University client workstations in the near future.

IT Software Development Services

Academic Recovery Module

Each year the Academic Advising Center deals with approximately 10% of the student population. One continuing challenge is how to devote special attention and raise the awareness of university policies and procedures to those students that find themselves in academic difficulty. The Academic Recovery Module is a OneStop application that requires students to take a quiz based on the academic difficulty policies of ECU and take a survey to gather some basic information that may help the adviser return the student to good academic standing. This will allow academic advisors to spend less time informing students of policies and procedures and more time for coaching students back into good academic standing. Over 1,000 students used the ARM system in Fall 2008.

Adviser Calendar

The Adviser calendar allows advisers to block off available times to meet with students in an academic advising capacity. Students can then sign up for an advising session during one of the available slots. To date over 7,000 students have used the system to schedule advising sessions with their adviser.

ASK Survey System

In the past, the OneStop has housed many university surveys. Traditionally, each survey required a separate application and IT developer time to create. The OneStop ASK system allows individuals to create surveys within the OneStop with little or no involvement from ITCS. The ASK system allows university faculty and staff to create surveys through an easy-to-use interface, select target groups of users to push out the surveys, and schedule when the surveys will be opened and closed. With help from ITCS, survey administrators can also build in post-processing such as hold tag releases, auto notifies, and similar types of processing. The first ASK survey was taken in December 2008, to date there have been over 10,000 survey responses through the ASK system.

Audits

In addition to a state IT audit addressed elsewhere in this report, we underwent two state financial audits (9 months review and EOY review), an OSC mandated accounts payable/purchasing audit, and we participated in a Foundation audit, as well as several Internal Auditor follow-up audits.

Banner 8.1 Release Implemented

ECU was the first university in the UNC system (and one of the first nationally) to have implemented Banner release 8.1 (including the data warehouse module ODS) in a very short timeframe. This implementation was facilitated by our having installed the initial Banner version without customization. In addition, ECU has been contacted by more than 250 institutions asking us to share our Banner 8 implementation plans and a documented list of issues and resolution processes.

Banner Security Request – Finance Module

The Banner Security Request system allows users to request Banner Security through one simple-to-use interface. The request is routed to the required approvers making sure appropriate security is granted. In April 2009, the Finance Module was developed to allow Finance requests through the Banner Security Request application. This will allow a single system to manage Banner module access and ensure appropriate access is given. In 2008 there were 1,207 Banner Finance Security Requests and 3,499 total Banner Security Requests (both new and modifications).

Credit Card Processing Conversion to uPay

All OneStop applications that processed credit card payments have been converted to utilize TouchNet's uPay module. This allows ECU to move PCI compliance onto TouchNet – our e-commerce provider. All applications utilizing online payments were converted utilizing a SOA architecture that was developed in the OneStop to allow for quick ecommerce integration with uPay.

HealthSpan

ECU Physicians is converting its existing clinical information systems (GE IDX and GE Centricity) to the EPIC Systems (known by the project name HealthSpan) in collaboration with University Health Systems of Eastern Carolina (UHS). ITCS has been involved in assisting on this project as follows:

- Collaborated with Brody School of Medicine and UHS to develop a detailed Application Service Provider Master Agreement between ECU and UHS.
- Assisted in the activities in getting the Fire Tower ECU Physicians clinic into productions status in February 2009 with the HealthSpan Medical Record system.
- Providing a critical implementation role for the HealthSpan Revenue Cycle (Patient Registration, Scheduling and Billing) scheduled for production status on July 1, 2009.
- The Brody School of Medicine (BSOM), with guidance from IT Software Development Services (SDS), chose *ecuBIC* as the primary reporting and analysis

solution for its HealthSpan system and saved thousands of dollars that would have been spent on Crystal Report licenses. SDS is presently assisting on the HealthSpan reporting portion to meet their “go live” deadlines.

Mass Time Entry

With the implementation of Banner a need arose to more efficiently pay out employees' non-standard pay such as overtime, beeper pay, and other types of special pay. A new system was put in place to allow easy entry, validation, and integration of these pay records into Banner. The project was a huge success. One payroll entry clerk stated that the total processing time was reduced from two-plus hours to 15 minutes! In addition, payroll went from thirty-plus pages of errors to none. This application incorporated a streamlined user interface utilizing many new Web 2.0 enhancements. The application has now processed over 37,371 records since June 2008.

MyFoapReports

Completed the first phase of a project that will deliver a utility for pooling FOAPs (finance account codes) for a variety of resource reporting purposes. This will enable units at any organizational level to create reports based on custom, user-defined and maintained collections of FOAPs, otherwise known as “FOAP groups.” This will allow these pre-defined FOAP groups to, in turn, be treated as individual entities within *ecuBIC* reporting and analysis solutions. The deliverables from the initial phase of this project are being used by ITCS Financial Services.

