Questions Being Explored
April 13, 2007

IT itself: What kinds? Integrated how?

1. Network infrastructure (cabling, switches, routers, tunnels, closets)
   NC State owns a campus ductbank system and buildings are inter-connected via fiber. Over 95% of buildings have either CAT5 or CAT6 cabling internally. Approximately 1600 network devices in 430 telecom closets provide data connectivity.
   Supports ~50,000 data connections. Wireless nomad network 2006-07: Can support 8750 simultaneous users; strong authentication ResNet: All ~7000 students in on-campus housing with port/pillow network access; over 95% campus buildings with fiber optic connection to network backbone; 100%classrooms have high-capacity network connections; Internet usage 2006-07:
   Average peak monthly load - inbound - 315Mbps; outbound - 447 Mbps

2. Telephony (sets, carriers, voicemail, call direction)
   Student phones become optional in Fall ’07, approximately 10,000 administrative Centrex lines via BellSouth with about 25% p-phones and 75% analog lines. An aging Octel voice-mail system will be replaced by unified messaging no later than 2010. Analog lines are currently being converted to IP Telephony over the next 24-30 months.

3. Data-network services (email, directories, network storage, calendars)
   ITD provisioned 49,234 Unity accounts in 06-07; provides authentication (login/access) services for administrative and academic data/resources access, email to all students faculty and staff, and 300 MB file storage; Unity WebMail used by up to 23,000 individuals a day. Campus email relays handle average of : 24,181,180 messages handled/month (YTD12/06). University administration (~3,000 users) uses GroupWise version 7 for integrated e-mail and calendaring.
   Network storage is provided via Novell file services.

4. Wireless networks (coverage, capacity, accessibility, security)
   Wireless is viewed primarily as a convenience network complementing the wired network. A secondary “instructional” use is seen increasing use but pales in comparison in terms of numbers of users. Approximately 650 access points deployed to date provide coverage primarily to classrooms and study areas. Comprehensive coverage of at least 11 Mbs is only about 30% complete but perception is much higher as lower rates are often usable for casual web surfing.

5. Data center(s), machine rooms
   3 Data Centers. Mission-critical machines monitored 24 x 7 x 365: ~ 500 servers, 2 enterprise servers (Sun E25s), 1 mainframe; Average number “batch” processes monitored (financial, payroll, etc): ~650/day

6. Servers, mainframe(s), storage-area networks
   The administrative environment is comprised of one (1) IBM 3083 mainframe (for legacy Student Administration system currently being converted to PeopleSoft); two (2) Sun E25K high-end servers (for PeopleSoft ERP environments – HR, Financial, Portal & Student Information System); and 400+ Unix/Linux and Windows servers that provide a variety of functions such as application/web/batch functions for the ERP and web application environment, database services, secured encryption, departmental hosted applications, mail relays, email/calendaring, SPAM filtering, virtual hosting, remote access, and etc.

   The administrative ERP and high-end systems use a pair of Sun-Hitachi 9980 devices along with Network Appliance network storage devices that exists in both data centers for redundancy and fail-over. A Dell EMC Clarion CX700 storage area network is shared jointly between the central...
academic and administrative units for storage needed for email/calendaring, archives, and general files. Colleges and departments are charged for exceeding the distributed quota of storage.

The Academic environment is comprised of 200+ Unix/Windows/Linux servers that provide applications/web/database services/authentication/email/calendar/file and print services. Number desktops using ITD-provided environment/kits: Windows (WolfPrep): ~1700; Mac: 760; Unix: 396; Linux: 865

7. **Personal computers, workstations, notebook/portable computers**

RMIS, ITD and individual colleges/departments support a wide variety of personal computers, workstations, and notebook/portable computers. A campus vendor standard does not exist for these devices. However, the central IT organizations provide guidelines and minimum configurations via the following websites:

a. Administrative: [http://www.ncs.ncsu.edu/cs/data/hardware_software.html](http://www.ncs.ncsu.edu/cs/data/hardware_software.html)

b. Academic: [http://www.ncsu.edu/it/essentials/your_computer/](http://www.ncs.ncsu.edu/it/essentials/your_computer/)

NC State is building a next generation cyber-infrastructure call the Virtual Computing Lab (VCL) which provides time, place, and platform independent access to a very broad range of research, enterprise, professional, and commodity applications. VCL computing services can be effectively delivered to thin client devices.

