



**2005-2006**

## **Annual Report of Emory University's Office of Information Technology**

### **Executive Summary**

The fiscal year, September 2005 through August 2006 was a first step in bringing forward the strategic vision of the new IT leadership team. Starting with the principles of openness, partnership and agility, Dr. Mendola and his team defined an aggressive set of objectives. This annual report outlines the progress made in reaching these goals and objectives.

Under Emory's Finance & Administration Division, Academic and Administrative Information Technology (AAIT), Network Communications (NetCom), and Healthcare Information Services (EHC-IS) formed strong partnerships under the umbrella of the Office of Information Technology (OIT). It's these partnerships that have allowed OIT to move forward with a truly enterprise-wide focus. These strong partnerships have allowed the organization to focus on operational **transparency**, enterprise **standardization**, improved **communication**, and a robust technological **infrastructure**.

In addition to the foundational objectives, a number of key **academic initiatives** were completed over the year. In the administrative area, there were also a number of **administrative projects** initiated and completed.

#### **Transparency**

The motive underlying this category of objectives was for work to occur within a framework that is timely, transparent and clearly aligned with the missions, strategic plan, and vision of Emory. For this to happen, the divisions of OIT needed to reinvent the way they had traditionally operated. A primary goal for this year was to implement *Governance and Prioritization for IT Initiatives*.

A steering committee and seven subcommittees (approximately 125 members) have been in place and successfully underway since February. Another endeavor in this area was *Budget Alignment and Transparency*. A "Cost of Services" matrix was published for all of AAIT's product/services. This was shared with governance committees and customers making clear where financial resources were being expended. In addition, NetCom completed detailed documentation making their rate rationalization process clear to customers. Yet another move in this direction was the creation of a seamless process and common software for our *Help Desk and Network Operations Services*. With a goal of an optimized service delivery, EHC-IS adopted the same Remedy help desk software that was in use by AAIT and NetCom. These common shared tools allow and promote synergy between all three groups.

#### **Standardization**

A focus on a standardization of services, products, hardware and software improves our ability to quickly adapt to, and deliver a higher quality service under the continued growth of healthcare and university demand for IT. A number of projects have been underway that will assist us in achieving enterprise standardization.

Having an *Enterprise Email Strategy* will enable a standard, scalable and secure email offering. This strategy clarified the distinction between LearnLink and enterprise email. Through reallocation, there was an increase in staffing for better support of the data warehouse. This was one aspect of the *Business Intelligence-Data Warehouse and Reporting* initiative. There was also a business intelligence assessment



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report on data warehouses and reporting tools for healthcare and the university.

An effort in this direction was *Desktop Standardization and Coordination*. Confirming, communicating and publishing best practices and recommendations for a well-defined, limited set of certified configurations allows us to establish strong hardware and software standards. A *Standard Approach for Directory Services* was completed as well. This synchronization of existing directories enables phone and email lookups for all healthcare and university staff, irrespective of location. Healthcare personnel information was restricted to those within Emory.

Defining an *Enterprise Server Standardization* architecture for our enterprise class systems and development of a phased implementation plan for migration to this standard will allow for reduce costs, increased support, improved service quality and enable future growth.

### **Communications**

Communication is a key component in allowing OIT to meet its objectives. In order to achieve transparency and assist in the execution of a high level of service, the enterprise must be well informed on our activities.

An *IT Web Site Development and Coordination* initiative was a high priority. The clear need for a service oriented web site for IT at Emory which combined AAIT, NetCom and EHC-IS was met with a completely redesigned website. For the IT website and other forms of communication, an *IT Marketing and Communications* team was created. High-level *Performance and Customer Satisfaction Metrics* were also published. Posted metrics included those in customer satisfaction, customer support, incident volume, IT governance process and network statistics.

### **Infrastructure**

A robust and well planned IT infrastructure allows for the ability to nimbly address unexpected changes in technology without effecting the enterprise.

A *Business Continuity and Disaster Recovery* architecture was designed to implement business continuance on mission critical applications for healthcare and the university. One ongoing change in technology is the expansion of wireless services. For *Wireless Implementation*, over 425 wireless access points (APs) were installed in university residence halls, and over 400 APs were installed in hospitals and clinics. The *Network Backbone* had a new border/core implemented to eliminate single points of failure and improve throughput. This included new core routers, new firewalls, and LAN configurations

### **Academic Initiatives**

AAIT continues to make major strides in meeting the university's growing reliance on academic technologies as core tools to achieve teaching, learning, and research goals at Emory. For instance, new software for managing and presenting digital image collections, Insight, offers Emory faculty and students access to visual resources across the campus network. The university's course management system, Blackboard, is the standard for the campus and continues to experience impressive growth. A more robust and secure test and production infrastructure was developed for supporting and upgrading Blackboard, and an audio module, Wimba, was introduced in departments as varied as music and pediatrics.

Excellence across the digital campus also includes outstanding facilities and labs such as Emory's Center for Interactive Teaching (ECIT) and the Computing Center at Cox Hall. The Cox Hall lab supported nearly 16,000 users per month,



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up from 5,000 before its renovation. A new Social Science Graduate Data Lab was opened in Tarbutton Hall. As part of supporting the second-year experience, AAIT added support for two new classrooms and two collaboration labs in Woodruff Hall.

One of the prominent additions to the digital campus is a High Performance Computing Cluster located in the new co-location area added to the Data Center. A joint project of BIMCORE, Emory College, and AAIT, this cluster is already in use by 20 separate subscribers for research in biology, human genetics, and pharmacology. New projects are in discussion for GIS, numerical and statistical analysis, as well as bioinformatics.

### **Administrative Initiatives**

AAIT continues as an active and supportive partner with the administrative units of the University as well as supporting finance and administration at Emory Healthcare. AAIT is supporting research administration through implementation of software (*Click Commerce*) to submit and track research protocols and related study information. Emory branded their initiative as eResearch. The eResearch initiative has aided the IRB office in managing over 700 studies in various phases. The installation and implementation of PureEdge Viewer, the required software for submitting grant proposals, has enabled Emory to stay in compliance with Federal Government

guidelines for submitting proposals through Grants.gov.

AAIT continues to support students and employees through efforts such as automating Courtesy Scholarship. Applicants and enrolled students can now enroll for a Courtesy Scholarship via the web. Courtesy eligibility is updated automatically from the Human Resource system ensuring courtesy students receive the correct level of benefit. Support of Student administration has been strengthened by the installation of the new Adirondack Student Housing system. This system was rapidly installed and configured to meet the business processing needs of the Emory and Oxford campuses for the Spring 2006 term. AAIT continues to aid the Human Resource offices in supporting employees by supporting employee benefit changes and through enhancing employee self-service. For example, customizations to employee self-service allow employees to self-report family changes such as births to the benefits department via the web.

AAIT continued to support major initiatives for Emory Healthcare through the migration of The Emory Clinic (TEC) and Wesley Senior Living (WSL) to the PeopleSoft HRMS system. The migration of TEC enabled Healthcare to process their payroll and benefits as a single company in PeopleSoft. Operating as a single company within the HRMS system enabled Healthcare to allow their employees to use web self-service to enroll in benefits programs and view their pay advices.

