I. Introduction

Information Technology Services (ITS) is UNCG's central technology organization, providing computing, communications, data services, and technology planning. ITS is responsible for planning and management for the transmission and utilization of data, voice, and video in support of the University's academic and administrative goals. ITS seeks to provide cost-effective solutions for more than 18,000 clients (students, faculty, staff). UNCG has been designated by the UNC Board of Governors as an Information Technology Management Flexibility campus.

The ITS organization has 127 employees, and is divided into the following functional units:

Client Services
- Application Services provides web and desktop application solutions to meet instructional, research, and general technology needs.
- Client Computing Architecture researches, recommends, and implements solutions to address client computing devices issues.
- Technical Services and Student Computing supports individual client equipment, manages ITS computer labs, and provides technology support for the Student Laptop Initiative.
- The High Performance Computing Services Group facilitates the use of UNC System high performance computing resources.

Administrative Systems
- Data Management supports client reporting and data integrity.
- Management Information Systems (MIS) manages enterprise applications for campus business and academic services.

Systems and Networks manages the campus-wide network, enterprise computing infrastructure, and the ITS Service Center.
- Systems administers the enterprise server environment, operating systems, and databases.
- Service Operations and Support provides operations monitoring for the central campus computing facilities and general computing support to the clients.
- Data and Voice Operations administer campus-wide telephone and network enterprise infrastructure and services.

Project Management provides project management services to ITS.
Communications coordinates ITS internal and external communications.
Management and Budget manages ITS cost centers.
Compliance and Business Continuity supports compliance with HIPAA, DMCA, and other laws.
Technology Planning plans for new technology.
II. Summary of ITS Developments

In the 2005-2006 fiscal year, ITS devoted extensive human and material resources to furthering or completing several major projects and initiatives of tremendous importance to the University. The most notable projects include the campus wireless buildout, the implementation of technology support for the Student Laptop Initiative (SLI), expanded support for the Blackboard learning management system, and a series of Banner-related projects designed to improve and expand UNCG’s administrative computing environment. The success of these efforts was achieved by ITS working in close partnership with others across the University who were both clients and fellow members of project teams. A number of ITS efforts of a primarily internal nature were undertaken to improve ITS services to clients. These included the implementation of BMC’s Remedy product for 6-TECH service request tracking, the selection of PlanView as an enterprise project-management system for ITS, the expansion of the ITS Project Management Office, and the creation of the ITS Communications Office.

As of June 2006, ITS has successfully launched wireless service in 9 campus buildings, and all major academic building will have wireless service in Fall 2006. Responding to client needs, ITS is already piloting an encrypted wireless network service for those who need to work with sensitive data or protected applications over the wireless network. In addition, wireless course registration was successfully tested by ITS clients in Spring 2006. The ITS project to support the Student Laptop Initiative has made tremendous progress in 2005-2006. Contracts have been negotiated to offer students, faculty and staff opportunities to purchase Windows and Macintosh laptops and related software at discounted prices. Laptops with UNCG software pre-loaded are currently being shipped to student purchasers, and construction has begun in McIver on a new service center for laptop support.

For the mission-critical enterprise applications of Blackboard and Banner, ITS and its clients have recognized the need for robust systems with redundancy designed to continue services in the event of failure of a primary service or machine room. ITS worked closely with the UTLC and other academic affairs clients to design a more robust and redundant Blackboard server environment, and is in the process of implementing this environment to better serve students and faculty in Fall 2006. For Banner, ITS completed a project to migrate Banner services from the VMS platform to a state-of-the-art UNIX environment, resulting in noticeable performance improvements. In Spring 2006, ITS successfully completed the upgrade to Banner 7. Throughout 2005-2006, ITS has worked closely with Business Affairs on the Banner Finance Implementation project and a number of related projects, including the implementation of the Operational Data Store (ODS) and WebFOCUS to meet client reporting needs. Much needed resources added for support of administrative systems have contributed to ITS and Business Affairs being on track for a July 2006 Banner Finance go-live.

Though not directly noticeable to clients, the Spring 2006 move of the ITS Service Request tracking system from Magic to BMC’s Remedy product has laid the groundwork for improving ITS tracking of and responding to inquiries received via 6-TECH. Critical work now in progress includes the launch of a client self-service portal which will allow clients to obtain immediate information and assistance via a Remedy web interface. Similarly, the selection and acquisition of PlanView as a project management tool will allow ITS to better service clients by allowing ITS to track the project needs of clients, assign appropriate resources to projects, plan projects to be successfully completed by agreed upon deadlines, and by allowing key clients to directly obtain project information through a web interface.

ITS announced a new organizational structure in Fall 2005 that has clarified ITS roles and responsibilities and put additional emphasis on important areas such as security, technology planning, business continuity, management and budget, project management and communications. Throughout 2005-2006, ITS devoted resources to information security issues including a successful audit follow-up and achieving Payment Card Industry (PCI) compliance for ITS systems. The communications Office was established in 2005 and has made tremendous strides in improving ITS communications to clients. Three full-time project managers were added to the Project Management Office in 2005-2006, and, in the spring, the first Assistant Vice Chancellor for Project Management was hired. ITS, in conjunction with Facilities and an external consulting firm, also successfully completed a Data Center Study to prepare UNCG for growth and stability of its technology
infrastructure in the future. ITS devoted extensive resources to other planning and support initiatives as well, including financial planning for a comprehensive refresh of the University network, and addressing a number of facility design and building issues related to the Bond Building projects as well as supporting clients during the actual move processes related to those projects.

III. ITS Initiatives Linked to The UNCG Plan

STRATEGIC DIRECTION #1
Teaching and Learning:
Promote excellence in teaching and learning as the highest university priority.

(1:4) Expand use of technology to improve teaching and learning for students on campus and at a distance.

**Wireless Project:** The wireless infrastructure build-out began in Spring 2005 and is expected to be available for the Fall 2006 semester. ITS worked with Academic Affairs and Student Affairs to identify funding to establish wireless service in all major academic buildings, freshmen residence halls, and major common campus areas. ITS is purchasing additional supporting infrastructure for campus-wide deployment of an encrypted wireless service. ITS continues to work with technical and instructional staff to build the environment suited for the instructional need. Because of the continuing evolution of wireless standards, ITS and technical staff continue to explore the evolution in wireless services, and may need a replacement cycle shorter than the standard 4 years.

**Student Laptop Program:** A student laptop initiative by Academic Affairs encourages Fall 2006 freshmen to purchase a wireless-enabled laptop, and will require all incoming Fall 2007 freshmen to have a laptop that meets minimum specifications. A Student Laptop Program Implementation Project has been formed in support of this initiative. Laptop program standards were developed in cooperation with the Academic Technology Coordinating Committee (ATCC). A project manager, daytime and evening support center shift leaders have been hired specifically for the laptop program. Two additional positions have been hired for laptop/wireless support, and existing staff are being cross-trained to support laptops. The Student purchasing website for IBM/Lenovo ThinkPads launched on 5/16/06, and a website for purchasing Apple launched on 6/23/06. ITS also negotiated a special exception contract to allow Student Laptop Initiative machines to be shipped to students with Microsoft Office installed, at a greatly discounted price. ITS has worked in conjunction with other University offices to publicize the laptop program.

**Blackboard Environment Enhancement:** The 2005–2006 Blackboard Environment Enhancement Plan was developed by ITS in close partnership with the University Teaching and Learning Center and Academic Affairs leadership. The primary goal was to design and implement the appropriate infrastructure to support Blackboard as a mission-critical, highly-available enterprise class service to the University. The plan includes infrastructure design re-engineering for high availability, capacity planning to facilitate growth, a proposed implementation cycle and a detailed annualized financial plan. The plan was presented to the Provost in December 2005 and in January 2006 Academic Affairs made the decision to fund the plan with the expressed objective of providing enterprise class Blackboard services to the University by the start of the Fall 2006 semester. A joint project between ITS and the Teaching and Learning Center is underway to implement the new high availability Blackboard environment. It is on target for Fall 2006 delivery of services.