8. **Small devices, smartphones, PDAs**

Users can receive support for a variety of PDA devices via the central IT organizations and individual college/department IT support staff. Official support for blackberry devices for administrative users can be found at url: [http://www.ncs.ncsu.edu/cs/data/blackberry/](http://www.ncs.ncsu.edu/cs/data/blackberry/).

VCL can deliver other low to very high-end application services to mobile devices limited in most cases only by the device display capabilities.

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② **IT organization:** What is a central responsibility? A departmental responsibility? Where is there collaboration, overlap, competition, duplication?

1. **Instructional systems & support**

NC State uses two learning management systems, WebCT Vista and an in-house product called WolfWare. Implementation of Moodle and/or Sakai is being considered. VCL is rapidly becoming the dominant underlying delivery architecture for instructional applications and services. Distance Education and Learning Technology Applications (DELTA) provides instructional technologies and support for faculty campus-wide; [http://delta.ncsu.edu/](http://delta.ncsu.edu/); ITD provides the university's "homegrown" course management system, Wolfware ([http://wolfware.ncsu.edu/](http://wolfware.ncsu.edu/))

2. **Research technologies**

NC State has a two pronged research computing strategy—provide intermediate level high performance computing locally (80-90% of total requirement) and use national lab resources for real supercomputing work. In support of this strategy NC State has made significant strategic investments in networking; for example, the consortium of UNC-CH, Duke, and NC State is one of the fourteen founding/core NLR groups. VCL is a highly evolved research computing architecture in which computational resources can be dynamically moved among the four core service categories. NC State’s research computing partnership program delivers such compelling value that deans, department chairs, and researches are strongly supportive of the centralized service. The Department of Defense was sufficiently impressed with the value proposition that they reversed a standing policy and allowed grant funded hardware to be placed in the shared use VCL environment.
3. **Administrative systems**
   Implementation, enhancement and maintenance of the administrative systems are, in general, centralized functions provided by RMIS in collaboration with functional central offices (Accounting, HR, Registration & Records, etc.) and Academic IT units (ITD, college IT offices) and at the direction of customer-driven steering/management teams. However, some Student central offices run their own administrative applications or have externally-hosted applications that interface with the RMIS-supported systems (examples: the Financial Aid system and the Graduate and Undergraduate online application processing systems). There are also “shadow” systems run by some college IT units to meet college/department-specific needs (example: Engineering’s Graduate Tracking Application) but, in general, there is little/no overlap, competition or duplication of administrative system support.

4. **Desktop support**
   Desktop support is provided both at the central and departmental/college level. The University only provides recommendations at the central level (see information in 1.7 above). Individual colleges/divisions generally standardize within their own entities. The administrative IT unit (RMIS) coordinates desktop support (approximately 3,000 users) via a LanTech program that is described via a service level agreement: [http://www.ncs.ncsu.edu/cs/data/dept_docs/SLA.html](http://www.ncs.ncsu.edu/cs/data/dept_docs/SLA.html). ITD provides desktop support for 335 workstations in Unity computing labs and the 20 kiosks available across campus.

5. **Help desks**
   The NC State University Help Desk, part of ITD, provides helpdesk services to the entire NC State community. The Help Desk provides Tier I and some Tier II support services for ITD’s services, provides Tier I support services for a wide variety of technology organizations at NC State, including DELTA, ClassTech and the NCSU Libraries. Designated as the university’s default help desk in 2003, the NCSU Help Desk provides a gateway to the other help desks at NC State. [http://help.ncsu.edu](http://help.ncsu.edu).
   