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### **Dr. Richard Mendola**

Vice President for Information Technology & Chief Information Officer



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## Transparency

### IT Governance

The IT Governance structure was in place with meetings underway beginning in February, 2006. The structure consists of a steering committee, seven subcommittees, and a Financing in IT committee - which was added later in the year. There are approximately 125 members assigned to the various committees which meet on a monthly basis. A common business case template was created to standardize and define the information required for a committee to review a particular request. To streamline the process and provide visibility to the community regarding all submitted project requests, an IT Governance web-based application was created using an existing workflow tool already in place at the University. Additionally, a website was created which contains committee membership, meeting schedules, FAQs, processes, and other documentation. Since its inception, approximately 41 requests have been received and 20 approved, with approximately 10 requests currently gathering business requirements and 4 being evaluated by the appropriate subcommittee for approval. Table 1.0 shows the number of requests received by each subcommittee and their current status.

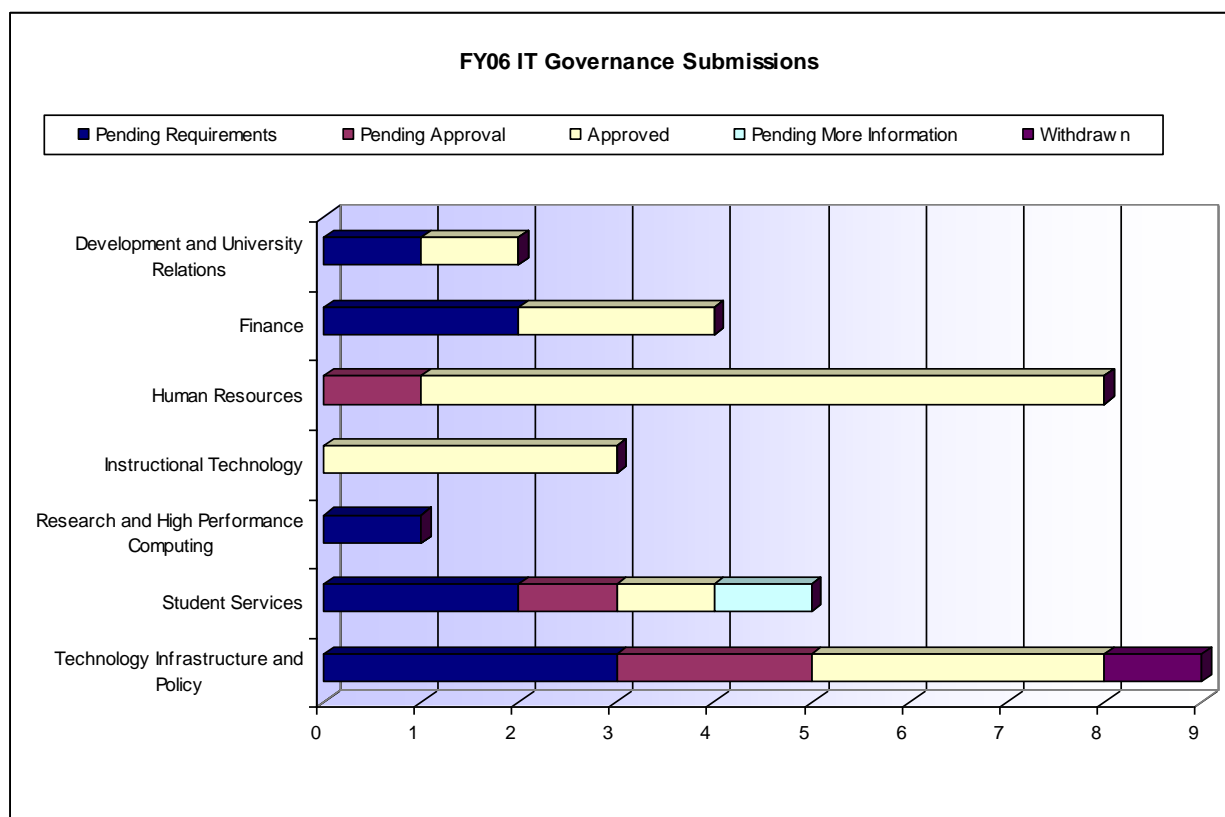


TABLE 1.0



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### **Budget Alignment**

In March 2006 AAIT released a draft cost of services matrix which defined the annual cost of each service provided by the division. The data was shared with the various IT Governance subcommittees and customers making it clear how the annual budget was being expended. The matrix identifies full time employee, hardware, software, and operational costs for each service. A sample of this report is included in Appendix A. In addition, NetCom completed detailed documentation making their rate rationalization process clear to customers.

### **Help Desk Operations**

Another effort designed to help provide transparency and simplicity to the Emory community was the exploration of streamlining the multiple front-line customer facing support organizations across the three divisions (AAIT, EHIS, and NetCom). As an initial step, EHIS evaluated the feasibility and ultimately decided to adopt the same help desk software currently being used by AAIT and NetCom, Remedy. EHIS engaged a consulting partner and began gathering business and technical requirements resulting in a detailed statement of work. The funding for this project will be available in September 2006 at which time a formal kickoff of the project will occur and work will commence to implement the software. Additionally, another project team evaluated the possibility of consolidating and/or co-locating all three support organizations. Ultimately, the project team recommended co-locating the AAIT Help Desk, NetCom Network Operations Center, and EHIS Call Center in one location. The team designed the layout of space requirements with a final location to be determined as part of the North Decatur Building renovation changes scheduled for FY07.



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### **Standardization**

#### **Email Strategy**

AAIT conducted extensive research into email service options for the academic community. This included polling the community for the business requirements, researching service options at other comparable higher education institutions, and working with the newly formed IT Governance Technology Infrastructure and Policy subcommittee. As the needs are different, the recommendation was made to separate academic and administration requirements. It was also decided to continue LearnLink as the student and faculty email solution. After much research and collaboration, Exchange was chosen as the administrative email solution. Funding was allocated to add additional storage to add wait-listed users to the Exchange service.

#### **Directory Services**

A very early goal identified for FY06 was to provide a single online directory service representing Emory University and Emory Healthcare employees. The comprehensive online directory was made available in November 2005, providing a phone and email lookup service for all Emory employees and restricting access to healthcare employees so users may only view this data when they are on the Emory network. As the usage of the Microsoft Exchange email service continued to grow, the need to provide a Global Address List to the users of this service became increasingly important. The Global Address List provides a comprehensive lookup in the Microsoft Office Outlook client for all Emory employees, regardless of the email service the employee uses. A cross-functional team also began the evaluation and selection process for an Emory-wide identity management provisioning tool. A final candidate was selected and the proof of concept is scheduled to begin in September 2006. Deployment of a robust identity management solution lays the foundation to which many other Directory Services initiatives depend: synchronization and generation of a single network ID, synchronizing password credentials, and increased automation and accountability for system authentication and granular access.

#### **Standard PC Desktop**

A cross-functional team with representation from all major IT units on campus was formed to define hardware and software desktop standards, DeskNet. The recommended hardware and software standards are posted on the IT website and reviewed throughout the year. AAIT defined and implemented strict standards for the desktops of the divisional employees including hardware, software, and configuration standards. A pilot standard image was created and used by AAIT, Oxford, and the Registrar to automate and expedite the provisioning of new desktop computers. DeskNet meets on a quarterly basis to review the standards and discuss common desktop related initiatives. In FY07 this team will identify the requirements and identify a product to provide a full suite of configuration management tools including asset/inventory management, patch management, software deployment, auto-discovery, and desktop provisioning.

