



Office of the CIO 2007 Annual Report

Submitted to

**Office of Institutional Effectiveness
The University of Georgia**

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Introduction

The vision for the UGA Office of the Chief Information Officer (OCIO) and Enterprise Information Technology Services (EITS) is two-fold: 1) position the University as a state and national leader in information technology in support of a world class public research extensive institution; and 2) provide the stewardship necessary to be recognized as the first source for knowledge and expertise in the area of information technology at the University. The mission of EITS is to provide a robust, reliable, and secure information technology infrastructure while offering world class support and maintaining essential production services.

Central to the success in meeting this vision and mission is a user-driven, comprehensive strategic planning model known Compact Planning fully implemented in 2007. Serving as key drivers for this *federated* planning approach are the University's three mission-critical strategic priorities: *Building the New Learning Environment*; *Research Investment*; and *Competing in a Global Economy*. Client engagement, adding value and return-on-investment, reliability, security and improved quality of service have also served as drivers for EITS move from a *tactical* to a *strategic* organization. In addition, EITS is committed to the effective management of capital investments; core system infrastructure, operating systems, hardware and software platforms; and a strategic planning, development and deployment process in support of comprehensive business, resource management and industry *best practices*.

Recognizing EITS receives hundreds of requests each year through the Compact Planning process, the past year focused on creating a sense of *strategic priority* within the campus community in addition to an emphasis on the implementation of data-driven planning and documentation; asset management and capacity planning; and the initial stages of project management and quality assurance. In addition, greater emphasis was placed on providing current and comparative data and information for use in planning, forecasting and project management, and for the development and implementation of *service delivery goals* linking the University's core information technology architecture, infrastructure and services with the institution's mission and strategic priorities.

The continued emphasis and success within the organization in moving from a *tactical* to a *strategic* focus resulted in a number of accomplishments. Examples based on the foundation laid this past year are reflected by strategic Goal in the following pages; major accomplishments providing significant impact to the mission of both the University and EITS include:

- 1) Design and development of a University-wide model based on industry standard of *Defense-in-Depth* and focused on: Process and Policy; People, and Technology as part of the *2005 UGA Securing Sensitive Data Initiative*. Recognizing the importance of each individual's role in securing sensitive and critical data, the 2007 emphasis was on the People component designed to provide and support awareness, training, and education at every level of the institution.
- 2) Migration to a industry standard *portfolio management approach* for aligning strategic, tactical, and operational activities of the *core* IT organization. As part of this effort, EITS developed a Strategic Planning Model incorporating the outcome of the annual Compact Planning Process and utilizing a portfolio management tool to assist in prioritizing resources for both projects and services in order to become a more customer-focused and performance driven organization.
- 3) Utilized *Six-Sigma* process improvement methodology to improve efficiencies associated with application development and execution on the UGA Mainframe enabling average annual savings of \$300,000 in licensure costs.

OCIO/EITS 5-yr Program Plan Goals and Accomplishments – 2007

Goal #1. Information Security: The Chief Information Security Officer, in concert with EITS leadership, will develop, implement and manage a comprehensive IT security planning process including the implementation of *best practices* based on industry standards.

UGA Security Policies Ratified

Five critical security policies were ratified including: UGA Minimum Security Standards for Networked Devices Policy, Minimum Standard for the Security of UGA Networked Devices, UGA Password Policy, UGA Password Standard, Electronic Equipment Disposal and Transfer Recommendations.

Expansion of Security Awareness, Training and Education Program Activities

The SANS Institute and The University of Georgia joined forces to sponsor a six-day in-depth *Security Essentials* course in computer and network security attended by information technology professionals at UGA, State of Georgia agencies and State/Federal Law Enforcement groups. Additional topics included: Digital Milam Copyright Act (DMCA); ASSETs (Automated Security Self-Evaluation Tool); Protecting Your Good Name; Computer Security Incident Response; Risk Management; and specific federal laws including HIPPA and Security, and the Gramm-Leach-Bliley Act.

Development and implementation of enhanced version of ASSETs (Automated Security Self-Evaluation Tools) Risk Assessment Tool

The ASSETs application was moved to a hosted environment behind a firewall. Additional controls limiting ASSETs web service access to officially declared security liaisons were implemented. Deployed an extra layer of *MyID* authentication required to create and change ASSETs passwords. Enhanced the Unit Security Liaison designation process and improved awareness working in conjunction with VPs, deans, and department heads.