   RMIS has a consolidated help desk to provide assistance to 3,000+ customers using the RMIS provided desktop services and the entire campus community that accesses a variety of administrative applications, data and tools. Both central IT help desks work collaboratively to provide assistance to the campus community. All university help desks use Remedy for tracking help desk calls.

6. **Security policy & enforcement**
   Security policy and enforcement is a central responsibility that is closely coordinated between both central IT organizations with input from the Office of Legal Affairs and Internal Audit. There is a Security Subcommittee within the University IT (UIT) Committee that is chaired jointly by RMIS and ITD with college/division representatives. The UIT Security subcommittee ([http://www.ncsu.edu/security/secsub/](http://www.ncsu.edu/security/secsub/)) recommends policy that is approved and enforced by upper administration. Examples of recommended policy from the UIT Security subcommittee are: Data Management Procedures ([http://www.ncsu.edu/policies/informationtechnology/REG08.00.3.php](http://www.ncsu.edu/policies/informationtechnology/REG08.00.3.php)) and Password Guidelines/Standards (currently being developed). Education of the campus community regarding security mandates, rules and regulations is performed jointly by the central IT organizations.

7. **Software licensing**
   ITD coordinates the University IT Software Subcommittee and provides central software negotiation, licensing and purchasing services: [http://www.ncsu.edu/software/](http://www.ncsu.edu/software/)
IT funding: What is funded centrally? Departmentally? Through recharge? By outside funds?

1. Expenditure mix (hardware, software, maintenance, services, salaries, benefits, space) See item 7.2 below.

2. Salary levels, equity, competitiveness
   Senior IT leadership, i.e., directors and assistant/associate directors, are EPA (Exempt from Personnel Act) employees are below those at UNC-CH and below the compensation levels paid employees in the business community.
   Of the remaining 478 classified positions (SPA—Subject to Personnel Act), NC State salaries average 9% below the state market value (65% are more than 5% under market rate). Note that anomalies in the classification structure (operators, systems programmers and database administrators being classified under the same job titles) cause some highly technical positions to appear over market rate when in reality they are not. Also, market rates are for the entire state, however, the Research Triangle Park is a recognized technology-rich area and thus Triangle market rates tend to be higher. Thus, NC State salaries for classified personnel are on average more than 10% under the local market rate.
   Salaries also differ significantly between campus units although at least some of this is to be expected given differences in levels of responsibility within similarly classified positions.

3. Economies of scale
   In response to the UNC President’s initiative on efficiency and effectiveness (PACE) NC State is in the process of submitting a far-reaching proposal to implement VCL as the core cyber-infrastructure for not only the UNC system, but NC public education and beyond. The economics of VCL are compelling! It is very highly scalable—achieving a level of integrated software, hardware, and operation with the potential to provide an order of a magnitude (10X) improvement in infrastructure efficiency and effectiveness over current models. This estimate is based on review and assessment of results to date in applying VCL to high performance computing and student computing and projections working with partners IBM and SAS.

4. Budget request & approval processes
   NC State University operates in a very decentralized environment for budgets as well as academic programs and IT services. Each college and major division (Provost and Vice Chancellor level) of the University has a budget that is basically “base plus.” That is, the college or major division has whatever funds it received in the prior fiscal year on a continuing basis with annual adjustments made for personnel compensation adjustments, budget reductions (which have occurred fairly often until the past two years), and specific allocations from either the Provost or the Chancellor through the CFO. The University’s Compact Planning process is intended to provide the mechanism for requesting and allocating new funds. The Compact Planning processing for 2007-10 is in its early stages. The current compact plan for 2004-07 for the administrative IT division (Resource Management and Information Systems-RMIS) appears here - [http://www.ncs.ncsu.edu/rmis/data/rmis_compact_plan.html](http://www.ncs.ncsu.edu/rmis/data/rmis_compact_plan.html); the academic IT division (Information Technology Division-ITD) appears here [http://www.itd.ncsu.edu/about/documents/ITD-CmptPlan-March06.doc](http://www.itd.ncsu.edu/about/documents/ITD-CmptPlan-March06.doc)