**Technology Training:** ITS supports and provides technology training and expertise to fulfill many differing training needs on campus.

- **Technology Courses:** ITS has collaborated with faculty members to offer classes that focus on technology (in some cases specifically at UNCG). Courses have been developed in collaboration
with INTERLINK (Office of International Programs), Consumer Apparel and Retail Studies, and Student Academic Services (University Studies 101).

- **On-Demand Training:** ITS has coordinated the outsourcing of training for software packages such as EndNote as well as training for best practice type “conceptual” topics such as Technical Writing. In addition, ITS continues to develop and deliver training classes as requested by Faculty. These classes have included Web Publishing, Web Marketing and MAC OS Fundamentals.

- **WebFOCUS Training:** ITS has coordinated outsourced training for WebFOCUS and has begun development on internal training modules that will be available for campus users of WebFOCUS.

- **Element K On-Line Training:** ITS has continued to update the Element K courseware to meet increased usage demands as well as to remain current with software versions. ITS has developed and implemented Element K Information Sessions where users are instructed on how to setup an Element K account as well as the fundamentals of using the system. ITS has successfully implemented the use of Element K as a primary method for delivering workshop content, with a facilitator on hand to answer questions.

**Academic Software:** New Academic Software applications were purchased by ITS for the network in 2005-2006 based on requests from academic units including:

- EndNote reference management software
- AtlasTi text analysis software
- The AutoDesk suite of products including AutoCAD
- Offerings delivered through the KeyServer license metering system have continued to expand, and now include Adobe Photoshop, Illustrator, Dreamweaver, and Acrobat Professional.

**LECTRA Software:** ITS provided technical guidance to the School of Human Environmental Sciences that successfully applied for a grant to acquire several modules of the LECTRA software suite.

**Microsoft Work At Home:** ITS implemented Microsoft Work at Home rights for UNCG faculty and staff allowing eligible University employees to use Microsoft Office on their personal home computer(s) used for University-related work

**Academic Software for Home Use:** ITS continues to offer a variety of packages for discounted purchase for home use including SAS, SPSS, Maple, Norton AntiVirus and the Stata Graduate Plan.

**Client Self-Service:** ITS implemented a beta release of a client self-service portal that provides clients with a “one-stop shop” for all IT needs. Clients can access a knowledge base with over 100,000 solutions both industry wide as well as UNCG-specific. Clients can also use the portal to generate their own trouble tickets directly into the Remedy service request tracking system.

**Streaming Media:** A partnership was developed between ITS, the University Teaching and Learning Center (TLC) and the Library for a 3 phased support structure for Streaming Media at UNCG. This consists of content creation (with support available from the TLC), content editing (with support available from the Library via the ERIT lab) and content compression and delivery (with support available from ITS). ITS created a centralized web support location for Streaming Media Information which includes policies, procedures and best practice information. Marketing efforts for Streaming Media services included articles in the ITS Newsletter, ITS News (ITS website) and Campus Weekly.

**Lab Use:** ITS continues to monitor lab use data and has engaged, since 2003, in a series of discussions with units in Academic Affairs regarding the future of the labs. During 2005-2006, one lab (CITI in Jackson Library) was transferred to the Library for operation and a new ITS-managed lab (HHRA) was constructed with a planned August 2006 opening date. Some computer lab initiatives include:

- **Exam Security:** ITS completed an Exam Security Project requested by the Academic Technology Coordinating Committee (ATCC) and, upon approval of the ATCC, purchased NetOp School for the three ITS instructional labs in the Bryan building. NetOp School is a classroom management
tool that provides security and a wide variety of functions from file distribution to utilities that take over student workstations or block non-approved software or Internet use during class, allowing instructor greater control over the lab when used as a classroom.

- **Kanaka:** ITS implemented Kanaka, which is a directory services plug-in for MacOS X that automates MAC user access to NetWare services. This project provided a significantly higher quality of service for campus MAC users in the labs by giving them the ability to have native Novell authentication with automatic drive mappings.

- **Decommissioned Computers:** ITS offers "decommissioned" lab computers to student groups and academic departments for graduate student offices and departmental student labs.

**TeleLearning Facility:** The ITS TeleLearning Center experienced a successful transition to its new location in the 1929 Wing of Stone Building. This new facility now has wireless capabilities. This past year the ITS Telelearning Center supported 233 teleclasses and 201 teleconferences from 7/1/05 through 5/14/06. Total network use for academic classes was 381 hours. The ITS Telelearning facility received accolades from students for extraordinary service – allowing a commuting student, who could not travel due to pregnancy, to participate in her Doctoral Defense via videoconferencing from Asheville, NC; and facilitating learning access for an NC A&T student when facilities at that campus were unavailable. The following upgrades to the Telelearning Center were completed this past year:

- Installed a Sony Ipela G50 Videoconference Codec in the TeleLearning Center to replace an aging unit. The new unit provides enhanced capabilities and improved visual quality.
- The TeleLearning Center, working with Physical Plant, completed the renovation of TeleLearning Classroom monitor enclosures, allowing use of two new widescreen rear projection television monitors.

**Novell Storage Manager:** ITS deployed Novell Storage Manager, a product that automatically provisions student file space based on a centrally managed policy. This gives one touch management of all student home directories, real-time automatic provision/de-provisioning of file space, web pages tools for service desk management of quota, and executive dashboard reports of space usage/distribution. The primary benefit to students is quicker ITS response time for network file space requests and ease of use.

**myFiles:** ITS deployed myFiles technology that allows faculty, staff and students to retrieve files stored on the UNCG Novell network from nearly any computer in the world via a web browser.

(1:5) **Expand and enhance opportunities for experiential learning, including internships and service learning.**

**Graduate Internship:** ITS provides a position to a graduate student from the Broadcast and Cinema department in order to assist with and learn about the development and delivery of streaming media.

(1:6) **Expand opportunities for international research, study, and education for students, faculty, and staff.**

**Studio Abroad:** ITS developed interface feeds for the Studio Abroad platform which is a web-based system to present study abroad/exchange programs and accept/manage applications to participate in such programs.

(1:8) **Improve support services for teaching and learning.**

**Blackboard Support:** ITS is hiring a new dedicated Blackboard Application Engineer who will work in partnership with the TLC Blackboard Application Administrator to develop a new support structure to manage and deliver outstanding Blackboard services to UNCG.
NetOp School: Deployment of NetOp School will provide greater control of environment for instructors while teaching in the Bryan Building ITS computer lab.

Service Desk Teaching Support: ITS provides a means for instructors to get a rapid response while teaching in an ITS computer lab via 6-TECH.

STRATEGIC DIRECTION #2
Creation and Application of Knowledge:
Strengthen research, scholarship, and creative activity.

(2:4) Strengthen the role of Centers and Institutes in enhancing opportunities for excellence in research, scholarship, and creative activity for faculty and students.

Metro-Ethernet Services for Off-campus Centers: ITS has worked in close partnership with Academic Affairs to identify the data and voice service requirements for Centers and Institutes that move off campus. ITS is actively developing a cost-effective turnkey University supported solution to meet these needs that is expected to be available by Fall 2006.

Software Licensing for Off-campus Centers: Where possible within licensing constraints, ITS has provided locally installable versions of software to off-campus Centers to reduce their reliance on slower off-campus networks for software access.

(2:7) Increase support for basic and applied research excellence in the University’s areas of traditional strength, including the arts, humanities, education, and social and behavioral sciences.

On-Going Training: ITS provides on-going training (individual, group and classroom) and support for SAS, SPSS and other statistical packages. ITS also provides SAS & SPSS for purchase to students and faculty at a discount.

Textual Data Analysis Support: ITS has created and filled a new position with responsibilities for the support of textual data analysis.

On-Demand Support: ITS staff provide assistance for a variety of equipment not officially supported by ITS but required by departments for their missions. ITS has maintained support for the officially unsupported Operating System required by Biology for use of their electron microscope, allowing Biology to defer the purchase of newer equipment. ITS has assisted with the installation of specialized hardware needed by the CARS department as part of the Lectra software initiative.

(2:8) Use technology to expand and enhance research.