#### **Server Standardization**

An architecture was designed to support the standardization of servers which included utilizing blade architecture for more cost-effective administration and virtualization. A team effort is underway to evaluate offerings from all of the major hardware vendors relative to



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functionality, power utilization, and cost. The initial plan is to standardize on a limited number of vendors with a proposal to migrate all end of life servers to the new standard. Future plans include developing an offering for campus divisions and schools.

### **Business Intelligence**

An evaluation of reporting and business intelligence environments in AAIT and EHC IS was completed. A report was produced recommending continued separate data warehouses and reporting tools for University and Healthcare; continued support of WebFocus and Business Objects for University and a re-evaluation of our BI tools as part of the Financials project.



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### **Communications**

#### **IT Marketing and Communications**

A newly formed Web & Communications team was created to address the marketing and communication needs of the OIT organization. This team is responsible for providing news items on the IT website; creating and editing columns for the Emory Report, Wheel, or other publications; and creating brochures and literature for IT services and conferences. Communication to and from the campus wide IT organizations are provided through regular monthly IT Briefings and as needed focused TechTalks.

#### **Performance and Customer Satisfaction Metrics**

To help provide a common approach to customer service, all three divisions participated in a best practices course resulting in certification of employees throughout AAIT on the industry standard service management approach: the IT Infrastructure Library (ITIL). Additionally, representatives from AAIT and NetCom finalized and posted on the IT website various performance and customer satisfaction metrics. The metrics focus on four primary areas: 1) Customer Support; 2) System Availability; 3) Customer Satisfaction; and 4) IT Governance. Please refer to Appendix B for sample reports.

#### **Web Development**

In February 2006, OIT launched a new combined website including all AAIT and NetCom services and general public EHIS information. The site introduced a new clean and easy to use navigation scheme. The web team solicited input from multiple users and made subsequent enhancements to the site based on customer input. A cross-functional Finance & Administration team convened to design a standard look and feel for all F&A websites. The team quickly came to consensus in March 2006, slight modifications made at this time to the IT website to comply with the new F&A standard. The current web hosting environment was stabilized with upgrades and configuration settings. The web team launched a requirements gathering process to obtain the business needs for a new web architecture. Multiple discussions with campus representatives through IT Briefings and focused TechTalks helped define the community needs. A comprehensive web services approach was developed with the new architecture scheduled for implementation in FY07.





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### **Infrastructure**

#### **Wireless Implementation**

A major effort was undertaken in '06 to deploy wireless to students in residence halls. After receiving numerous questions and comments regarding wireless by parents and students during the '05 back to school initiative, it became clear this service was a priority for the academic community. Similarly, the healthcare users were facing the same demand to get wireless installed throughout the hospitals and clinics. NetCom developed an aggressive plan to implement a robust wireless infrastructure. This plan included installing over 425 Access Points in over 40 residential halls and another 40 Access Points in common academic areas as well as over 400 Access Points in the hospitals and clinics. The total wireless implementation now includes 1,331 Access Points.

#### **Disaster Recovery**

Another cross-functional initiative requiring involvement not only from the three IT divisions but also the Emory business units was the initiative to determine a plan for business continuity and disaster recovery. The team researched and explored numerous options for a secondary data center. This included discussions with possible hosting companies as well as strategic business partners. Ultimately the decision was made to identify an Emory site as the secondary data center. The team also designed the architecture required to implement business continuance on mission critical applications for both the University and Healthcare. The team is working to identify the cost for providing email/web off-site hosting and creating a document for IT emergencies processes and procedures.

#### **Network Backbone**

NetCom began the implementation of a new highly available and high-speed network backbone. The backbone increases network capacity from 1 Gigabit to 10 Gigabits and provides a new flexible architecture. Additionally the new architecture eliminates any single point of failure – both internally and externally. All 12 new core routers are installed and operational. New firewalls were also configured and installed to connect to the new routers. Some of the Local Area Networks have migrated to the new core with an aggressive plan in place to migrate the remaining LANs as quickly as possible.

#### **ManageIT**

The OIT service management solution grew in both capabilities and usage during FY06. Self-service was expanded to include multiple form based support requests, ensuring the users provide the necessary information to expedite service. The application was customized to provide a view for PeopleSoft functional units into the status of all PeopleSoft requests/work in progress. A significant customization was made to the application to support the new IT Governance process. This involved creating a web-based customer portal to submit new requests and view the status of all submitted Governance requests and projects underway. The new Governance application was available when the committees kicked off in February 2006. Subsequent improvements and additional customizations were added based upon input from the various subcommittees and the AAIT Project Management Office.



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### **Mainframe Upgrade**

The Mainframe was upgraded to a more current mainframe; the new model is a small to medium size mainframe. The previous mainframe was over 4 years old and soon to become unsupported by the vendor. The new solution has flexible processing, increased memory, and increased fiber connectivity. Additionally the on-going software maintenance costs are reduced with the newer platform. Other additional benefits are increased efficiencies, reduction in power consumption, and support for additional operating systems (Linux) which will allow for the support of other applications when needed.

### **Storage Approach**

In order to more effectively utilize our resources; a plan was developed to review the method and technology used to store our applications data. AAIT moved all application test and development data to the Clariion, as well as tier 3 application data. The Clariion is a more cost effective solution and sufficiently meets the storage requirements in these areas. The new Clariion storage solution was installed and configured and all test, development, and tier 3 data was migrated to the new environment. All storage solutions and associated switches were also upgraded this fiscal year. To support the growing Exchange service, the team purchased, installed and configured additional storage to meet the Exchange needs and growth for other applications. A project is in progress to determine the campus needs for centrally managed services such as storage, backup, file services, and archive services.

### **Security**

AAIT hosted 3<sup>rd</sup> annual Information Security Conference for faculty, staff, and students. This conference is designed to create awareness and provide knowledge to the Emory community on various security threats and how to protect against them. The conference was very well attended with over 300 attendees. Approximately another 40 attendees viewed the conference through a live broadcast of the event. All three OIT divisions researched, evaluated, and selected a new firewall solution to support the new network backbone. A new web based remote access solution was implemented to address the limitations of the existing client based solution. The new VPN tool is easy to use and provides users remote access to the Administrative Core secured network. To improve security and protect Emory from various threats, OIT hired an outside consulting agency to review our security practices and make recommendations for improvements. These recommendations will be implemented in FY07.

### **Voice**

NetCom continued to make improvements in multiple areas to support the voice need of the University and Healthcare communities. These initiatives are designed to reduce costs, increase delivery speed, and improve efficiencies. The team researched and selected a new voice platform which positions Emory to move towards unified communications. Previously there were multiple solutions in place, in FY06 all of Emory was migrated to the new voice platform with a focus on a Voice over IP architecture – laying the foundation for unified communications. Additionally NetCom researched and identified a new Trunked Radio solution and relocated the paging tower for increased coverage.



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### **Academic Initiatives**

#### **Blackboard Academic Suite**

Blackboard, the University's primary tool for enhancing classroom instruction using online resources, experienced explosive growth. Online classes increased 97% over the past two years to over 3,100 digital classes. Responding to this unprecedented growth, the newly formed Interactive Technologies team introduced Just-in-Time training for faculty and staff. There has also been unprecedented growth in non-academic uses for Blackboard with almost 200 organizations, departments, and committees using the system for training and/or collaboration. This past year, Blackboard averaged 122,374 hits a day. AAIT took important steps to accommodate the overall demand by investing in two system updates, to improve system processing and reliability.