The University System requests funds for the constituent institutions through the state's biennial budget process (2007-09 is before the General Assembly at this time) that includes a continuation component (what do you need next year to do what you did in the prior year and to accommodate enrollment change), personnel compensation (salary and benefits) adjustments, new/expanded program thrusts, and capital improvement projects (bricks and mortar). In addition, the University Board of Trustees may recommend tuition increases of up to 6.5% with the funding retained and spent by the University in these primary areas: faculty salary equity, enhancing course availability or size, student-centered activities, and financial assistance for undergraduate and graduate students. The enrollment change portion of the budget request process generates the only significant funding to help address new and existing IT initiatives. Much of the one-time investment in IT occurs when the Provost and CFO allocate one-time funds in the late
Winter/early Spring from available reserves or in the Summer from funds carried over from the prior fiscal year. A preliminary draft of the next six year IT funding requirements is being developed, although most of what is currently displayed are from administrative IT (RMIS). When finalized to include the academic IT requests, the schedule will be maintained and reviewed with the Provost and CFO during the quarterly IT update meetings.

IT governance: Who sets the overall priorities for IT on the campus? What advisory committee structure currently exists? Who reviews the overall performance of IT on campus?

Ultimate authority rests with the Chancellor, with the Provost and the Vice Chancellor for Finance and Business working together to advise the Chancellor on global campus IT decisions and priorities. Most often, however, the administrative and academic IT decisions are made separately by these two Executive Officers in consultation with their primary IT leaders, Sam Averitt and Steve Keto. When appropriate they seek the advice and counsel of the other Executive Officers, Deans and college IT leaders.

An advisory committee exists. The University Information Technology Committee has been charged with facilitating the development of campus-wide strategies that will continue to improve the university’s delivery of information technology (IT) services to the campus for administrative and academic purposes. The committee reviews current implementation of information technology, recommends appropriate university-wide computing standards to maintain the currency of IT on the campus, and serves as a primary communication liaison among NC State colleges and central IT service providers. University academic departments and colleges are "free to choose" the computing hardware and software that best meets their needs within the approved baseline standards. The committee's recommendations are presented to the Provost and to the Vice Chancellor for Finance and Business, and when appropriate, to the Chancellor for final approval and implementation.

None of the Trustee committees is specifically charged with IT oversight, but the Audit, Finance and Planning Committee would handle most IT related decisions requiring trustee involvement.

IT issues: What are the current strengths and weaknesses of IT? What challenges lie ahead?


The University is challenged with educating the campus community for responsibility of securing sensitive data and information. The Data Management Procedures Regulation contains a Data Classification Statement that categorizes the data into security levels: high, moderate, and normal. The central IT security organizations are cooperatively developing and issuing further regulations and guidelines for identifying and securing the data within each level. The central IT organizations have a strong relationship with the University’s Internal Audit department who provides guidance and input into IT projects and audits for compliance of security rules and regulations. Current and future target security provisions are being developed for the administrative environment based upon ISO 17799 - the International Standard Organization IT Security Techniques – Code of Practice; Control Objective for Information and related Technology (COBIT); and FIPS 800-53 Recommended Security Controls for Federal Information Systems. These standards and procedures will be expanded to create a campus-wide information security plan.
Security mandates and regulation compliance such as PCI, HIPAA and SSN requirements continue to be challenges, as implementation must occur on top of already scheduled projects with tight deadlines and minimum resources. The implementation of the PCI DSS security standards for our credit card processing involved 81 credit card merchant accounts across the University all of which are now PCI compliant or inactive. The project involved setting up a secure data network, moving merchant account servers into a secure data center environment, physically separating internal credit card Web server and database processors and encrypting data, both at rest and during transmission. The central IT Security organizations have representation on the University Privacy Committee, which is chaired by the Office of Legal Affairs, and ensures compliance with the NC State Identity Theft Act, including strong social security number protection and other Personally Identifiable Information provisions. We have a small number of units that fall under HIPAA requirements that we continue to monitor to ensure compliance.