Disaster Recovery Enhancements

Developed multiphase approach to disaster recovery for UGA based on *risk remediation* with funding identified to implement Phase I targeting upgrade of existing systems and establish new tape backup systems providing timely backup of critical systems in the Boyd Data Center. The implementation of Phase I will occur in Fiscal Years 2008-09

Continued collaboration with the USG research institutions and the Board of Regents *Office of Instructional and Information Technology/OIIT*) through the "USG Disaster Recovery Collaborative" focused on review of current capacities and assessment of use in assisting in the event of a disaster. Also focused on where leveraging of common technologies and platforms would be possible in order to garner economies in the area of storage, virtualization, training, and system expertise.

Security Reorganization

Recognizing the increasing focus on information and data security, and the need for leadership at the enterprise level, separated overall incident response, legal and state-wide representation for

state and federal legislation and requirements from the daily operational and local campus support requirements. The Chief Information Security Officer reports directly to the CIO and is responsible for University-wide security issues, policy and processes, and training and awareness; the Director for Security, Operations & Network Infrastructure reports to the Associate CIO for Client Services, Operations & Infrastructure and is responsible for the daily operations, *Secure Operations Center*, support and incident response at the local level.

SecureUGA Initiative Developed focused on Role/Based Accountability

Design, development and Cabinet approval of UGA risk management model, **SecureUGA**, comprised of three components: policy and procedures, technology, and people. This model is role-based and the people' component is focused on security training and accountability and includes every individual of the campus community, regardless of position, recognizing everyone has a responsibility to protect sensitive and critical data. Implementation of **SecureUGA** is scheduled for 2008.

Goal #2. Enterprise Data Integration: Recognizing the need for *enterprise-wide* integration of University administrative data management systems, implement systematic and incremental assessment and planning processes to enable reliability, stability, and timely access to organizational data and information; facilitate ability to move to web-enabled business services.

Implementation of UGA Alert application

In conjunction with the Office of Security and Emergency Preparedness, EITS built a web based self-registration application for receipt of official UGA emergency notifications by UGA campus community. This service enables UGA students, faculty, and staff to be contacted by phone, text message, and/or email.

New Applications for UGA Employee Self Service

Development of *UGA Employee Self Service* is an ongoing effort in concert with Finance & Administration for a consolidated web site for employee business related functions. New applications added to this self service website in 2007 include: 1) payroll check advisements; and 2) enhancement enabling home address update address information, leave balances, training and development registration, etc.

Developed Interface for Kronos e-payroll and Time/Attendance

EITS, in concert with Finance and Administration, implemented first phase of a purchased software package, Kronos, to provide a centralized application for all UGA payroll vouchers and leave tracking. The first phase of the project focused on the interface to Food Services with employee payroll vouchers. Kronos also provides significant enhancements that will reduce manual paper processes associated with time, attendance, and leave reporting.

Developed and Implemented SSN Out-of-the Classroom Initiative

As part of an initiative to further secure students' sensitive information students' Social Security Numbers (SSN), initiative developed elimination listing of SSN on class rolls, grade rolls and testing.

Documents for these functions now include the nine-digit portion of the UGA ID number on the current UGACard that begins with 810. The revised identifier is known as the "810 Number".

Selection/Implementation of *Faculty Activity Reporting System*

Recognizing need for a central UGA application for collecting information about institutional outcomes assessment and faculty activity, selection and deployment of the *Digital Measures Faculty Activity Reporting (FAR) System* was initiated. This system provides a standard platform across all units at UGA for: a) faculty activity reporting and outcomes-based assessment; b) optimize the accuracy of faculty data; and c) define core data requirements common to most schools and colleges. Additionally, Academic Program Assessment will also be tracked in the Faculty Activity Reporting System reflecting electronic mechanism to capture, consolidate and standardize faculty data; the *FAR System* will also support the UGA Southeast Region (SACS) accreditation process.

Comprehensive ID Management system

EITS initiated project planning for a comprehensive and secure ID Management system designed to allow access to information while promoting efficiency and streamlining work flow and business processes. A *Technical* project planning team was formed to begin planning and assessing requirements and initial work was started on developing a RFP. A *Functional Team* was also created and is being chaired by the University Registrar.