#### **eControl Remote Classroom Support**

After a groundbreaking pilot program in the summer of 2005 – AAIT partnered with Emory College in 2006 to deploy Crestron eControl (RoomView) in over 60 technology-rich classrooms across campus. With eControl, the Classroom Technologies Team can centrally monitor the full spectrum of equipment installed in classrooms across the College. As use of technology in the teaching curriculum grows, the network-based system allows support staff to work smarter via remote management. Additionally, faculty and students also experience less classroom downtime as a direct result of remote identification of equipment that needs servicing. Daily usage statistics are utilized to pinpoint the most popular teaching technologies -- offering solid data to help the College identify trends for future growth.

#### **Personal Response Systems (PRS) Clickers**

Following an extensive pilot program in the spring of 2006 -- "Clicker" (PRS) technology became fully supported across Emory College and provided an enhanced learner-centered experience in over a dozen Biology, Chemistry, Psychology and Physics classes. In its first year -- PRS technology allowed faculty to gain immediate feedback from 1,600 students participating in "real-time" assessment during class. Based on student responses, faculty can tailor their teaching style and content to monitor and enhance learner comprehension and retention

#### **Centers for Educational Technology (CET)**

Aspiring to excellence across a digital campus means providing faculty with required resources and students with optimal learning environments. 2005-06 saw the Centers for Educational Technology (CET) at Emory officially chartered, bringing together four academic technology centers and expanding training and outreach to faculty and students. The Centers offer enhanced instructional technology support for emerging technologies such as podcasting, blogs, PRS clickers, and streaming media. One of the first CET initiatives was a digital certification program for new faculty of Emory College. Partnering with the libraries and the AAIT Interactive Technologies team, faculty were introduced to the instructional and research technologies available to them on the Emory campus.

#### **Social Sciences Graduate Data Center at Tarbutton Hall**

As part of the Centers for Educational Technology, the new Social Sciences Data Center opened in Tarbutton Hall just in time for Fall semester and featured a wireless



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classroom equipped with laptops, a touch-down space for tutoring, and a formal lab for data study. Twelve classes were taught in the classroom during 2005-06, and numerous brown bag lunches and seminars were hosted in the facility.

### **Faculty and Student Training**

In 2005-06, over 115 classes/workshops were offered through Emory's Center for Interactive Teaching (ECIT). In addition, 1,200 faculty and students received technology training in ECIT. Summer seminars included a three-week session for faculty of Emory College and a week-long program for Biology Post-Docs focusing on classroom applications of instructional technologies. Language faculty participated in an innovative one-week iPod workshop offered through Emory College's Language Center that explored effective use of iPod technologies throughout the curriculum. ECIT also led an orientation program for graduate teaching assistants, hosting over 300 Arts & Science graduate students and showcasing Emory's digital classrooms and instructional technology resources.

### **Videoconferencing**

As the digital campus expands, videoconferencing lessens the need for travel. Distance learning and communication via videoconferencing more than doubled with 263 classroom videoconferences including Arabic and Chinese -- and a new Doctoral of Nursing Program hosted for the first time in partnership with the Medical College of Georgia and 5 other sites. Emory extended its national and international reach by hosting 80 additional videoconferences, including multi-site links for the Center for Behavioral and Neurosciences and an eight-site videoconference linking the Jane Fonda Center with constituents world-wide.

### **LearnLink Online Community**

LearnLink continued this year as the the vital and virtual community for over 17,000 users on Emory's campus -- with over 35,000 public and private conferences and an average of over 340,000 messages sent and received per day. LearnLink continues to host pre-matriculated applicants to Emory College and Oxford College, and this year played a key role in supporting a re-envisioning of Dooley Week, hosting a conference for Lord Dooley, himself. SPAM filters were implemented on the LearnLink system and pushed out to users, improving Emory's online community experience.

### **Art History Image Database**

The Art History digital image database (Insight) manages access and presentation to more than 38,000 digital images from the Art History Visual Resources Library collection, as well as over 120,000 additional digital images from other Insight user institutions. The collection expanded significantly in 2005-2006 and is slated to support personal image collections in the coming year.

### **Assessment in Learning**

The Emory College Language Center continued to evaluate the impact of student learning of foreign languages with technology-enhanced curriculum strategies and materials. This assessment is part of an AAIT three-year study with Emory College Language Center and the University of North Carolina, Chapel Hill. Separate studies have been conducted on four different French and Italian materials and methods developed at Emory. Results significantly favor the learning of language with Emory's materials and methodologies over more traditional methods of teaching.



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### **Technology in the Residence Halls**

In extending the reach of the digital campus into the residence halls, the Woodruff Residential Center's renovation was completed, incorporating two new smart classrooms and two "pilot" collaboration labs that support group work using the latest technologies. Open workshops were hosted for student residents to learn about the collaborative technologies and to setup wireless laptops.

### **Webcasting**

Live webcasting technologies facilitated campus-wide internet viewing of President Wagner's "State of the University Address", the MLK "Words of Peace" listening, EPIC - Emory Practical Intervention Course sponsored by the CME office, and the Woodruff Health Sciences "State of the Union Address: Vision 2012" which produced HD videos shown onsite. Live Cable TV events broadcast the 5th Annual Emory Vision 24 Hour Telethon, Physics Department "Another Look at Saturn", and the Ellman Lectures featuring Mario Vargas Llosa. Satellite broadcasts of "World Food Day" were downlinked and sent to Oxford College as a webcast, "The Forgotten Student: Understanding and Supporting Sophmores" was received for University Housing staff to view, and 92nd Street Y featuring Deborah Lipstadt.

### **High Performance Computing Cluster**

Emory University High Performance Computing Cluster (EUHPC), a joint project with BIMCORE and Emory College, became the most powerful computing environment on campus, featuring a 64-node Linux cluster. This year saw growth in a number of areas surrounding High Performance Computing (HPC), as EUHPC added its twentieth user, and AAIT doubled its staff in support of Research to two full-time administrators. In addition to neuroscience and pharmacology, use of the cluster is being expended to fields such as Physical Medicine and Geographic Information Systems (GIS). Physical expansion of the cluster also took place this year with the addition of nearly a terabyte of high-speed disk space, and proposals are underway for a four-fold cluster expansion to take place in early 2007.

### **Back to School**

In August 2006, over 75 staff and student employees participated in AAIT's annual weekend effort welcoming students to campus. Much of the time was spent configuring hundreds of laptops for EmoryUnplugged wireless access. Over 1100 freshman were active on Emory's wireless network freshman weekend, shattering previous campus records established in Spring 2006 when 800 users across the entire University were concurrently online.

### **Clean Room**

Increased planning, automation, and flexibility contributed to the smooth kick off of the Clean Room service this year. As with last year AAIT temporarily moved the service to Kennesaw to accommodate the additional load of arriving and returning students for the first two weeks of back to school. AAIT increased communication and directional information by creating and posting professional quality posters and signs. The intake process was automated by creating a custom intake form for the Clean Room which significantly decreased the time required for intake and improved data collection and subsequent reporting capabilities. For the 3 week period following back to school last year a total of 357 students were serviced by the Clean Room. This year due to the continued improvements made to CAT, NetReg, and the EOL CD the number of students serviced by



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the Clean Room for virus repair was 150. There were another 154 students serviced by the Clean Room for wireless configuration. The wireless configuration work was done while the students waited no check-in necessary. Since the team reacted quickly to the wireless need, AAIT was able to maintain a 2-day turnaround for all systems checked into the Clean Room during this high volume period.