A few NC State students have been targeted by RIAA. RIAA compliance is being communicated to the campus community and we work with the Office of Legal Affairs in this matter. CALEA is being closely monitored and will have a huge impact depending on the outcome.

2. **System integration (single sign-on, data replication)**

NC State's identity management initiative, the I AM Initiative, is a collaborative effort of ITD and RMIS. The initiative focuses on several key areas:

1. Processes for securely handling identity information for university affiliates
2. Policy infrastructure to ensure confidence in the university's identifiers
3. Technologies to implement identity-related policies and processes

A key participant in the Student Information System project, the I AM team is currently focusing on enterprise authentication and affiliation management strategies. This project is expected to address reduced sign-on, along with many other authentication, authorization and provisioning requirements for the University. In the meantime, the Password Standard is codifying, standardizing and extending password use across the university. The University also has an automated workflow approval system for routing and approving management requests for data access and functional roles associated with all of our administrative applications. Approved roles are recorded centrally, and user management verifies actual current roles by individual semi-annually.

3. **Collaboration and/or tension among IT-providing entities (among central groups? With departmental groups? Libraries? Research groups? Corporate partners?)**

There is a sense of collaboration between the two central IT organizations. The collaboration has increased due to joint ventures such as procurement of a shared Storage Area Network (Dell EMC Clarion CX700) and tape library system. The implementation of the Student Information System (PeopleSoft) requires both groups to work collectively to provide a seamless student system for the students, faculty and staff. Implementation of virtualization technology is actively being deployed and researched jointly and is creating a significant paradigm shift in the architecture of the administrative IT infrastructure. In particular, consolidation of server and desktop hardware into blade centers that can be centrally managed to a great extent as well as enhancement of our collaborative storage systems is being investigated and implemented as appropriate to best leverage limited human resources and hardware capital.

Other examples of collaborative initiatives between Academic and Administrative IT staffs include: the creation and synchronization of various login credentials, the implementation of the university portal, the creation of the centralized help desks, the implementation of the Campus ID (CID) system and various security-related initiatives (firewall implementations, etc.).

General IT support for the campus is decentralized. The Library, Distance Education and Learning Technologies Applications (DELTA), and each College has its own IT staff that provides
desktop, server and application support specific to that entity. All IT entities come together under the auspice of the University IT Committee (http://www.ncsu.edu/it/uitc/) to discuss and recommend strategies for providing effective administrative and academic computing to the campus community.

Development of a Project/Portfolio Management Office to assist with collaboration, standard project management methodologies, and resource leveling to align the correct projects with the appropriate resources is underway. The outcome of this effort is targeted at improved morale, higher project satisfaction, reduced costs from the lack of duplication of effort, better cost tracking, and organizational assets from our lessons learned.

Long ago ITD made the decision to create a cohort of IT engaged faculty by providing funding for direct participation and contribution to IT initiatives has resulted in strong campus links, better outcomes, and mutual respect and empowerment. Much of the tension among campus IT units is a byproduct of rapidly changing technology and requirements superimposed on the struggle between a need for controls and a core imperative to empower innovation, experimentation, and the process of discovery.

4. The student experience (online registration, etc? instructional-management systems? Library reserves? Media classrooms? Privacy? Facebook?)