InfoEd: ITS has provided continuing guidance to the Office of Research & Public/Private Sector Partnerships regarding the acquisition and installation of a software package (InfoEd) to facilitate research administration.

Operational Data Store (ODS): ITS has worked collaboratively with clients to implement the Operational Data Store (ODS). The ODS is a necessary pre-requisite to implementing the Enterprise Data Warehouse (EDW). The ODS and the EDW could be a source of data for faculty, staff and student researchers for studies of academic performance data and/or institutional effectiveness in the academic and administrative arena.
UNIX Web Environment Upgrade: ITS is in the process of upgrading the UNIX web server hardware as well as the services offered in that environment. These service enhancements in conjunction with the new SQL database environment, will allow researchers and web developers to do more robust web development.

Exercise and Sport Science Research: ITS actively participated and supported a research project with faculty and graduate students from Exercise and Sport Science to analyze the effects of walking and cognitive response times.

Slavery Petitions Project Support: ITS has provided support for data cleansing, filtering and reporting to faculty from the Department of History for their Slavery Petitions Project.

STRATEGIC DIRECTION #3

Campus Community:

Become a more diverse and actively engaged community of students, faculty, staff, and alumni.

(3:6) Ensure a positive and supportive environment for faculty, staff, and students.

Staff Advisory Committee: A Staff Advisory Committee has been created with non-management representatives from each area of ITS. This committee will address issues of importance to ITS staff and will make recommendations directly to ITS Senior Management and the Vice Chancellor.

IT Professionals Roundtable: ITS has continued to organize IT Professionals Roundtable which is a monthly meeting designed to provide updates to current ITS initiatives as well a forum for information exchange between ITS and the UNCG client community. A support website has also been created for the posting of minutes and meeting materials.

IT Professionals Technical Focus Group: ITS has created IT Professionals Technical Focus Groups which are intended to be small, technically oriented discussion/work groups to allow further information exchange on specific ITS initiatives and issues.

ITS Communications Office: ITS created a Communications Office to coordinate communication both internal and external to ITS. The office was designed to be a single, clear, consistent voice for ITS communications to the campus, and has focused on developing procedures for communicating critical and non-critical information to the campus.

Process Based Leadership Training for the ITS Management Team: The ITS Management Team is currently participating in a series of highly interactive training sessions designed to provide a road map for developing and reinforcing employee performance management plans that are aligned with University goals and cornerstones. The training is specifically focused on the steps critical to the integration, reinforcement, and maintenance of an organizational team culture.

IT Infrastructure Library (ITIL) Foundations Training: A number of ITS staff recently participated in ITIL Foundations training. The training covers effective delivery of IT Services based upon the ITIL Service Management best practices standards.

ITS Training and Certification: ITS supports the professional development of its employees, and publicly acknowledges their achievements such as when staff obtain certifications.

ITS Standards of Conduct: Revised standards were included in the work plans for every ITS employee.
STRATEGIC DIRECTION #4

Economy and Quality of Life:
*Be a leader in strengthening the economy of the Piedmont Triad and enhancing the quality of life for its citizens.*

(4:1) Establish and maintain collaborations and alliances among academic institutions, Action Greensboro, economic development agencies, and industry.

**UNC Compliance Work Group:** ITS worked to initiate the UNC Compliance Work Group, an ad hoc group formed to develop a common set of guidelines for implementing the Payment Card Industry (PCI) Data Security Standard in the UNC campus environments. The Work Group will identify alternative compensating controls that meet the intent and rigor of the standard without undue impact to university resources and operations. These alternative controls are presented in the form of guidelines, which maintain sufficient flexibility to be applicable to most, if not all, of the UNC constituent campuses.

(4:2) Establish, with N.C. A&T State University, The Joint Millennium Campus.

**Planning for Greensboro Center for Innovative Development (GCID) Network:** ITS has been working with the GCID Executive Director and the IT networking group at NC A&T to develop proposals for network connectivity to and within the campus. The Metro-Ethernet solution proposed for off campus offices will provide a reliable and expandable solution that would meet the short to medium term needs of GCID. ITS continues to research new solutions and is waiting on funding to implement. If network construction is involved, it will take a minimum of 6 months after funding and finalization of a construction plan to provide a network to GCID.

**Technical Support:** ITS has provided technical support for the Greensboro Center for Innovative Development.

(4:3) Develop and promote new opportunities for lifelong learning.

**MarketPlace Upgrade:** ITS performed an upgrade of the MarketPlace web platform which is used by the Division of Continual Learning (DCL) to offer non-credit lifelong learning programs to the public.

**Highly Available Services:** The requirements of Distance Learning drive a greater need for 24x7 network availability and the University’s demand for after-hours availability of services has constantly increased. The Network Refresh and Blackboard enhancement projects will provide the foundation of a highly available environment required to facilitate development of a future service plan for students and faculty, based on 24x7 availability of services.

(4:5) Facilitate the transfer of products of research, innovation, and other academic endeavors to business and industry.

**InfoEd:** ITS management has provided guidance to the Office of Research and Public/Private Sector Partnerships regarding acquisition and installation of a software package (InfoEd) that includes a Technology Transfer module.

(4:8) Strengthen partnerships with universities, community colleges, and non-profit agencies in educating children/youth from birth through twelfth grade.

**Lab Tours:** ITS has responded to requests by various student and community groups by conducting tours of our computer lab facilities and providing workshops, such as in Web page creation, to middle school and other students. ITS provides computer lab facilities for various UNCG summer camps and classes for high school and middle school students.
STRATEGIC DIRECTION #5

Access and Student Success:
*Recruit and retain students with the potential to succeed in a rigorous academic environment.*

(5:1) Increase efforts to recruit and retain students from diverse backgrounds.

**e-Spartan Lite:** ITS implemented e-Spartan Lite, an alternative web-based email client to the standard IBM Lotus client. This implementation allows the display of foreign character sets, a service which improved the ability of students who speak foreign languages to read their email.

**INTERLINK Workshops:** ITS continues to create and deliver workshops for INTERLINK students.

(5:2) Increase enrollments at all levels and among various student populations.

**Azorus:** ITS provided assistance to Undergraduate Admissions in developing a strategic direction for integrating the Azorus recruitment platform and Banner.

**MACH5:** ITS manages the MACH5 application, a mass email client, to facilitate departmental requirements to send thousands of emails to select populations of recruits, applicants and students.

**Virtual Advising:** ITS has continued to develop enhancements to the appointment scheduling section of the Virtual Advising Module within UNCGenie.

(5:3) Become a university of first choice for an increasing number of students.

**Technology Facilities:** Provision of up-to-date computer lab facilities and software is key to meeting top students' expectations and demands for technology support on campus.

**ResNet Wireless:** ITS is working in partnership with HRL to deploy wireless services in the campus residence halls. This project will provide resident students with wireless network access for portable computing devices in the lounge areas.

**Open House:** ITS activities during Open House for admitted students highlight the computing environment and encourage positive assessments about computing and technology at UNCG.

(5:6) Encourage all divisions of the University to work together to manage enrollment growth effectively.

**Network Refresh:** The 2005 – 2006 University Network Infrastructure Refresh Plan was developed to provide University leadership with the requisite information to plan for provision of campus network services at a level sufficient to position UNCG to become a university of first choice for students, both today and into the future as enrollment grows. The key goal of this extensive project was to develop a plan designed to provide maximum reliability and performance for all clients, security for administrative/enterprise clients, fast and secure network admission for student owned machines, an open access environment for academic support, and a foundation for future voice over IP (VoIP) support.

**HRL Network Refresh Plan:** ITS worked in close partnership with Housing and Residence Life to develop a comprehensive Housing and Residence Life Network Refresh Plan for the eighteen dorm buildings on campus. The plan included infrastructure design re-engineering for high availability, capacity planning to facilitate growth, a proposed implementation cycle and a detailed annualized financial plan, which was presented to HRL Leadership in February 2006. HRL made the decision to fund the Refresh Plan and will follow a 6-year phased dorm building network infrastructure upgrade strategy that includes
implementation of Cisco Clean Access, as well as a cycled hardware replacement strategy to consistently provide delivery of fast access, reliable wired network service and a platform upon which to enhance the network services UNCG can offer to resident students in the future. A joint project between ITS and HRL is underway to implement the new high availability dorm network. It is on target for a Fall 2006 delivery.