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### **Administrative Projects**

#### **eResearch**

eResearch is a Web-based system for submission, routing, tracking, and management of research protocols and related study information. The system will help better ensure that Emory is conducting research in a manner consistent with Emory policy and all applicable regulatory guidelines. The eResearch initiative is divided into 4 phases; one for each of the research oversight committees here at Emory. The first phase, eIRB, went live on June 5, 2006. Phase I included development and testing of the application, construction of the eResearch computing environment, and the development of training strategies and plans for the end user community. Currently, eResearch is managing over 700 studies in various stages of the submission and approval process.

eIRB was developed by a cross functional project team that included members from the IRB/IACUC office, the Emory Health and Safety office, and the Conflict of Interest Committee in the School of Medicine.

#### **eSubmissions**

eSubmissions is the Emory "brand" name for the PureEdge Viewer which is the required software for submitting grant proposals to various federal funding sources via the Grants.gov web site. A Citrix environment was implemented for University and Healthcare users to allow Macintosh users to submit and maintain proposals. eSubmissions was approved by two IT Steering Committees, funded by the Office of Research, and implemented in time for the June 1, 2006 proposal deadline. Phase 2 planning has begun in preparation for the next large submission deadline of February 5, 2007.

#### **Housing System**

In November 2005, the PeopleSoft Student Administration team inherited the Adirondack system implementation. Senior administrators stated the housing system should be an enterprise system with central management responsibility because many other systems across campus are dependent upon housing data. Campus Life selected Adirondack Solutions as their system of choice for managing student housing.

Pursuing an aggressive implementation timeline a basic version of the system was implemented in March. We experienced several issues with system performance, but were able to complete the business process needs prior to the end of the Spring 2006 term. Tuning and other changes have been made to improve system performance. We are anticipating a significant reconfiguration from the vendor to improve system performance in the Spring 2007. In August, the Office of the Provost, hired an analyst to assist Campus Life to support this system.

#### **Series 25 (Resource 25)**

The use of Series 25 applications expanded during the year. Oxford College began using Resource 25 for scheduling of regular events and classes. The Miller/Ward Alumni House also began using the Web viewer to view space and make reservations. The Emory Biology department came onboard and started using R25 to schedule regular events and classes. A new feature, the executive dashboard was implemented in Emory College last year. This



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module provides statistical data about space utilization that can be used for decision making purposes.

### **PeopleSoft Student Administration**

Multiple enhancements were made in FY06 to the PeopleSoft Student Administration applications. The major enhancements are listed below:

#### Student Health Insurance

AAIT assisted Campus Life Student Health Services department in implementing Emory's new policy requiring students to possess health insurance. With OPUS the applicant or enrolled student is able to see a "to-do" stating they must pass a waiver or purchase insurance. The waiver and purchase data is brought together to provide Student Health Services with a complete view of the student's choice. Health insurance charges are automatically fed to the student's account to facilitate placing the charge on their bill.

#### Enhancements to OPUS Self-Service

OPUS self service web page enhancements included a web page that allows students to add cash to their Emory Card. An improved student account web page was created that resembles a credit card statement.

OPUS HELP has now become ASK OPUS. End-users are now presented with Frequently Asked Questions (FAQs). Answers to the FAQs are maintained by the student offices. This allows ASK OPUS to maintain FAQs that are responsive to current events. Since implementation of FAQs, there has been a noticeable reduction in the number of ASK OPUS questions. Additionally, the OPUS users can select from a list of topics that will be associated with their email message. This helps us filter or forward messages more accurately resulting in faster responses to their inquiries.

#### New Functionality for Schools In OPUS

Medical Imaging and the Department of Physical Therapy, both Allied Health programs, started utilizing PeopleSoft SA this year. A new online process was created for several of the schools (*Graduate Business, Public Health, Nursing, Allied Health*) to allow individuals to write an applicant's recommendation on-line through OPUS.

The School of Theology is now using the academic advising piece of OPUS to assist their students in keeping track of their academic progress toward their degree.

#### Courtesy Scholarship in Student Administration Offices

In partnership with functional analysts from the four central student offices and Human Resources, the courtesy scholarship process is greatly improved this year. Automation of the process includes a web page that any applicant or enrolled student can use to request a courtesy scholarship. The project improved several business processes including Student Financials becoming a central point of contact for any student with a Courtesy scholarship issue. Courtesy eligibility is automatically sent to OPUS from the HRMS system to insure the student receives the correct level of the courtesy scholarship benefit.





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### **PeopleSoft Human Resources Management System**

Additionally, multiple enhancements were made to the PeopleSoft Human Resources application. Major accomplishments listed below:

#### Conversion of The Emory Clinic (TEC) to PeopleSoft HR

In partnership with Emory Healthcare the AAIT PeopleSoft technical team completed the conversion of TEC from Ross Payroll and HR systems to PeopleSoft HR. This conversion also included moving Wesley Senior Living (WSL) to PeopleSoft from ADP. The conversion was accomplished in two phases. In the first phase all HR and Benefits data was converted. The first phase involved several months of planning to determine data values for loading into the target system. The first phase was completed in September 2005 allowing Emory Healthcare to conduct their first Benefits Open Enrollment on PeopleSoft. The second phase involved the conversion of TEC and WSL payroll processing to PeopleSoft. This phase involved extensive planning and testing to ensure accurate payroll processing. TEC and WSL time and attendance data began flowing to PeopleSoft on December 18, 2005 and the first payroll advices and checks were issued January 6, 2006

#### Consolidation of Emory Healthcare into One Company in PeopleSoft

As part of the TEC Conversion to PeopleSoft we reconfigured PeopleSoft to process Emory Healthcare as a single company. In previous years Emory Healthcare processed their payroll and benefits under a multi-company format. Using the new one company structure, Healthcare is enabled to pay physicians on a single paycheck.

#### Supporting Employee Benefit Changes

In support of University and Healthcare HR Benefits administration implemented the following changes in PeopleSoft

- Change of Pharmacy Vendors
- Roth Plans
- Medicare Pharmacy Subsidy
- High Deductible Medical Savings Plan

#### Employee Self-Service for Family Status Change

Functionality was added to Employee Self-Service through eBenefits allowing the employee to enter their own family status change, such as marriages, births, etc. This application opens up their benefits enrollment to allow the employee to make the necessary changes.

#### Courtesy Scholarship in Human Resources

In support of the Courtesy Scholarship project HRMS developers automated the calculation of university employee-dependent eligibility, the application process for students, and the tracking of cost for taxation and reporting purposes. Also included is the addition of a self-service page to display eligibility and usage to employees. With the addition of this functionality, employees can see their current eligibility, and eligibility in future years.