RMIS performs electronic satisfaction surveys after major implementations such as our recent Financial System upgrade. The Financial survey is still in progress but of the 59 responses received so far, we have a customer satisfaction rating of 89% (i.e. when asked to rate the ability of the Financial System to meet their needs on a scale from 1 - 10, the average response is an 8.9). RMIS also performs customer satisfaction surveys on help desk services via electronic surveys and survey cards that technicians leave when they go on-site. However, response rates are so low that the data provided is not significant statistically.

Students can use a rich array of online student services beginning with the online admissions process, through financial aid applications and tuition payment services, course registration, class schedules, drop-add, grades, transcripts, advising, student government voting, and career counseling and resume services. In order to meet the diverse needs of its wide-ranging academic programs, NC State supports a multi-platform (Windows, Unix, Linux, Macintosh) distributed academic computing environment. All classrooms have wired high-speed Internet access, and more than 60% have wireless access via the campus nomadic wireless system, which utilizes strong authentication protection. Centrally-supported learning management systems, (WebCT-Vista) enhance usability of online course materials and learning outcomes. NC State is committed IT accessibility including students with disabilities and is one of the few campuses to have passed a regulation to assure the accessibility compliance of official university public web pages.

5. The faculty experience (research support? Online grading, etc? Information about students?)

See 2.2 for description of faculty experience and support in research computing. In the area of student computing a library of VCL images is available on demand. In addition, VCL allows faculty to create and manage images absent traditional central IT gatekeeper hurdles. Faculty can give students root access where needed—operating system courses, web courses, grid course, etc. VCL resources have proved accessible from around the globe, enabling faculty and students to work and collaborate effectively while abroad.

Faculty have a number of online services available such as: grant proposal submissions/extensions/addendums, tracking of grant expenditures (this needs enhancement to allow faculty to start with summary report and drill down into individual transactions such as individual payroll expenses), grade submission, class roster generation, access to advisees' plans of work and progress toward degree reports, time and effort and compliance reporting, and degree audit reporting. As with the student experience, some of these functions require an overnight feed to/from the mainframe Student systems. Faculty are also provided with IMAP-based university email accounts and can use the clients of their choosing. Implementation of the new portal in Fall 2007 will hopefully help faculty to easily access various online services.
6. Modernity, quality, flexibility of administrative systems?
The major HR and Financial systems are robust, flexible ERP systems from PeopleSoft (version 8.9 for the Financial System, 8.4 for HR) built on current technology (Oracle databases, Sun hardware, WebLogic web servers) and delivered via version 8.8 of the PeopleSoft Enterprise Portal. The HR System will be upgraded to version 8.9 in July and the Portal to version 8.9 along with a total redesign to incorporate student services. The current major Student Administration systems are built on old technology (COBOL programs, IDMS databases on an IBM mainframe) with many peripheral Student systems built on Pearl/Sybase or PowerBuilder/Sybase. Implementation of version 8.9 of the PeopleSoft Campus Solutions product (on an Oracle database and Sun hardware) is in progress to replace the old Student systems with phased go-lives starting in Fall 2007. We are challenged to secure the people (functional and technical) and funding needed to make this project a success. Another significant challenge we face is to provide campus with the ability to easily integrate information from the various systems (we do not have a data warehouse). Most other administrative systems are built on older technologies (Pearl or PowerBuilder running on Sybase) and have not had significant modifications within the last 5 – 10 years. These applications must be updated and migrated to Java/Oracle but finding the resources for these activities is also a challenge.

7. Responsiveness & capacity of network-based services (email quotas, file transfers)?
Students are given base allocations and then provided at cost options to expand the allocation as needed. In the storage arena, students are given tools that also allow them to manage a single storage allocation across many services and uses. Our Dell EMC Clarion CX700 SAN has reached its capacity and must be expanded. Administrative customers are charge for using disk space over the distributed/allocated amount. The support model for email and disk quotas can be found in the ETSS Customer SLA at http://www.ncs.ncsu.edu/cs/data/dept_docs/SLA.html.