Established Quality Assurance Office

Established a Quality Assurance (QA) Office based on industry standard model and featuring increased quality standards for core administrative business functions. *Program change controls* are in place to minimize risk personnel and change approvals to source code; implemented change control processes for Financial and Student applications with additional change control implementation for other administrative applications scheduled for 2008.

Goal #3. Next Generation Network: Develop the *UGA Next Generation Network* design and action plan recognizing the campus network, systems and services have become the core infrastructure for teaching, learning, research and outreach efforts of the University.

Increased efficiency and Reduced Costs Annually for the UGA Mainframe

Utilized *Six-Sigma* process improvement methodology to improve efficiencies associated with application development and execution on the UGA Mainframe enabling average annual savings of \$300,000 in licensure costs. Network & Operations personnel were also able to upgrade the current Mainframe to a faster, state-of-the art computer by paying for actual use of software on a monthly basis (sub-capacity pricing) while saving on software costs.

Completed Phase I and II of the proposed UGA Telephone System Replacement

Completed Phase I and II of the UGA telephone system evaluation including: 1) evaluation of the telephone and data networks (including over 12,000 telephones and 13 call centers); 2) establishment of customer/user requirements; and c) vendor reviews. Completion of these efforts supported completion of RFP focused on the design and deployment of UGA's next generation telephone system.

Expansion of Wireless Network

Funding identified through Student Technology Fee in amount of \$795,000 targeting implementation of 414 new wireless access points, and integrating 80 existing access points into the PAWS wireless network. This extended UGA wireless network coverage to 36 additional buildings and over 920,000 square feet of campus. Additionally, 16,250 seats in instructional areas were added to the wireless network; 290,000 credit hours were accumulated based on wireless usage; and 102,000 students participated in classes in these areas with wireless access.

Expanded Hosting for Departmental Servers in Boyd Data Center

EITS hosted eight (8) departments' mission-critical servers in the Boyd Data Center providing an industry-standard and secure environment supported by a backup generator, UPS, fire suppression system, security monitoring and staff support 24/7/365.

Goal #4. Research Computing: Facilitating Connectivity and Functionality in support of Research Computing and High Performance Computing (HCP)

Addition of High-Performance Computing cluster (HPC)

The *Research Computing Center (RCC)* added a high-performance computing cluster as outcome from a UGA researcher submission for a Biofuels grant. This additional high-performance computing cluster will support biofuels also provide computing cycles for other research activities. In addition, the Complex Carbohydrate Research Center (CCRC) also identified \$90,000 to be used to purchase a 225+ processor cluster to be added to the existing high-performance RCC cluster enabling even greater capacity and functionality in support of the research priorities of UGA.

Establishment of a Georgia Cyber infrastructure Alliance (GCA)

Medical College of Georgia, Georgia State University and The University of Georgia initiated the establishment of a *Georgia Cyber infrastructure Alliance (GCA)* to develop and deploy a shared, unified research-driven cyber infrastructure in support of the research mission of each institution. The focus was to establish a context to review options for leveraging investments in cyber infrastructure by combining experience, technology and personnel into a shared set of resources. A draft Charter was developed to support this initiative with implementation of the Charter in 2008.

Revamped Research Computing Center MOU/Research Computing Advisory Committee

In concert with the Vice President for Research, updated the existing Memo of Understanding to a Memo of Agreement reflecting shared responsibility between the OVPR and the Office of the CIO for the Research Computing Center. In addition, broadened membership to the advisory committee and charged committee with responsibility for providing leadership to high performance computing agenda supported through the RCC.

Goal #5. Customer Service: Increase customer service options and support (e.g., messaging and information delivery systems; technology-based instructional delivery systems; file and print services; tiered customer support options) recognizing user requirements by competitive 21st century higher education students, faculty and research community.

Integration of Student Technology Support and the EITS Help Desk

The Student Technology Support unit, and the EITS Help Desk, were integrated into one set of services to improve support for campus students, faculty and staff. *Problem management* and *Balance Score Card* processes were developed to better evaluate service levels and identify high priority issues (example: Identity Management). Based on identified high priority issues, specific projects were developed; savings generated from this integration of staff and function enabled the creation of two new support positions for the integrated unit.

Digital Media Download Service Deployed

EITS provided leadership, in concert with the UGA Student Government Association, in the establishment of a University-wide committee focused on the examination and assessment of potential music/movie download services to assure legal downloading. The committee recommended the deployment of Ruckus, a music/movie service for students, faculty, staff, and alumni in concert with the University System of Georgia. The Office of the CIO negotiated a contract for UGA and all University System of Georgia institutions to utilize Ruckus.