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### **Enterprise Data Management**

#### Emory Shared Data (ESD)

Functional and infrastructure enhancements to ESD were completed that increased its value to the campus:

- Added Healthcare employees, student preferred phone numbers, and employee office locations and sub departments to the on-line directory. Provided the option for sponsored people to be included in the on-line directory
- Promoted the use of and accepted data from the HR NewHire application. This significantly simplified the process and reduced the data problems which can occur when a pre-start employee has been sponsored before being hired
- Added additional security options and Healthcare specific data to AINQ to support the use of this application by approved individuals in Emory Healthcare. AINQ is a Web based application which provides a comprehensive data view of the multiple roles of each person at Emory
- Began generating Emory Healthcare login id values from ESD. Began with an algorithm which depended on the emplid and later dropped that dependency so that login id values can be created for people who do not yet or never will have an emplid

#### Data Warehouse (DW)

Significant enhancements to add data and upgrade infrastructure were completed for the data warehouse. Selected work included:

- Added approximately 25 new Finance tables including Vendor Payments data into the Data Warehouse and created and scheduled the jobs to load them
- Added new tables and modified tables for DUR Advance system
- Data from the Office of Sponsored Programs and Emory Healthcare were added to the University Data Warehouse and was joined with existing FAS data to create a consolidated Financial Report (the 'Numbers Day Report')
- Separated the Enterprise Data Management database into two instances, one for Emory Shared Data and one for the Data Warehouse. The backup and tuning procedures are now tailored to best support the specific use of each database.
- Migrated from the BusinessObjects fat client to the newest release of the web version. This provided greater functionality to the customers and eliminated the need to install client software on each customer's workstation
- Conducted requirements gathering and assessment sessions with various constituent groups in preparation for inclusion of student and enhanced human resource data in the data warehouse

#### WebFOCUS

This year has marked the beginning of the transformation from an operational and functional reporting environment to one which employs best practices and uses for Business Intelligence. In partnership with the Finance Division, all business user reporting has been migrated from the mainframe to the web environment, reducing overall costs while allowing more robust distribution and presentation of information.



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Through a personal, hands-on and interactive approach with business users, actions have been taken to eliminate duplicated efforts by streamlining and consolidating similar business reporting functions into a more intuitive framework. In addition, predefined reporting templates have been instituted to simplify and assist users in the creation of reports for satisfying their own informational needs.

In collaboration with Health Sciences, WebFOCUS was employed to implement a dashboard analytical solution used to communicate monthly healthcare metrics. The solution was designed to minimize the labor required to consolidate, accumulate and deliver data and reports as well as shift efforts from labor intensive practices to the use of interactive information portals.

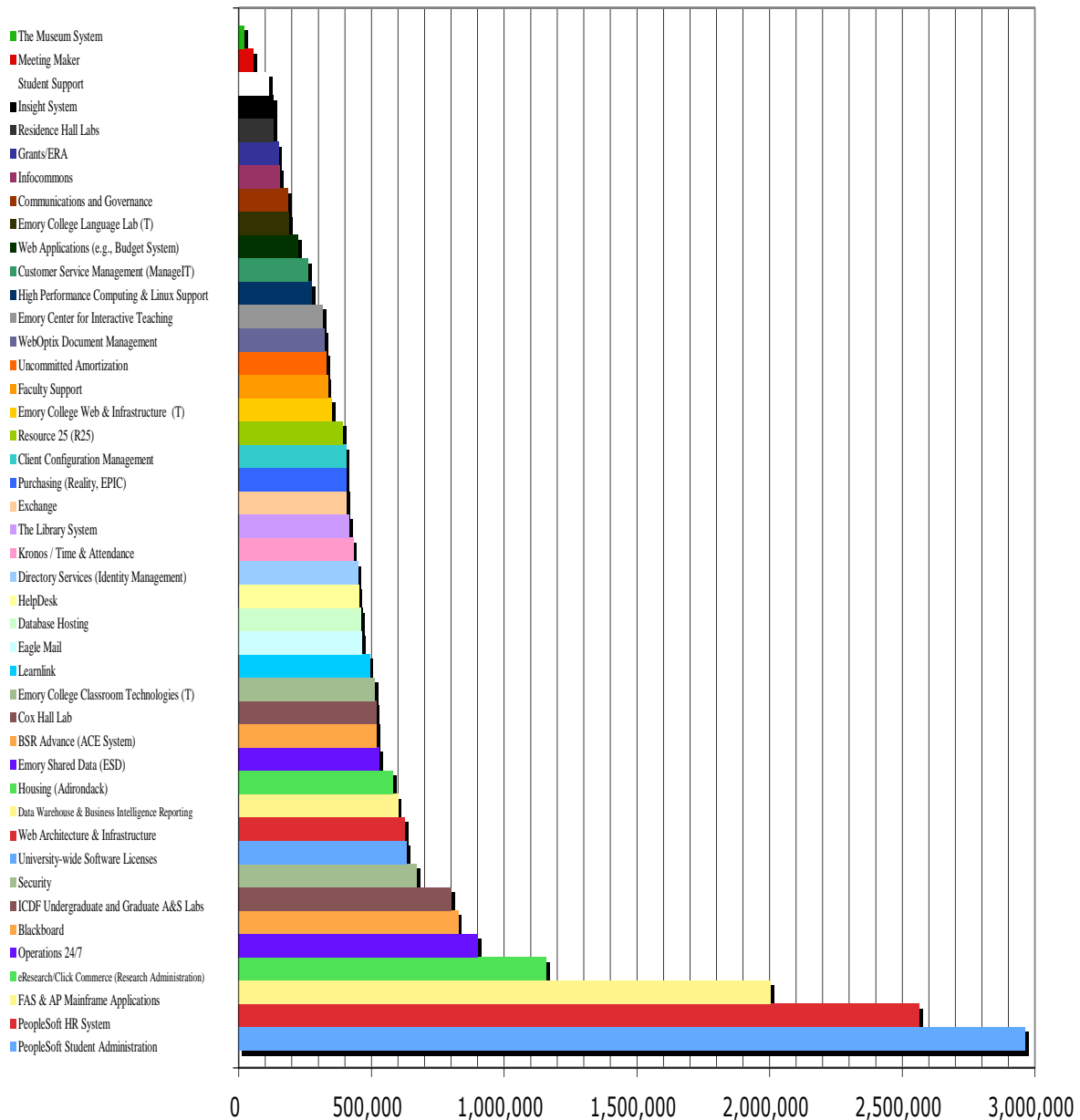


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### Appendix A – AAIT Cost of Services

The following charts summarize the cost of services data collected for AAIT and NetCom.