IT prospects: What has been proposed? What has been achieved? What are the goals for any change?

1. Prior studies, recommendations, implementation?
The most far-reaching academic IT initiative and proposal is VCL. This is followed by attempts to integrate and streamline IT access and support services across all services. Identity management is a looming challenge which must be addressed not just at the campus level but at the system level as well. Following a comprehensive internal study by functional staff, the University administration decided in 1997 to acquire PeopleSoft HR, Financials, and Student administrative software to address Y2K issues as well as provide an integrated suite of software for the future.

2. What themes recur in formal discussions? On the street?
UNC-CH and peers have significantly higher levels of IT funding. While this is a true statement, it is not also necessarily true that they are doing equivalently better. Which tends to imply that scarcity has resulted in greater efficient and effective in thinking and actions. There is continuing frustration on campus that we continue to use 15 or 20 email systems and do not have a single calendar system. A recent internal study narrowed the field to two alternatives: a) Cyrus email with Oracle Calendar or b) Groupwise email/calendaring with optional clients. (see item #4 below).

3. If change is going to take resources, are these new resources, reallocations from non-IT efforts, or reallocations within IT?
Increasingly academic IT is looking to leverage external partnerships, achieve system level service consolidation, and to translate internal innovation into external funding. The University
has incurred major budget reductions in 15 of the last 16 fiscal years. There are no internal buckets of cash around to fund IT changes so, if these are found to be necessary, resource reallocations will probably have to occur from the existing IT budgets.

4. What are the sacred cows, and why are they sacred?

Email and calendaring. The Provost and Vice Chancellor for Finance and Business charged a committee consisting of RMIS and ITD staff to recommend a solution for standardizing e-mail/calendaring for the campus community. A single approach was not recommended. Details of the study can be found at url: http://www.ncsu.edu/ceei/. NC State University is a very decentralized institution in virtually every manner; such autonomy is often closely guarded by the vice chancellors, deans, and department heads.

Bases for discussion: Documents and data that might prove useful

1. Are there lists (or Web pages, or other documents) of all entities on campus that currently offer IT services outside their own borders (such as ITD, RMIS), and of the services each provides?

   ITD - Information Technology Division: http://itd.ncsu.edu/
   DELTA - Distance Education and Learning Technology Applications: http://delta.ncsu.edu/
   NCSU Libraries' Information Technology Department: http://www.lib.ncsu.edu/it/

   DRAFT NC State IT Org chart, March 2007: http://www.itd.ncsu.edu/about/documents/NCSU-ITOrgChart.doc

   What about departments and other units with substantial IT staff or activity not provided by the above? How do these fit into NC State’s organization chart?

   In the College of Agriculture and Life Sciences the Cooperative Extension Service has Extension IT which provides extensive IT and IS services outside their own (and campus) borders: http://www.cals.ncsu.edu/it/office/eit.html

   Colleges and some larger departments have IT units that serve within their borders. The reporting lines of these IT service units stop within the unit, i.e., the unit director reports to a college level administrator and not to a university level administrator.

2. Are there any summaries of activity, service levels, and so forth – especially for central entities, but also for substantial decentralized ones?

   EDUCAUSE Core Data report as submitted March 2007.
   ITD Metrics page – Provides “dashboard” measures and other indicators of ITD service levels and usage: http://www.itd.ncsu.edu/about/metrics/
   ITD Compact plans, short annual reports, and funding trends: http://www.itd.ncsu.edu/about/planning.php