Onestop Usage Statistics

We developed a new tool in the OneStop to monitor its usage by reporting total hit counts, most used applications, distinct users, what device the client is using (mobile, browser), browser type, etc. This information will aid in developing our focus and strategy for the OneStop in the coming years. In three weeks time over 31,000 distinct users logged in, and 100+ web applications used, and over 1 million user clicks.

Position Management Reporting (PosManIT)

PosManIT, the Information Technology and Computing Services (ITCS) positions dashboard, is an integrated collection of online charts and reports designed to aid the Office of the CIO with its analysis of the campus-wide distribution and funding of positions possessing classifications within the IT career-banded family. This system enables the CIO to make more informed decisions vis-à-vis potential consolidation and/or elimination of distributed IT positions/funding.

Proctor Project

The UNC GA approached ECU to develop a UNC system-wide proctoring network application. The application will allow prospective proctors to register with ECU and the larger UNC system, to give students the ability to quickly locate proctors in their area using interactive search and mapping functionality. The first phase of this project, developing the prototype, has been completed. The second phase will involve SDS-NTDG co-developing the system with UNC GA staff.

Race/Ethnicity

New reporting requirements mandated by the federal and state government required ECU to capture new ethnicity and multiple race fields. Phase 1 of this project surveyed the ECU population to update their race and ethnicity information in the Banner database. Phase II updates the new fields for the population that did not take the survey based on their existing data.

Reduced Systems Footprint

Due to the data center capacity issues and the declining budget for ITCS, we reduced our server usage from nine to five servers. Two servers were decommissioned due to moving our credit card processing functionality off-site; one server was permanently taken out of the production pool, and one of the development servers was decommissioned.

Student Opinion of Instruction Survey (SOIS) Results Online

A new system, developed using *ecuBIC* tools and technologies, now makes it possible for deans, department chairs and faculty members to easily retrieve SOIS results online. This new system represents an alternative to the traditional time-intensive, paper-based process of the past. It provides convenient, secure, individualized viewing of instructor results at faculty, chair and dean levels, and includes combined results for collections of courses with similar characteristics. A number of statistics are also included to allow for campus-wide comparisons of survey results. Some resulting benefits include:

- Order-of-magnitude reduction in processing time from months to weeks
- Considerable reduction in the amount of paper used in printing SOIS results
- Over 22,000 executions of SOIS reports since the solution went live in February 2009

Team Foundation Server (TFS)

Team Foundation Server (Microsoft's solution for software development lifecycle management that includes source code control, work item tracking, SharePoint project portals, project management, and the integration of other tools used in developing software) was fully implemented in the spring of 2009. It satisfies a recent state-mandated audit requirement, protects ITCS source code assets, allows collaboration and brings ECU in line with modern development practices. It is currently in use by all members of the Software Development Services (SDS) team, and a number of external, departmental information workers. The present infrastructure is capable of supporting additional development teams, both within ITCS, and out among the academic and business units across the campus and presently manages over 7,000,000 lines of source code.

IT Security

Sensitive Data Remediation

1. External Assessment

ITCS utilized the services of an external security assessor to detect sensitive information residing on the University's desktops, laptops and file servers. This is a part of ongoing efforts to prevent sensitive information from leaking out of the organization. Scans were conducted on 2,600 desktops and laptops (workstations) and 75 servers. Sensitive information for the purpose of the scans is defined as PCI (Payment Card Industry data, i.e. credit card numbers (CC)), PII (Personally-Identifiable Information, i.e. name, address, Social Security Number (SSN)) and HIPAA (Electronic Protected Health Information (EPHI)).

1,730 workstations and 33 file servers were identified as having sensitive content. Remediation efforts resulted in the removal of sensitive content from all servers not authorized for sensitive data storage and review of security controls for the remainder. Removal of sensitive content on 70% of workstations is complete. Remediation efforts continue for the remaining workstations in our efforts to remove all identified sensitive information.

2. Ongoing Assessments and Remediation

Semi-annual Scans

ITCS implemented semi-annual sensitive data scans for all enterprise-level servers to detect the inadvertent storage of sensitive information on ITCS managed servers. All identified sensitive information is immediately removed from enterprise servers and the responsible party is contacted.

3. SSN Use Review

IT Security personnel serving on the Identity Theft Protection Committee (ITPC) reviewed, investigated and responded to SSN Use Requests for more than 25 University clients. Actions resulted in the removal of SSN from local workstations and enhanced security controls where SSN use was required.