AAIT Cost of Services 04/24/2006

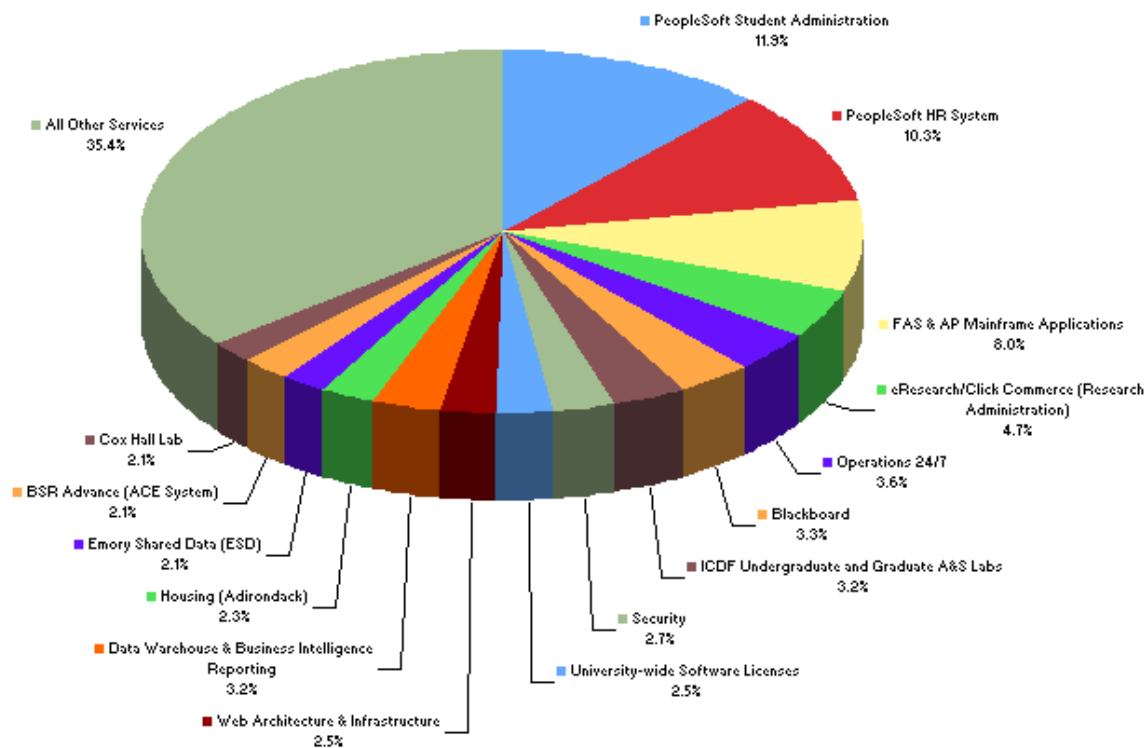




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AAIT Cost of Services 04/24/2006

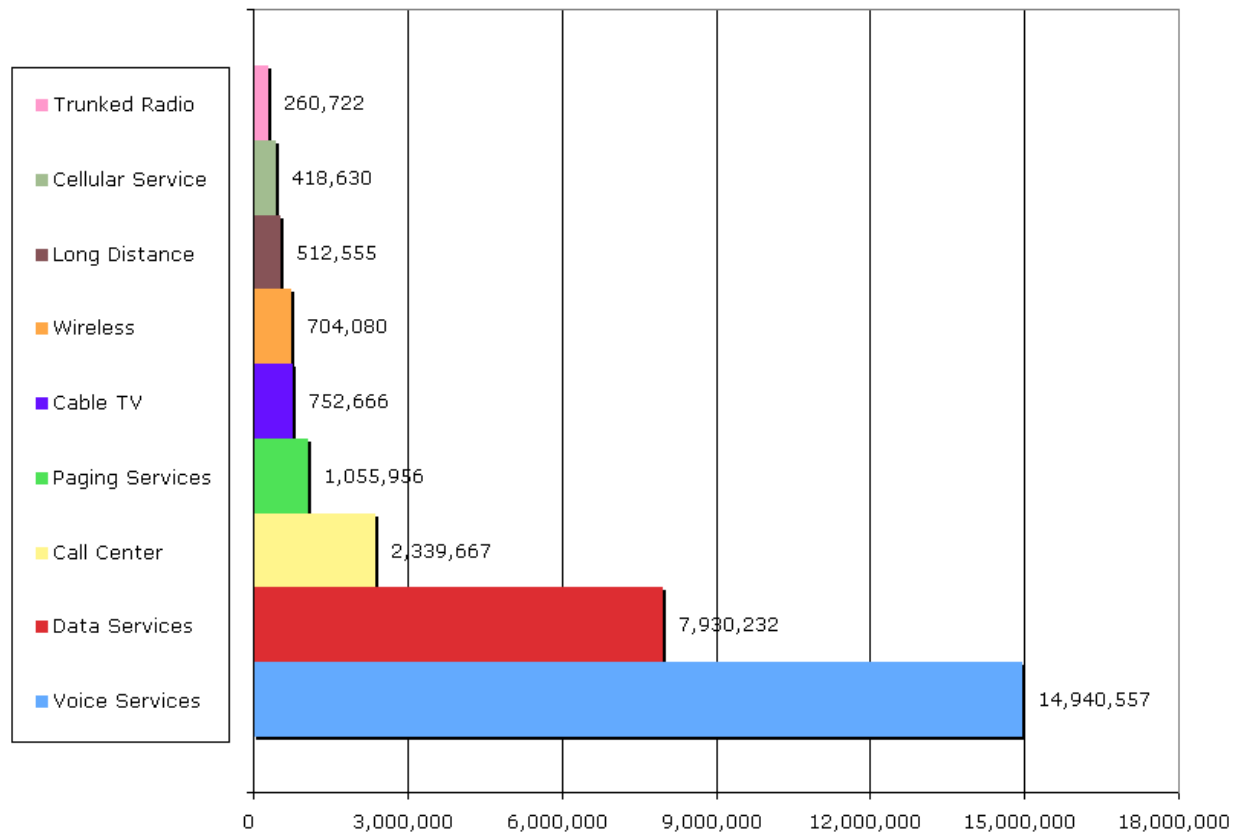
Top 15 Services (fully-loaded cost, as a percent of the total AAIT budget)





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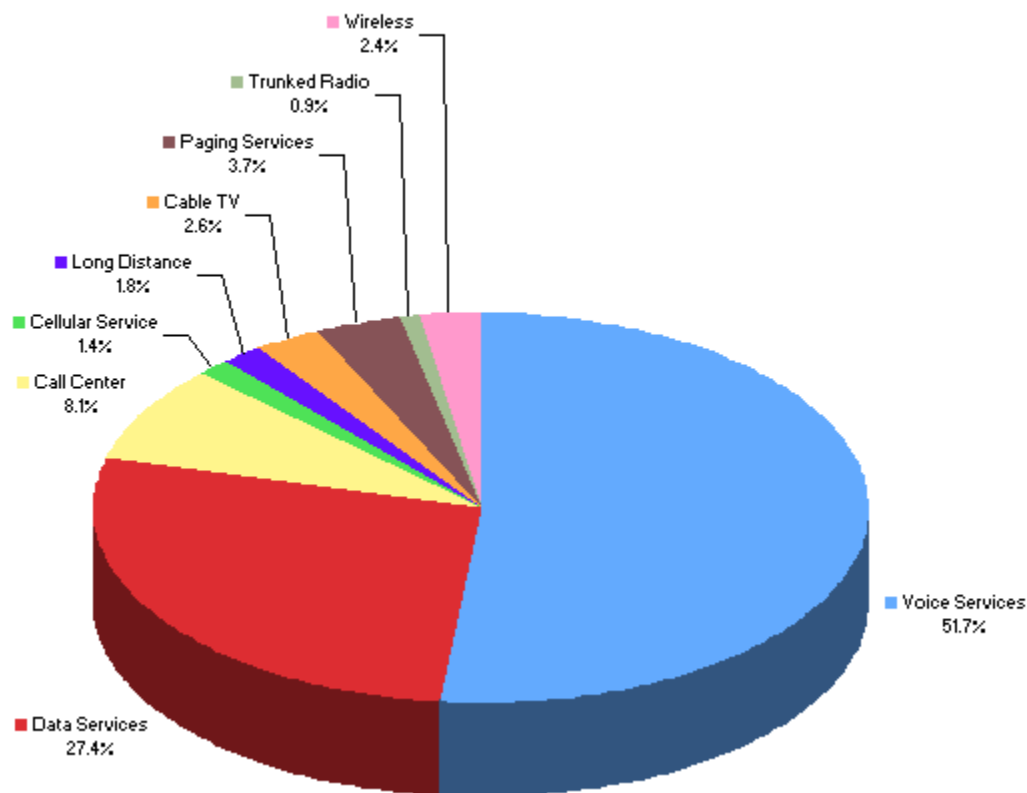
NetCom Cost of Services 09/25/2006