**Banner Environment Refresh:** ITS developed a detailed, comprehensive financial plan for University Leadership to utilize in planning the refresh of the Banner enterprise environment. The plan includes capacity modeling for growth of Banner, ODS and add-on modules.

**Student Academic Support Group (SASG):** The Assistant Vice Chancellor of Management Information Systems serves as the ITS representative to the Student Academic Support Group (SASG) chaired by the Associate Provost for Enrollment Management which convenes key student service providers to coordinate efforts and resolve issues relating to recruitment, advising, orientation and registration.

(5:7) **Work collaboratively to ensure an integrated approach to marketing University programs.**

**Marketing the Laptop Program:** The laptop project team has worked with Enrollment Services and the Office of Orientation in developing publicity material for the Student Laptop Initiative and providing information about it to incoming students.

(5:8) **Support campus initiatives aimed at improving student satisfaction, retention, graduation, and career placement rates.**

**Student Laptop Initiative (SLI):** The SLI and requisite support infrastructure is designed to provide convenient and high-quality computing support for students on campus.

**Extended Computer Lab Hours:** Late night operating hours in Bryan 213 and early morning operating hours in the SuperLab are offered to make lab use more convenient in response to student requests.

**Career Services Reference System:** Work is underway ITS on the Career Services Reference System. This system, when complete will permit student to electronically review and request delivery of resumes and supporting documents to prospective employers, all electronically. This will replace manual processing within Career Services.

**Student Mailboxes:** ITS has begun efforts to modify programs used to assign mailboxes to students living on campus to accommodate the new satellite mailbox location in the newly constructed residence hall at the corner of Aycock and Spring Garden. This will permit those students to receive their mail directly in their residence hall.

(5:9) **Expand opportunities for adult learners.**

**Adult Undergraduate Workshops:** ITS has created and delivered workshops for Adult undergraduate students as requested by the Office of Adult Students & Enrollment Services. A total of 4 workshops were taught as a General Introduction to Computing at UNCG with approximately 40 students in attendance.

**Technology Orientation for Bryan MBA:** ITS continues to offer a student orientation program, specific to technology at UNCG, for the Bryan MBA program.

**Element K Self-Paced Instruction:** Element K provides for self-paced instruction for those who may not have had the opportunity to learn computer skills prior to coming to UNCG.

**Late Night Computing:** Evening and late night computing hours provide more convenient access to adult learners who work during the day and attend UNCG at night.
(5:10) Ensure that quality student services are available to meet the needs of all learners.

**Lab and Technical Support Availability:** Computer lab and technical support availability from 7:30 a.m. until 3 a.m. provides more convenient access to non-traditional students. Assistive technology software is available on all lab computers, and specialized hardware and associated software is available in the SuperLab and Bryan 213, to meet the needs of students with physical and/or learning disabilities.

**eLearning Portal:** ITS has consulted with Specialized Education Services on the development of center.uncg.edu which is an eLearning Portal for the Deaf/Hard of Hearing.

**e-Spartan Lite:** ITS implemented e-Spartan Lite, an alternative web-based email client to the standard IBM Lotus client. This implementation was done to meet client demands for a web-based email system that is compliant with the Americans with Disability Act for the visually impaired.

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**CORNERSTONE #1**

**Public and Private Support:**

Pursue and effectively use all sources of public and private support.

(C 1:2) Cultivate relationships with governmental and public agencies, to increase support and service for UNCG.

**Criminal Records Exchange:** ITS worked with UNCG Campus police and City of Greensboro IT representatives to encourage exchange of electronic information between police departments.

**Economical and Expandable Network:** ITS is an active participant in the North Carolina Research and Education Network (NCREN) advisory committee that explores expansion and economies of scale in providing network services within the city, triad, and state.

**Inauguration of President Bowles:** ITS provided leadership and staff assistance for the Academic Processional during the Inauguration of President Bowles. UNC General Administration staff and BOG members were impressed with our campus’s friendliness and the service they received from ITS staff while our guests.

(C 1:4) Improve capacity of UNCG to raise private funds and provide proper stewardship.

**Credit Card Giving:** ITS has begun work on a project to provide an easier method for web based credit card giving. This project, to be completed prior to the 2006 Fall kickoff of the public phase of the campaign will permit one-step entry of information to initiate a credit card gift.

**Lectra Software Grant:** The Lectra software grant for the Consumer Apparel and Retail Studies (CARS) department was dependent on the ability and willingness of ITS to provide the necessary server and lab support.

**Nursing School Grants:** ITS has worked with the Nursing School on their grant application, supporting their requests for enhanced technology offerings and providing an up-to-date computer lab used by Nursing School classes.
CORNERSTONE #2
Technology:

Strengthen technology resources for effective use in academic programs and administrative services.

(C 2:1) Strengthen technology services available to the campus, while implementing cost-effective technology solutions that take advantage of economies of scale.

New Services and Initiatives

- **Interactive Intelligence, Inc. (I3):** ITS completed a project to deploy the I3 VoIP system for call processing to Financial Aid and the College Foundation of North Carolina (CFNC). Call services were dramatically improved for both Financial Aid and CFNC as the new telephony system provided higher availability, integrated into Lotus Notes, supported SIP clients and provided a more secure environment.

- **Blackberry Service:** ITS implemented Blackberry PDA service that is integrated with Lotus Notes. This will increase productivity and allow University faculty and staff to receive their email/calendar outside the office.

- **Automated Network Registration:** ITS worked in close partnership with departmental technical professionals across campus to engineer an automated network registration tool that provides self-service capabilities to clients to auto register their own computer on the network.

- **LDAP Service:** ITS developed and deployed a central gateway for all Novell LDAP requests, which resulted in significantly increased availability to campus network clients for authentication requests using this service, for example Blackboard and e-Spartan email.

- **Judicial Action System:** ITS implemented the Judicial Action System from PAVE Systems to replace a problematic and unstable homegrown database that the Office of Student Affairs was using to manage student judicial information.

- **Medicat System:** ITS installed a new hardware environment and upgraded the Medicat application for Student Health Services. ITS provided VPN access for SHS administrators as well as account set-up and training. ITS also performed two re-writes of the interface from Banner to the MEDICAT system to accommodate format changes required by the vendor and to include students registering for SOAR.

- **EMS Professional:** ITS upgraded the EMS Professional application and environment that the Office of Student Life uses to manage spaces and facilities’ schedules for conferences and events.

- **Pro-Venue Max:** ITS installed ProVenueMax, the new ticketing system for the University Box Office and provided network connectivity from the server to the University Box Office client workstations and to the Tickets.com vendor site.

- **Private Conference Numbers:** ITS rolled out private conference numbers as a new service, allowing customers to get and keep a dedicated phone number.

- **Enhanced Student Voice Services:** ITS deployed individual distinctive rings and simultaneous ringing services offered to the students and faculty/staff.

- **ZEN Server and Remote Assistance Deployment:** ITS deployed ZEN for remote management to empower the Service Desk, Technical Services and their clients with an option to provide assistance from remote locations live and in real-time. This solution was specifically implemented to allow the client to control how and when remote assistance is provided. ZEN also allows real-time metrics regarding hardware present in the Novell user environment to be gathered, stored, and reported in the Novell tree. This can be utilized for access control and other management and delegation of tasks, all of which result in better service to ITS clients.

- **Standard Computer Image:** ITS has developed a standard computer "image" which is installed on client computers by request or made available to Unit Technical Staff to avoid the time-intensive process of having to rebuild individual computers and reinstall software on new or reconfigured computers.