   Service levels for RMIS can be found at the following urls:
   HR/Financials SLA: http://www.fis.ncsu.edu/eads/SteeringInfo/fin_hr_sla_20_approved_012506.doc
   Desktop Support: http://www.ncs.ncsu.edu/cs/data/dept_docs/SLA.html
   Production Hours: http://www.fis.ncsu.edu/etss/production_hours.asp
How about budgets or expenditures?
IT Finance and Management data for RMIS, ITD and DELTA, 2005-06. (As summarized for EDUCAUSE Core Data submission) [http://www.itd.ncsu.edu/about/documents/coredata05-06fundingstaff-rmis-itd-delta.xls](http://www.itd.ncsu.edu/about/documents/coredata05-06fundingstaff-rmis-itd-delta.xls)
ITD Funding and Expenditures Overview report for FY 2005-06: [http://www.itd.ncsu.edu/about/documents/ITD-FundExpendFY05-06.xls](http://www.itd.ncsu.edu/about/documents/ITD-FundExpendFY05-06.xls)

3. Have there been one-time or ongoing efforts to measure client satisfaction, perhaps separately for students, faculty, and others?
RMIS performs electronic satisfaction surveys after major implementations such as our recent Financial System upgrade. The Financial survey is still in progress but of the 59 responses received so far, we have a customer satisfaction rating of 89% (i.e. when asked to rate the ability of the Financial System to meet their needs on a scale from 1 - 10, the average response is an 8.9). RMIS also performs customer satisfaction surveys on help desk services via electronic surveys and survey cards that technicians leave when they go on-site. However, response rates are so low that the data provided is not significant statistically.

ITD Classroom Technologies (ClassTech) user surveys and assessment research: [http://www.ncsu.edu/classtech/survey_results/](http://www.ncsu.edu/classtech/survey_results/)
Infrastructure Survey, spring 2006 (Note: UPA provided representative sample of undergraduates) Unity login required: [http://www.cals.ncsu.edu/caat/survey/inf_survey.htm](http://www.cals.ncsu.edu/caat/survey/inf_survey.htm)
UPA biennial sophomore and graduating survey trends for technology questions: [http://www.itd.ncsu.edu/about/metRICS/index.php#UPAsurveys](http://www.itd.ncsu.edu/about/metRICS/index.php#UPAsurveys)
HPC/research computing annual project renewal reports: [http://www.ncsu.edu/itd/hpc/Documents/Annual_Reports/2006/reports.php](http://www.ncsu.edu/itd/hpc/Documents/Annual_Reports/2006/reports.php)
NC State EDUCAUSE Core Data Survey2006-07 [http://www.itd.ncsu.edu/about/documents/NCSU-CoreDataSurvey-03-07-07.pdf](http://www.itd.ncsu.edu/about/documents/NCSU-CoreDataSurvey-03-07-07.pdf)

4. Have there been internal or external reports relevant to IT from internal reviews, outside reviews, faculty committees, or others?
ITD 5-year unit review presentation (January 2007): [http://www.itd.ncsu.edu/about/documents/ITD-5YearReviewV01-07-accessible.ppt](http://www.itd.ncsu.edu/about/documents/ITD-5YearReviewV01-07-accessible.ppt)

How about articles, editorials, letters, or other IT-relevant items from the campus media (student newspaper, official news, formal announcements, alumni magazine)?
From NC State student newspaper, Technician:
NC State Research magazine, Results:
“Simulations a Successful Research Reality” (fall 2006) http://www.ncsu.edu/research/results/vol13/1.html
“University Helps researchers Crunch Numbers” (fall 06)
http://www.ncsu.edu/research/results/vol13/6.html

Misc. News Releases:
Open House Introduces Research Community to RENCI
Friday Institute Leads State Pilot Initiative to Provide Broadband Connectivity to All K-12 N.C. Schools
(03/07/07)
IBM-based Lab Improves NCSU Educational Experience (10/30/06)
New Global Grid Computing and Communications Technology Demonstrated by Researchers in U.S. and Japan
(09/14/06)
NC State University and SAS to Collaborate on Data Analytics Education
http://www.ncsu.edu/news/press_releases/06_07/122.htm
Web Page Accessibility Regulation now official
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