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NetCom Cost of Services 9/25/2006





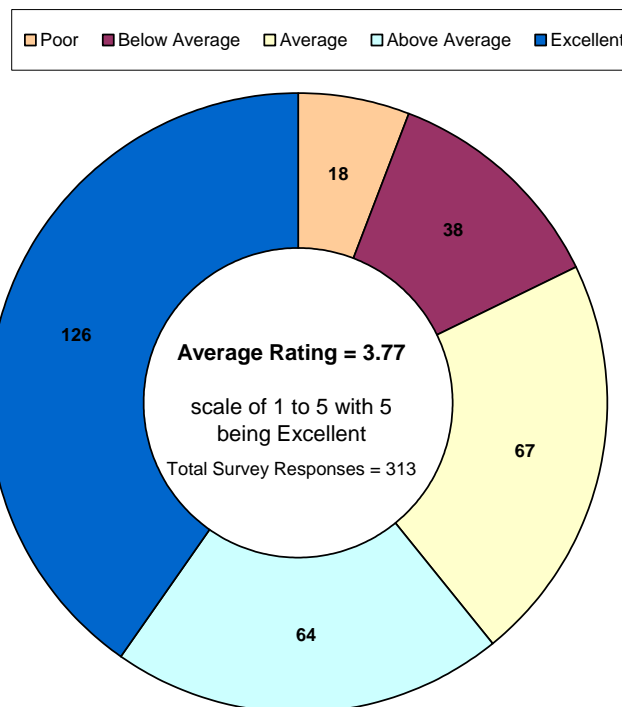
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### Appendix B – Sample Metric Reports

#### Customer Satisfaction – FY06

Upon resolution of a support request initiated by calling the Help Desk (404-727-7777) or by self-service (<http://help.emory.edu>), all customers are given the opportunity to complete a customer satisfaction survey. Customers are asked to provide input on 4 areas: timely service, knowledgeable technician, courteous technician, and overall satisfaction. The survey details are given to the appropriate manager and used to identify areas that require customer service improvement on an individual, department, and organizational basis. The results for all submitted surveys are represented in the cart below.

**FY06 Customer Satisfaction Survey Results**



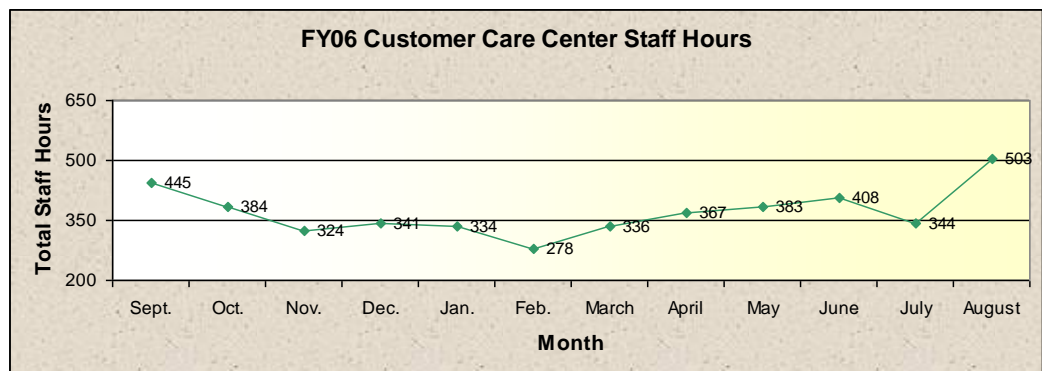
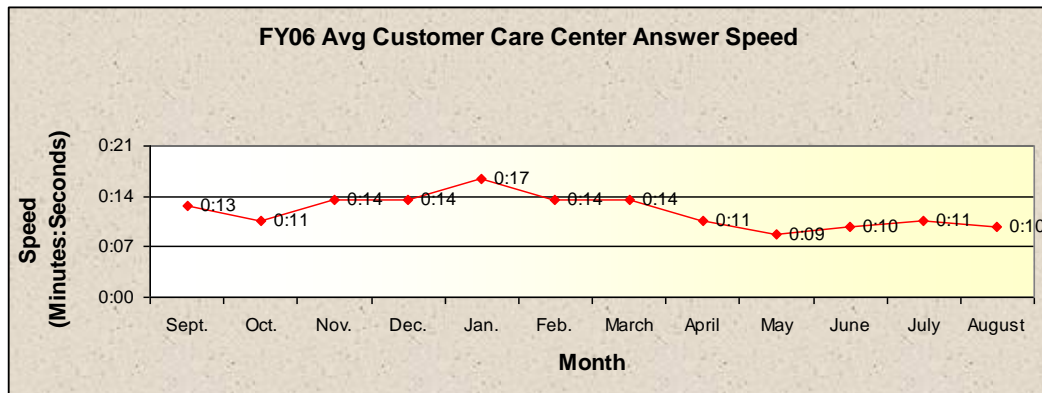
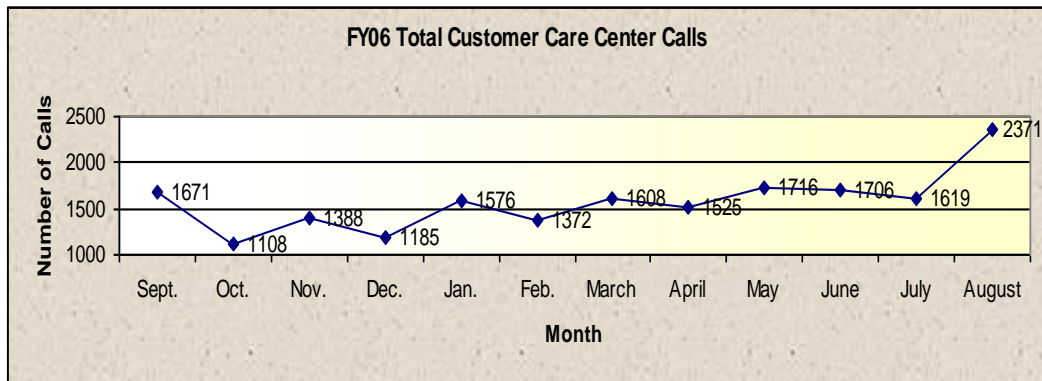




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### Customer Care Center

The Customer Care Center (CCC) at 404-727-2323 supports Emory University and Emory HealthCare. The CCC receives requests for voicemail resets and NetCom billing questions. Additionally the service supports work order requests for phone, data, cable TV, trunked radio and paging. Any trouble tickets receive first tier troubleshooting and diagnostic tests for immediate resolution or escalation as needed. The metrics below were obtained by accessing information contained in the Call Management System.





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### Network Statistics

The chart below represents the monthly availability figures for the Academic network backbones. Availability measures the amount of time a device can communicate with the network backbone. These figures do not include any time the network was scheduled for routine or emergency updates and repairs (a planned outage). Additionally these numbers do not reflect any isolated local area network outages. The data was obtained using automated monitoring tools.