- **VMS to UNIX:** In keeping with the project plan begun in 2004-2005, Banner was moved from the VMS platform to the Solaris Unix platform as of July 11, 2005. The highly available environment provided Banner to the UNCG community during the first 10 months of operation with only 3 hours of
unscheduled downtime to the database servers. The client community noticed immediate improvement in NOLIJweb document management software performance and general Banner reporting. The new environment has proven itself during the Fall and Spring student registration and drop-add cycles which are the highest demand periods. This year long effort brought UNCG into the majority technology platform of Banner campuses, and is aligned with the hardware and operating systems decisions made by the majority of the UNC Shared Services Alliance schools

- **Enterprise Backup**: 90% of all backups are being done with the enterprise backup solution, NetBackup software, utilizing the tape robotic libraries. The new Enterprise Backup solution affords economies of scale from using a unified backup system which covers all UNIX, Netware, Windows, and Linux server environments. The system allows for scheduled backups to occur and manages the tape rotation based on University-defined policies. The system also manages the vaulting process of removing tape copies of the backup from the building and moving to an alternate location. This system has consolidated the use of single tape cartridge drives and has reduced hands-on requirements of ITS personnel. The centralized backup has decreased the time required to develop backups for newly implemented systems. The use of the robotic libraries has allowed ITS to handle client file restoration requests more quickly. This service is also offered to clients who have servers in the ESP server farm.

- **WebFocus**: ITS has implemented WebFocus, a platform in which campus units and ITS can develop and make available reports to support their operational, internal and external reporting needs. This environment is operational for Banner Finance, and during the 2006-2007 fiscal year will be made available to administrative units using Banner across all 5 UNCG divisions. The previous implementation of WebFocus has been in support of legacy HRS/FRS systems used principally by Business Affairs. ITS has a coordinating role for WebFocus administration and managing WebFocus training available at UNCG.

- **AppWorx Job Scheduling**: ITS has expanded the use of AppWorx job scheduling and queue management software to automate essential nightly processing for Banner Finance, refreshing of the Operational Data Store and execution of nightly Financial Reports. Additionally daily, repetitive Banner processes previously started and stopped by staff in the Financial Aid, Registrar’s and Undergraduate Admissions Offices have been automated to start and stop automatically.

- **Client Field Support**: Three new temporary positions have been created to supplement permanent staff for field support requests, Bond Building move support, and ITS initiatives, such as secure hard drive surplusing.

- **Student Laptop Initiative Discounts**: Student Laptop Initiative project negotiations resulted in a 40% discount for select IBM/Lenovo Thinkpad models for UNCG students, faculty and staff, and a MacBook Pro discount of approximately 7.5%.

- **Pay-For-Print**: ITS implemented a major system upgrade to the Pay for Print environment. Pay for Print services have been made available to academic and administrative departments at a lower cost than if they instituted autonomous systems, by allowing them to attach to the ITS system used in the labs and taking advantage of the economies of scale offered in terms of license and hardware costs.

- **Computer Management Services**: Life-cycle planning is currently under development. ITS end-of-life services such as securely wiping computer hard drives and subsequent delivery to surplus are currently available to campus.

- **Campus Call**: ITS is in the process of upgrading the server and software for the Campus Call application used by University Advancement to solicit donations.


- **Management of Mass e-Mail Lists**: ITS managed the mass email lists used to notify campus of service interruptions, Chancellor announcements, General Administration and other approved mass email notifications. These lists include all employees and students.

- **Faculty Lab User ListServ**: The faculty lab user email list provides a mechanism to notify faculty of any issues or upcoming events that affect the computer lab environment.
Project Management

- **Academic Project Priority Setting:** In Spring 2006, the Associate Vice Chancellor for Client Services began a discussion with the Provost Office and ATCC chair regarding a process for academic project priority setting.

- **PlanView:** ITS has purchased and has begun the implementation of PlanView, the Gartner top-rated product for enterprise project and portfolio management. PlanView will allow ITS to scope, schedule and execute work, manage projects, perform resource-capacity planning across the organization and align and commit ITS financial and human resources based on strategic University objectives. Most importantly, it will provide University leadership with the accurate data needed to make effective decisions for strategic planning and execution campus-wide based on resource availability.

- **Project Management Office:** ITS expanded the Project Management Office (PMO) to oversee and coordinate all project work within the division. This involved moving three full time employees from other areas within the division and the hiring of an additional full time person to have four full time project managers. The office is currently staffed by eight full time employees, dedicated to improving the business processes by which ITS handles project requests, manages project work, and improves the quality of client deliverables.

- **Assistant Vice Chancellor for Project Management:** A nationwide search was conducted to find a person with the appropriate experience to take the newly formed Project Management Office to the “next level” of project management.

Incident Management

- **BMC Remedy:** ITS implemented the first module of BMC’s Service Management solution for incident tracking and management. This solution provides support personnel with the information necessary to better identify and assist client issues. This solution also allows ITS to provide the same level of technical support to students as they do for faculty/staff.

- **Enterprise Incident Management Team:** ITS established a functional group within the Service Operations Center dedicated to the overall management and quick resolution of higher priority incidents that impact multiple clients and their ability to perform required business or academic duties. This team has overall ownership of these incidents throughout their lifecycle, including root cause analysis after the issue has been resolved.

- **Revised Incident Management Process:** ITS implemented a comprehensive process for the end-to-end management of incidents from reporting to resolution. Included in the new process are clear standards around client communication and issue escalation/resolution.

- **Expanded Service Desk Hours:** ITS completed an initiative to incorporate the after-hours support functions into the ITS Service Desk. The goal of this effort was to improve quality and consistency of customer service outside of normal business hours by standardizing processes and training.

- **Expanded Computer Lab Hours:** Computer lab services are now available from 7:30 a.m. in the SuperLab until 3 a.m. in Bryan 213. Computer lab and technical support availability from 7:30 a.m. until 3 a.m. provides more convenient access for non-traditional students.

Service Management

- **Production Control:** In support of client requests for development and maintenance work done by the Administrative Systems Group, the DBA group processed over 1000 production control requests in 2005 – 2006.

- **Service Agreements:** ITS implemented new templates and procedures for the development, negotiation, and management of various service agreements. These agreements included Memorandums of Understanding, Operating Level Agreements and Service Level Agreements, and are intended to provide both ITS personnel and client representatives with clear expectations of service and escalation procedures.

- **Change Management Process:** ITS implemented a comprehensive process for managing all changes made to the production IT infrastructure. The new process increases client involvement in the planning, scheduling, and communicating of all proposed changes. It also provides more stringent procedures for implementing changes to decrease service disruptions and downtime.
Outreach

- **Research Advisory Council Participation:** To improve communications between ITS and clients, ITS participated in select Research Advisory Council meetings for the first time in 2005-2006 and two ITS staff participated in workshops sponsored by the Office of Research and Public/Private Sector Partnerships. ITS also provided support to the Office of Research and Public/Private Sector Partnerships to facilitate a RENCI (Renaissance Computing Initiative) information event on campus.

- **UNC Alliance:** In Fall 2005, the Associate Vice Chancellor for Client Services was named the official UNC Alliance representative for UNCG. In May of 2006, her contributions to the Alliance were recognized by the Alliance Chair as impressive for her relatively short time as part of the group.

- **ITS Newsletter:** ITS produces a campus newsletter, *Technology at UNCG*, to keep faculty, staff and students informed on technology issues and news that affect campus computing. Five issues, covering a wide range of topics, were published during the year. Designed as a single page attachment to the *Campus Weekly*, regular features include the Vice Chancellor’s column, a lead article, secondary article, two news items, and a data box.

(C 2:2) Protect and enhance the reliability, security, and capacity of UNCG networks, and the servers that support UNCG administrative enterprise systems.

Reliability and Performance

- **BMC Performance Management:** ITS implemented a comprehensive performance monitoring and management solution to provide real-time end-to-end monitoring of the service delivery process. This solution provides proactive monitoring of the infrastructure, applications, and processes necessary to deliver key services to clients.

- **Switched Building Topology:** ITS changed to a switched building topology for the campus network. This configuration provides a higher capability for isolating problems. Network faults can now be isolated quickly and service impact minimized.

- **Network Closet Inventory:** ITS conducted an exhaustive inventory effort of all IT network infrastructure deployed across every university building. Data collected provided ITS with the ability to better plan for upgrades and refreshes necessary to provide network services to the client communities.