Evaluation of UGA Course Management System Options

The LMS Executive Committee was charged by Chief Information Officer (CIO) and Associate Provost Dr. Barbara A. White to evaluate the current learning management solution on campus and recommend future directions in course management systems. Membership on the LMS Executive Committee included faculty and staff from the College of Education, College of Pharmacy, Terry College of Business, the UGA Libraries, the Georgia Center, Enterprise Information Technology Services (EITS), and the UGA Center for Teaching and Learning (CTL). Based on the recommendation from the UGA Learning Management Systems (LMS) Executive Committee, the Blackboard Learning System - Vista Enterprise Edition (formerly known as WebCT Vista) was selected as the future University course management platform. As part of the continued monitoring of course management systems, the Sakai community source LMS product will also continue to be evaluated and available on a limited basis for faculty to explore and to use in conjunction with their courses. Implementation of the Blackboard Learning System is scheduled to begin in 2008.

Mainframe Security and System Support Enhanced

The *Mainframe Security Committee* recommendations were implemented including capability for encrypted sessions from the Mainframe to client; a management position to support Mainframe Security and System Support was also approved and successfully recruited.

MyID Security Enhanced via New Password Policy

The University of Georgia *MyID*, used by students, faculty, and staff to access online services, underwent a security overhaul in 2007 including the requirement for the use of strong passwords to be changed every six months.

Along with stronger passwords, *MyID* users are also required to set answers to secret questions used to provide additional verification of a user's identity for security-sensitive Web applications. The secret question/answer pairs will also be used to reset forgotten passwords

Creation of the EITS Strategic Planning Model

A new EITS Strategic Planning Model was adopted and incorporated placed into effect July 2007. It is based upon the Capability Maturity Model developed at Carnegie Mellon and consists of nine key performance assessment measurements across five Organizational Maturity levels. It is designed for the alignment of strategic planning efforts within EITS to ensure performance-driven services focused in support of helping the University meet and exceed its mission and goals.

Goal 6. Positioning the Office of the CIO: Establish university-wide leadership for UGA Information Technology by positioning role of Chief Information Officer as leader for University information technology enterprise planning in support of the teaching, research, and outreach mission of the institution.

Realignment of OCIO/EITS Organizational Reporting and Functional Structures

Recognizing higher education *best practices* (e.g., Gartner, Inc) regarding the critical nature of organizational alignment, governance and advisory structures, completed the realignment of the Office of the Chief Information Officer (OCIO) and EITS organizational reporting and functional structures including the governance (*EMT*) and advisory (*ITAC*) structures.

Leadership for the design and development of the **SecureUGA**

As a component of the *2005 Securing Sensitive Data Initiative*, provided leadership for the design and development of the **SecureUGA** risk management program focused on the individual role and accountability of each member of the campus community in protecting and minimizing risk for compromise of the institution's sensitive and critical data.

Increased partnership efforts and activities

Recognizing importance of campus engagement and shared responsibility, provided increased leadership for partnership efforts and activities including:

- leadership for updating the Research Computing Center (RCC) Memo of Agreement;
- facilitation of a shared FY08 budget request with the Vice President for Research in support of the RCC;
- development of a shared IT management and support model with Office of Admissions;
- development and implementation of pilot project exploring community source options for UGA course management system (Sakai);
- engaging student involvement in *core* IT requirements including, but not limited to, FY08 Student Tech Fee increase, music/movie downloading service, requirements for modern 24x7 access to student business services;
- facilitation of collaboration opportunities with Georgia R1s CIOs (e.g., Georgia Cyber infrastructure Research Alliance; Disaster Recovery; MSD/licensing services)
- increased participation in state, regional and national professional affiliations; recipient of the 2007 Southeast Region Quality Leadership Award.

Leadership for EITS 5-yr Program Review

Recognizing the critical juncture for the *core* Information Technology organization at UGA, and in the spirit of the University's 5-yr Program Planning Review process, initiated an 8-month planning and implementation effort including comprehensive *Self Study* and incorporation of an *External* program review team representing experts from peer and national higher education institutions.