External Security Assessments

1. Security Policy Review

IBM Internet Security Systems (ISS) performed an Information Security Policy Review on the ITCS Policy Suite. The purpose of the review was to compare ITCS's current Policy security posture with the best security practices set forth in the ISO 27002 standard, and provide recommendations for the remediation of any gaps found. ISO 27002 is a globally-accepted best security practices framework consisting of 11 clauses which when implemented form a well-rounded security program. The review found ITCS maintained an extensive IT Policy Suite which adhered to the ISO 27002 standard. It also revealed the need for an overall IT Security Policy and more timely updates. A policy update administrator has been named to manage the annual policy updates. Plans are in place to create an IT Security Policy.

2. Wireless Assessment

IBM Internet Security Systems (IBM ISS) performed a Wireless Penetration Test and Assessment, Firewall, and Router Configuration Review for ITCS to evaluate

the confidentiality, integrity, and availability of the wireless infrastructure, network devices, and firewalls. The assessment revealed ITCS adheres to many of ISO 27002 standards but recommended controls which would enhance overall security. ITCS reviewed recommendations and implemented the majority of the recommended security controls. Controls not implemented are being reviewed for funding and resource availability.

Policy and Compliance

1. ITCS Policy

IT Security managed the annual review and update to the ITCS, HIPAA Security and IT Security Policy Suites in an effort to meet industry best security practice standards and state and federal requirements.

2. HIPAA Security

IT Security personnel serving on the HIPAA Security Workgroup reviewed, investigated and made security recommendations to more than 15 University clients for new software applications which housed electronic protected patient information (E PHI).

3. Compliance

- a. IT Security provided resource support to University clients on data security and regulatory compliance issues in an ongoing effort to implement industry best security standards and adhere to state and federal regulatory requirements for computer applications, data storage and hardware installations.
- b. IT Security provided resource support for the University health care systems which housed E PHI in the form of security reviews, GAP analysis, HIPAA security policy and procedure creation, risk assessment, security control recommendations and system tracking.

4. Audit

The Office of State Auditors (OSA) conducted a state Information Technology (IT) general controls audit. Although the audit revealed areas where additional security controls were warranted, the overall IT security controls adhered to the majority of ISO 27002 standards. In those areas where additional controls were needed, ITCS formulated a plan of action. IT Security coordinated ITCS's response to the OSA IT Audit findings and tracked the action plan. ITCS has satisfactorily responded to all OSA IT audit findings.

Information Security Awareness

Our University cannot protect the integrity, confidentiality, and availability (CIA) of information in today's highly networked systems environment without ensuring that each person involved understands their security roles and responsibilities and is adequately trained to perform them. In an effort to accomplish this, ITCS has expanded and intensified its Security Awareness Training Program. The actions below are part of a multi-phase effort.

1. Updated HIPAA Training Content and Exam
2. Annual HIPAA Security Training and Exam
3. Departmental Security Awareness Sessions
4. One on One Security Awareness Sessions

5. Information Technology Blogs Weekly Tips
6. Website Weekly Security Awareness Tips
7. Security Awareness Posters
8. Updated IT Security Website
9. Updated Computing Security Reference Guide
10. Campus Security Awareness Notices via Email

Banner Security

1. IT Security coordinated with ITCS resources in the successful startup of the Finance Module Banner Security Finance requests via the Banner Security Request application. This change facilitated a single system to manage all Banner modules security access.
2. IT Security developed account change and role tracking sheets to enhance the ability to track changes to Banner access and roles for the Banner modules.
3. IT Security developed a Banner Module Checklist for module approvers to assist approvers with tracking users' access, level of access and inactive users.

HealthSpan

Brody School of Medicine is converting its clinical information systems to the EPIC Systems named HealthSpan. University Health Systems of Eastern Carolina (UHS) will host the HealthSpan application. IT Security assisted on this project as follows:

1. Collaborated with Brody School of Medicine, UHS and HR to develop weekly new Hire and Termination reports for UHS use in the creation and removal of HealthSpan user accounts.
2. Collaborated with Brody School of Medicine, UHS and ITCS resources in the development of a user support structure for the Brody School of Medicine HealthSpan users.
3. Collaborated with Brody School of Medicine, UHS and ITCS resources in the review of the HealthSpan Master Agreement to ensure inclusion of data security language.

Statistics

Statistics	Count
IT Security Service Tickets Completed	421
Banner Security Requests Completed	2096
Security Incident Investigations	13
Stolen Computers Data Security Investigations	23
SSN Use Review	25
Sensitive Data Scan Server Remediation	33
Sensitive Data Scan Workstation Remediation	1211