- **UPS Normalization:** ITS completed an effort to analyze the existing universal power supplies supporting IT infrastructure across campus and make necessary upgrades. This effort was to ensure network availability to the client communities in the event of power outages.

- **Wiring Infrastructure labeling schema:** ITS developed a wiring infrastructure labeling schema to quickly identify and troubleshoot wiring related incidents. This allows a faster tracking of our wired infrastructure and assists with knowledge transfer.

- **Novell Distributed Print Services:** ITS completed a project to migrate Novell distributed print services to a clustered environment, which resulted in delivery of a high availability service to campus clients, with real-time failover and redundancy.

- **KeyServer Enhancements:** In 2005-2006, ITS began a project to implement a redundant, failover environment for the KeyServer software monitoring application.

- **Data Handling Training:** ITS staff have been trained in procedures involving client data backup and other types of data handling.

- **Disaster Resistance and Recovery Plan:** ITS began work on a major revision of ITS Disaster Resistance and Recovery Plan.

Security

- **Security Assessment:** ITS is working with the results of the UNC system security assessment to improve the reliability and security of UNCG’s computing network. ITS has implemented suggestions from the report including a wider separation between operational and security duties and improve documentation of high level procedures. ITS will continue to work with the client
community on formal security awareness/security training programs and improvement of system and network security.  

- **Security Policies and Procedures:** ITS has an active project to formalize procedures and actions related to the University policies impacting information technology. These procedures are the framework that will enable technology staff throughout the University to work toward common security goals.

- **Enterprise Security Initiative:** ITS is completing a project to significantly enhance the security of the campus network by providing industry standard security for all enterprise application servers, providing increased network perimeter security, providing security protections to the campus from internal hostile sources, implementing intrusion protection systems for identified areas and providing enhanced auditing capability for all areas of network communications that violate policy.

- **Intrusion Prevention:** ITS implemented a robust Intrusion Prevention system protecting UNCG’s outer network as well as its server farm. Since March 1, 2006, the Intrusion Prevention system has actively blocked 561,001 attempts to compromise the security of the UNCG network. Of these, 92,965 (17%) of those attempts can be categorized as serious threats, and 48,999 (9%) as critical threats.

- **Banner Administrative Security Application:** ITS developed an application that allows the Banner data stewards to manage access to the Banner and ODS data for which they have operational-level responsibility. As this application is fully implemented it will decrease the amount of time required for an employee to be granted access to data. It provides more flexibility at the hand of the data steward as the new levels of control can be defined by the data steward without the intervention of ITS.

- **Event Monitoring in the Service Operations Center:** (DMCA takedowns, machine takedowns): ITS has expanded the capabilities of the Service Operations Center (SOC) to manage the connectivity of stations on the campus network. The processes and procedures allow SOC individuals, who are available beyond the standard 8-5 day, to isolate workstations/servers that are deemed to be a risk.

- **Account Management:** ITS manages the account maintenance process for enterprise systems including Banner, Blackboard, Email and file systems access. ITS supports client authentication by maintaining the Account Creation process and Self Service Password Reset process. A new enhanced version of Account Creation was developed this year to provide clients the ability to verify the spelling and format of their name prior to account creation to minimize the need for account renames within the Lotus email environment. LDAP authentication services are provided for application access minimizing the need for additional username or passwords. Client developers are working with ITS to develop web applications to utilize the LDAP authentication.

- **Enterprise Patch Management:** ITS has completed a project to deploy an enterprise patch management solution to ensure that the PC’s in the laptop program are up to date with the latest patches and virus updates. Service will be improved by a reduction in downtime resulting from issues related to viruses, worms and other malware.

- **SQL Cluster Environment:** ITS deployed a clustered SQL server environment that enabled separation of private data from public data, securing departmental and private data for clients. In addition to the separation of data, the cluster environment provides failover capabilities for a zero downtime solution. ITS allowed the SQL server cluster to be accessed by non-ITS departments and developers to increase flexibility for these groups. This allows them to have full access to their SQL database space for development and production.

- **PCI Compliance:** UNCG has identified 12 entities with merchant numbers which need to achieve Payment Card Industry (PCI) Data Security Standard compliance. ITS is partnering with the primary campus contact in Cashiers and Student Accounts to work with contact representatives of the areas for which the merchant numbers were obtained. This group has met and understands the breath of the PCI compliance program and UNCG commitment to obtain compliance. UNCG has met most of the data security requirements but still needs to institute background checks on all employees with access to credit card numbers to be compliant.
• **Student Copyright Compliance Training:** Presentations to students during SOAR and Open House, and the ITS-produced Student Computing at UNCG handbook, all educate students on the DMCA, appropriate use of computing resources, and security policies.

• **DSMETER:** ITS implemented DSMETER, a product that provides detailed file system activity logging and auditing to aid in HIPAA compliance regulations.

**Capacity**

• **Cisco Wireless Access Point Manager:** ITS completed a project to provide central management of wireless access points and detect wireless rogue AP’s and rogue wireless intrusion devices in the UNCG controlled airspace. This service results in higher availability for wireless service and provides advanced troubleshooting and planning tools.

• **Expanded Wireless Service:** Wireless service is now provided to space adjoining the UNCG campus at Tate Street and Walker Avenue where UNCG administrative offices are housed.

• **Increased Disk Space:** ITS increased the available disk space on the campus storage area networks to enable provision of additional space to departments upon request. A funding model and a revised quota model was developed to meet the demand for extra disk space.

(C 2.3) Make UNCG a Web-enabled campus, using the Web as a regular means of doing business and providing service to students, faculty, staff, alumni, and the community.

**Web Development and Oversight**

• **Unit Website Requirements:** ITS has worked under the direction of the Web Oversight Committee to provide consulting for departments wishing to comply with the Unit Web Site Requirements as well as the University’s Accessibility Policy.

• **Web Developer Certification:** ITS has worked with the Web3 Committee to develop and deliver the overall program as well as the specific training modules for the UNCG Web Developer Certification Plan.

• **New Web Positions:** ITS has created and filled 2 new staff positions dedicated to the support of web development and textual analysis.

• **Web SSL Certificates:** ITS provided coordination and consultation with clients in the purchasing of 33 SSL certificates for securing transactions of web applications during 2005-2006.

**Enhanced Web Based Services**

• **Spartan Orientation Advising:** ITS developed enhancements to the Spartan Orientation Advising and Registration (SOAR) module within UNCGenie, providing better service to students registering for orientation and adding administrative capabilities for Orientation Office staff.

• **UNCGenie On-Line Applications to Graduate:** ITS has coded enhancements to UNCGenie to permit graduate students to apply to graduate over the web, similar to the process used by undergraduate students.

• **People Admin Support:** ITS has provided guidance to Human Resources as they implement the remotely hosted People Admin product which will streamline and automate the web based recruitment process for SPA positions.

• **T2 Parking System:** Parking Services purchased a new parking management system (T2) last year, for which ITS hosts the application and database. ITS also provided enhanced interfaces, facilitating implementation of a new online ticket purchasing and appeal system.

• **Internet Native Banner (INB):** ITS completed full production implementation of Internet Native Banner. By delivering the core Banner administrative functionality via a web browser INB supplants the prior requirement for client-server based forms.

**ITS Website Re-Design:** ITS has re-architected its web presence to provide greater functionality and usability to the UNCG client community. Information has been updated and expanded in an effort to provide a single, current, recognizable source for ITS communications.
- **University Policy Manual**: As a part of the ITS Web Site project, ITS has updated the University Policy Manual to adhere to the Unit Web Site Requirements. The global navigation for the Policy Manual has also been updated to be more accessible.

(C 2:4) Maintain UNCG’s status as an Information Technology Management Flexibility campus, and comply with appropriate federal and state technology standards.

**Information Systems General Control Audit**: During the period October 11, 2004 through November 4, 2004, the Office of the State Auditor conducted an Information Systems General Controls audit at UNCG. The Associate Vice Chancellor for ITS Data Services coordinated the Internal Auditors’ required follow-up review during the first quarter of calendar year 2006 with ITS management and staff. In a letter dated March 31, 2006, the Internal Auditor issued an opinion that the University continues to comply with the recommendation of the State Auditor.