Awards, Professional Affiliations, Publications and Community Service

Awards

- Mike Carey. Unsung Hero Award. 2007 Division of Student Affairs Awards and Recognition Program, May 2007.
- White, Dr. Barbara A. *QLE Visionary Award for 2007*. December 2007.

Advisory Boards/Professional Affiliations

- Cisco Mobility Higher Education Technical Advisory Board
- Southeast Region Optical Networks (SERON) Steering Committee
- Executive Board Member Content Committee and 2008 Chair of Content Committee, *Association of Higher Education Campus Television AHECTA*
- Member of the governing body of the Georgia CIO Leadership Association (GCLA)
- SIMS - CIO Executive Summit Governing Body (Atlanta Chapter)
- Southern Light Rail Advisory Board
- NASULGC IT Commission
- CIO Executive council Southeast Region
- Women in Technology

Certifications Achieved by Individual Staff

- Six Sigma Black Belt. American Society for Quality
- Six Sigma Green Belt Training. American Society for Quality
- CAPM (Certification Associate in Project Management). PMI.
- Certified Professional V2R5. Teradata
- Project Management Professional. Project Management Institute.

Publications/Conference Presentations

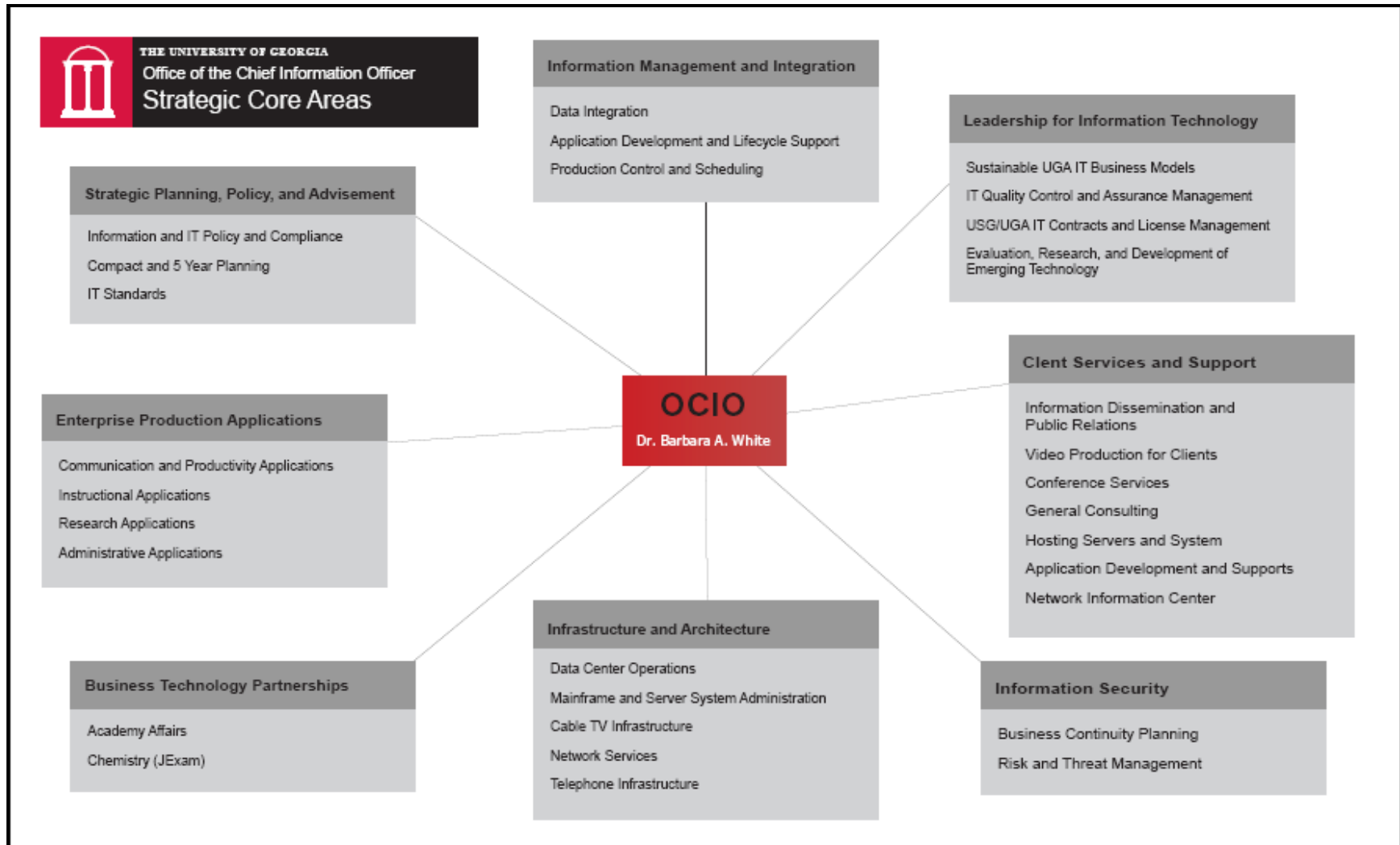
- "A Follower's View of Leadership." In *Academic Leadership*. October 2007. DeSimone, Albert.
- *Assessing Portalness, A Guide for CIOs and other Administrators*. Invited presentation at Portal 2007 Conference, Gettysburg, PA, June 2007; also presented at Educause Southeast, June 2007. DeSimone, Albert.