**CORNERSTONE #3**

**Administration:**

*Use effective policies and processes to deliver services to the University community.*

(C 3:1) Maintain accountability and fiscal integrity over all financial operations to include clean audits / unqualified opinions and no major audit findings.

- **Harbor Payments/Expense Path**: ITS has supported implementation of credit card reconciliation software (Harbor Payments/Expense Path) that will enable the University to implement appropriate financial controls for purchasing cards.

- **Banner Finance**: The Banner Finance Project (and related ancillary systems implementations outlined below) will be the technological foundation for the accountability and fiscal integrity of UNCG’s financial operations.

(C 3:2) Upgrade and improve the functionality and efficiency of administrative systems and processes.

- **Banner VMS to Unix**: ITS completed the move of the Banner system from VMS to Unix with an implementation which provides a higher level of availability of Banner to clients, with duplicate hardware configured in separate machine rooms designed to permit clients to reconnect and resume work within minutes should there be a failure of the primary system.

- **Banner 7 Upgrade**: ITS has completed a major upgrade to Banner 7. This effort involved new technical tools for ITS staff, as well as changes in functionality within Banner. It also required large scale collaboration between long time users of Banner Student, Financial Aid, Accounts Receivable, Advancement and General Modules and the client offices implementing Banner Finance.

- **Operational Data Store (ODS)**: ITS worked collaboratively with clients to implement SunGard’s Operational Data Store (ODS). The ODS will be available in the production environment on July 1, 2006. ODM has worked closely with Finance clients to identify data gaps in the baseline ODS and has made significant progress in enhancing the finance component of the ODS to meet reporting needs. Critical customizations for Banner Finance implementation have been completed. Customizations for other Banner modules will be undertaken in 2006-2007FY.

- **WebFOCUS Connection to Operational Data Store (ODS)**: ITS staff developed a method for dealing with an issue connecting WebFocus with the ODS. This method was adopted by the vendor and the solution provided to other UNC Alliance schools, and has been shared directly with two other universities who are dealing with this problem.
**AppWorx:** ITS created over 29 ODS nightly refresh chains in AppWorx to schedule over 512 ODS objects. These chains were created in a manner that (1) gives us the abilities to do restarts and recoveries in a robust manner, (2) is faster and more reliable than using the SunGard provided scheduling capabilities, and (3) provides an efficient predecessor to use for scheduling WebFOCUS reports to execute.

**Data Conversion and Report Writing:** ITS devoted significant efforts to data conversion, report writing and custom development to support the implementation of the Banner Finance system and conversion from the legacy FRS system. Highlights include: development of a method to calculate fixed assets depreciation that has been adopted across the UNC system among Banner Schools, development of real time web based budget queries with summary and drill down capability, and development of an automated budget flexibility system. ITS has worked collaboratively with Finance clients to understand and configure the Banner system to meet UNCG’s business needs.

**Data Mapping:** ITS produced a comprehensive data lineage of data elements used in reporting from the legacy FRS system to Banner and from Banner to the Operational Data Store. This data mapping will help both report writers and report consumers understand the data and will accelerate the process of report creation.

**University Reporting Standards:** An ITS staff analyst chaired a committee that developed University reporting standards. These standards are independent of reporting tool and address report naming conventions, formatting, use of abbreviations, documentation, and other report elements. The standards will promote consistency and clarity for the benefit of report writers and report consumers.

**Banner Accounts Receivable:** ITS implemented Banner Accounts Receivable 6.2 which permitted UNCG to comply with regulatory requirement changes for the production of 1098-T statements.

**NC Accounting System Extracts:** ITS has implemented and provided operational support for the North Carolina Accounting System Extracts with Unified Data Mart supplements for the legacy FRS system. This initiative has been mandated by UNC General Administration. Additionally UNCG has installed the equivalent processes within Banner Finance to support continued reporting of data once Banner Finance goes live.

**Shared Services Alliance:** ITS installed and tested on behalf of the Shared Services Alliance customized Banner software relating to the processing of financial aid grants from College Foundation of North Carolina (CFNC). The Assistant Vice Chancellor for Management Information Systems serves as UNCG’s Banner Project Lead to the Shared Services Alliance.

**Financial Aid Regulatory Upgrades:** ITS performed multiple Financial Aid Regulatory upgrades (6.7, 6.8.1, 6.9, 7.4, 7.5). Timely application of these upgrades permits UNCG to annually be among the first within the UNC System to issue award letters to aid applicants each spring, while maintaining compliance with Federal regulations.

**Academic History Records:** ITS has revised programs to more completely automate the process of updating academic history records when undergraduate students change from one degree program/major to another.

**Banner Eligibility Flags:** ITS provided enhancements to programs to flag certain student groups of students as being ineligible to register for the next term. This reduces potential for awarding aid to ineligible persons.
Integration of Telephone Services into ITS: With the convergence of telephone and data imminent, ITS reorganized telephone services as a part of the ITS organization while keeping their budget and cost recovery separate.

Administrative Systems Project Estimation: ITS has undertaken steps to formalize project estimation, with the goal of providing divisional priority determiners the relative size and staff time costs associated with a specific project. This should result in more judicious evaluation of priorities and consideration of the relative trade offs of doing one project vs. another.

(C 3:3) Provide essential support services to the campus.

High Availability Campus Network: UNCG ITS maintains a high performance, high availability network that is able to withstand the loss of one of the two data centers. Our metropolitan area network (MAN) consists of more than 700 network switching devices, and over 23,000 network access ports. The metro-network serves more than 7,000 desktop workstations and printers throughout the campus, transmitting 600 – 900 Gigabytes of data each day.

High Availability Enterprise Applications: UNCG ITS maintains an industry-standard high-availability environment for our mission-critical enterprise applications. Both the Banner and the Blackboard learning management system (scheduled to go live during the summer of 2006) are designed to have sufficient computing capacity to meet peak demand and to have sufficient redundancy in components to survive the complete failure of one of our two campus data centers and still meet average demand. ITS has implemented a “semi-transparent” failover solution for these two critical enterprise applications that allows recovery of services within minutes.

Service Desk: UNCG ITS maintains a staffed professional Service Desk that provides a vast array of critical technical support services to the University’s faculty, staff and students. In the last 12 months, the ITS Service Desk staff handled 30,878 incidents, 63.6% of which were resolved on the first call.

Mail Frontier: The Mail Frontier anti-spam/anti-virus gateway has been a cornerstone in alleviating the bottleneck of spam email for the UNCG community. For the 12 months prior to May, 2006, UNCG received more than 557 million emails of which 424 million were filtered as junk or spam and not delivered. The remaining 24% of email received was delivered to users. The web interface found at http://spamcontrol.uncg.edu provides individual users the ability to set their personal tolerance for determining the likelihood that an email is spam. ITS provides direct support to clients who have concerns about the functionality of the filtering system. ITS is presently analyzing the latest hardware and software offering that will provide enhanced features at lower cost than the previous solution from the Mail Frontier vendor, now Sonic Wall, for implementation by year end.

WebFOCUS support: A new Memorandum of Understanding was developed for the support of WebFOCUS and three new staff were added to ITS in support of this application.

Touchnet Payment Gateway (Credit Card Processing Server): New server hardware was purchased and installed to meet the demands for use of credit cards and to allow for an upgrade to the Touchnet Payment Gateway. The new software allows for more security and flexibility for the Cashiers office in support of accepting credit card payments. The older hardware has been maintained as a cold backup should the production server fail.

Operational Data Store (ODS) Consulting: ITS has held numerous ODS open labs, where Finance clients and ITS staff work together collaboratively to become familiar with ODS data, identify reporting data gaps, find and share data and reporting solutions, and complete Finance reports. These have been held periodically throughout the year and increased in frequency to a bi-weekly basis from late March through the end of July.
Develop, implement, and maintain relationships, policies, procedures and programs that make for a safe and accessible campus.

Late Night Lab Staffing: The late night computer lab in Bryan 213 continues to be staffed during all evening hours to promote security.

Accessibility: Assistive technology software is available on all lab computers, and specialized hardware associated software is available in the SuperLab and Bryan 213, to meet the needs of students with physical and/or learning disabilities. All labs are assessed to ensure wheelchair accessibility to computer workstations and printers.

Maintain a personnel system that meets the needs of the University and the staff.

HRS to Banner Interface: ITS has worked on enhancements to the HRS to Banner interface that, when completed, will more accurately and efficiently reflect employees’ status in Banner supporting greater accuracy within the web-based Campus Directory, the assignment/de-assignment of computer accounts, and faculty status updates for assigning instructors to courses.

HRS to Banner HR Conversion: During the 05-06 fiscal year, ITS hired an additional staff member to assist with conversion of HRS to Banner Human Resources. This staff member has received preliminary Banner HR technical training.

Support for FRS and HRS Plus System: Batch jobs continue to be run at the Service Operations Center in support of the legacy Plus systems. The disk space freed by moving Banner to Solaris has been repurposed to the Plus systems allowing for older disk arrays to be surplused and allowing the repurposing of electricity in the Forney machine room. ITS continues to apply critical maintenance updates to the HRS system and provides operational support for monthly payroll processing, monthly benefits/retirement processing, federal tax reporting, and annual W-2 production.

Implement University planning and research.

Planning Initiatives: ITS projects and initiatives are linked to the goal clusters within The UNCG Plan 2003-2008.

Monitoring Planning Efforts: An interim committee of the University Planning Council met to go over the metrics and progress made towards goals of The UNCG Plan 2003-2008.

Enhance and maintain the security of legally protected information.

HIPPA Compliance: ITS continued follow up coordination with the compliance efforts of the University units (covered entities) subject to HIPAA Security. Four meeting of the Security Rule Implementation team were held during the year. ITS developed a HIPAA web site, which was launched in February, to provide information concerning the law. ITS HIPAA Security Compliance Recommendations were completed and published on the web. ITS reviewed three Business Associate Agreements for University units and consulted with University Counsel to create a standard Business Associate Agreement.

Digital Millennium Copyright Act (DMCA): ITS continued to improve procedures to respond to alleged copyright violations as required by the Digital Millennium Copyright Act (DMCA). ITS processed 109 (107 student and 2 staff) complaints from copyright owners or their agents. This is a 32.3% decrease in complaints from the previous year. In October 2005, an article, “Copyright Owners Serious about Illegal File Sharing,” was published in the ITS newsletter, Technology at UNCG. ITS began development of procedures to respond to any violations that may be detected on laptops connected via the wireless
network. ITS met with ResNet and Student Affairs staff to discuss DMCA requirements and procedures. ITS developed a DMCA web site, which was launched in February. In May, a statement on DMCA was developed for the 2006-2007 ITS Student Computing Handbook.

NC Identity Theft Protection Act: To ensure compliance with the NC Identity Theft Protection Act, ITS compiled an inventory of applications that use the Social Security Number as the identifier and developed a proposal for projects to convert applications to an assigned University ID. In coordination with users of administrative systems across the University, ITS began three projects to plan and execute the transition to generated University ID numbers for all students, faculty and staff. These projects, once complete will eliminate use of the Social Security Number as a primary identifier and further restrict use of SSN for only legally mandated purposes.

Electronic Records Retention Policy: ITS worked with University Counsel and the Records Management Office to develop the Electronic Records Retention Policy that replaced the E-Mail Retention Policy.

Records Management: The Records Management office worked with other UNC Records Officers to complete an updated draft of the UNC System General Retention and Disposition Schedule. The schedule includes instructions for the care and management of legally protected records.

University Data Classification Policy Procedures: ITS is developing procedures, in support of the Data Classification Policy, for the establishment of a formal data governance program. These procedures establish a structure for carrying out University data policy related to data resource management, data classification, data access, and data quality. Resources are also provided regarding relevant laws and regulations.

Restricted Data Use Guidelines: ITS developed Restricted Data Use Guidelines to assist ITS staff in handling restricted University data. ITS technical staff have been trained in procedures involving client data backup and other types of data handling.

“Hardened” Windows Software Image: ITS has developed a Windows XP image with additional security controls (“hardened” image) to be installed on client computers that process restricted data.

Virtual Private Networking (VPN): ITS implemented a Virtual Private Networking (VPN) service that is available to users who need end-to-end encryption for transmission of restricted data from off-campus (non-secure) locations or over wireless. This service allows faculty and staff to securely access restricted data using non-traditional network connections, such as working on Banner-related job tasks from remote locations and running Banner-enabled SOAR sessions from any location on campus.

Data Use Compliance: In Spring 2006, ITS established a new temporary position to ensure that data is securely erased from surplus computers at the warehouse. In May 2006, the contributions of this employee were recognized by warehouse staff who noted a remarkable reduction in the backlog of equipment to be processed before sale or reassignment.

CORNERSTONE #4
Facilities:
*Build and maintain high-quality facilities that permit good academic and support programs to operate.*

(C 4:1) Design and construct new and renovated facilities on schedule and within budget.

Building Renovations: ITS has played an instrumental role in the success of the campus bond renovation projects by providing timely services in the design and installation of secure, scaleable,
dependable, and thoroughly documented data and voice infrastructure for each building wiring project. During this year there was major design and construction work done in Forney, McNutt, Studio Arts, Humanities, McIver, New Residence Hall, Gove, McIver Street Realignment (including 1100 West Market St), Stone 29 wing, Library Connector, Softball stadium, Petty, Aycock, Oakland Deck Addition, Brown, Alumni, Ragsdale-Mendenhall, Weil-Winfield, and the Wireless projects.

**McNutt Building Bond Renovation:** ITS has been actively involved in the McNutt building bond renovation project. The McNutt building has just had the building renovation project bid awarded. This building design involved a re-purpose of the building from a public open library space to a data center with staff offices.

**Forney Building Bond Renovation:** ITS has been actively involved in the Forney building bond renovation project. The Forney building bond renovation is at the design development phase of renovation and presents operational challenges to the University. The Core Distribution Facility (CDF) that exists in Forney is one of four primary end points for fiber between CDFs and a primary fiber collection point on campus for twenty buildings. This CDF will need to be relocated within the building and kept functional during the building renovation. Between now and the opening of the McNutt data center this building contains the primary campus machine room and needs to be kept operational.

**Bond Move Technical Support:** In support of the Bond Building Projects, ITS has hired an additional temporary employee dedicated to provided technical support to clients during their move times. ITS has a cross-division project run by the ITS Project Management Office to help meet client technical assistance and networking needs during the Bond moves.

**Data Center Study:** ITS has worked closely with Facilities and an external consulting firm over the last three months to conduct a long-term Data Center Study that will develop a needs assessment and strategic data center plan for UNCG. ITS has funded this study and is working in partnership with Facilities to ensure that the consulting firm has adequate data to provide timely and meaningful recommendations for moving forward.

**HHRA Lab:** ITS has worked with Facilities to open a 34-seat lab in the HHRA building and in planning a lab in the renovated Petty building.

**C 4:5) Manage University space, including use of accurate and detailed space management data.**

**FAMIS (Facilities Management Information System):** ITS worked in close partnership with AAF and the Office of Space Management to develop a strategy to assist the OSM in becoming self-sufficient with regard to the operation and application administration of the FAMIS space management system. ITS continues to manage the database and operating system on the servers in support of the FAMIS application. FAMIS was moved to new server hardware in preparation for an upgrade of the software.

**Space Planning Short-Term:** ITS worked with the Office of Space Management to identify and plan for office space for ITS staff that will be moved to McIver during the renovation of McNutt and Forney buildings.

**Space Planning Long-Term:** ITS developed the ITS Space Planning 2006-2010 report. ITS met with the Office of Space Management to discuss space needs for staff and facilities during the period 2006-2010.

**TeleLearning Space Enhancements:** In conjunction with Physical Plant, enhancements were made to increase the operational effectiveness of equipment in the new Telelearning Center location in the Stone 1929 wing.