- “Directory Services, the Foundation for Web Portals.” Reprinted in *CSI Communications*, June 2007. DeSimone, Albert.
- *Communications Planning: Defining Levels and Phases of Communication*. Presented at ACM SIGUCCS Conference, Orlando, FL., October 2007. Paper published in conference proceedings. DeSimone, Albert.
- Presentation to USG Information Technology Executive Leadership, Rock Eagle 4-H Conference Center, titled: " IT Strategic Planning and Portfolio Management". Fall, 2007. Lynn Latimer
- Presented an invited talk on computation physics at the V Brazilian Meeting on Simulational Physics, Ouro Preto, MG, Brazil, August 2007. Tsai, Shan-Ho.
- Presentation on copyright infringement and the DMCA at the Winter 2007 Administrative Committee on Information Technology Meeting, Albany, GA, January 2007. Gatewood, Stanton.
- Speaker at the National Association of Colleges and Universities Business Officers 2007 Annual Meeting, New Orleans, LA, July 2007. Gatewood, Stanton.
- *The World of the CIO in Higher Education, "The Good, the Bad and the Ugly."* Presented at the CDW-G/Center for Digital Education Workshop, Atlanta, GA, March 2007; also presented as a lecture at Georgia Gwinnett College, MIST 6090 class, April 2007. White, Barbara A.
- *Balancing Today with Tomorrow through Innovation, Collaboration, and Integration: "Building Collaborations...The Challenges of Diplomacy."* Presented at the University Business and Campus Development Summit, Miami, Florida, March 2007. White, Barbara A.
- Panelist at the CIO Forum and Executive IT Summit, Atlanta, GA, April, 2007. White, Barbara A.

Community Service

- EITS staff participated in the Athens Clarke-County School District Adopt-A-Class Program; staff make monthly presentations to students with the primary message to stay in school.
- Women in Technology-Athens Chapter.

Appendix A
Figure 1. Major Services by Strategic Core Area



Appendix B: EITS Key Statistics: 2007

Selected Statistics		
WebCT	8,877	number of online courses
	210,661	total number of seats
	60,577	number of individual students enrolled in WebCT classes
Campus Network	41,000	number of devices (computers, printers) on campus network
	24,000	user capacity of PAWS, the campus-wide wireless network available to students, faculty, and staff, and departmental wireless networks not on PAWS
UGAMail	4.9 Million	total incoming e-mail messages daily
	4.3 Million	number of spam and virus messages deleted and eliminated daily
	600,000	delivered to users inboxes daily
My UGA	41,000	average number of daily logins
Uptime	> 99.9	percentage of uptime for critical production systems (e.g., Network, UGAMail, WebCT, Mainframe)
University Cablevision	77	educational and entertainment channels
	12,600	hours of programming per week
	6,000	installations on the campus network
Mainframe Transactions	19.9 Million	monthly average
	23.5 Million	monthly average during drop/add
Client Requests	112,000	annual number of requests for assistance resolved (Help Desk, Student Technology Support, Campus Information Technology Partnerships)
Research Computing Center	112	number of users of RCC high-performance computing (HPC)
	183,278	number of annual research jobs submitted to RCC HPC CPUs
	102.5	number of annual CPU years consumed by RCC HPC jobs
Web	746,432	visitors monthly on www.uga.edu
	10.4 million	page hits monthly on www.uga.edu
	>1,000	number of Web sites hosted on www.uga.edu