Information Services and Technology (IS&T) 
FY05 Q1 Report 
For the months of July 2004-September 2004 

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The IS&T Leadership Team: 

Jerrold Grochow, Vice President for Information Services & Technology 

Greg Anderson, Director Client Support Services 
Allison Dolan, Director Telephony and IS&T Shared Services 
Vijay Kumar, Director Academic Computing 
Theresa Regan, Director Operations and Infrastructure 
Wayne Turner, Director Administrative Computing 

Christine Cavanna, Sr. Project Manager & Communications, VP’s Office 
Angie Milonas, Sr. Manager Finance 
Steve Winig, Sr. Project Manager, VP’s Office
IS&T FY05 Q1 Report (Jul-Sep 2004)

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I. Office of the Vice President

The major effort that dominated the work of the IS&T Leadership Team and the Vice President during the First Quarter, FY 2005 was the development of a Strategic and Annual Operational Plan for IS&T.

I and the IS&T directors invested much of our time on these planning efforts. We held two retreats: the first a two day session at Endicott House that involved clients and staff in our planning efforts; the second with just the leadership team to further develop our overarching vision, mission and objectives for the organization.

Working with Sapient, our IT Architecture Group (ITAG) spent a significant amount of time focusing on our architecture and infrastructure, documenting our current architecture picture and now beginning to focus on the a design for the future.

Some of the commitments for the Second Quarter, FY2005 include:

- Launch new IT-SPARCC governance board and begin developing IT principles and governance matrix for MIT
- Develop and Submit the FY06 Budget and Plan
- Branding for IS&T – develop e-mail and Powerpoint templates to be used as tools for IS&T staff. ECAT interface for standardized business cards through Minuteman Press will go live in early November.
- IS&T Communications – propose communications strategy for IS&T through work with a Communications Consulting Group made up of communications professionals from various areas of the Institute.
- IS&T Projects – working to develop a common methodology for project management for IS&T.
- Expand on the relationship manager service that we currently are piloting with Dean for Student Life and Brain and Cognitive Science by hiring additional full-time staff and developing a plan for the service.
- Space – complete renovations of N42 walk-in center and design signs for exterior of N42 and W92; and continue telephone room work in building 2, 4 and 6 if funding becomes available.
II. Academic Computing - Executive Summary

Considerable attention and energy in Academic Computing was devoted in this first quarter of FY’05 toward developing a programmatic focus, i.e., articulating strategic programs, the strategic objectives in these programs and the activities and services toward achieving these objectives for addressing the MIT community’s information technology service needs for academic programs. The strategic objectives reflect IS&T Academic Computing’s response to the changing vector of technology use in teaching and learning at MIT, as well as the opportunities being presented by the IT market space. The programmatic focus is expected to guide the prioritization and resourcing of activities and projects over the next three years.

Key accomplishments in the Platforms and Spaces program include the provision of specially configured laptops (approx. 150) to students in courses as well as shared high performance computing resources for education. These deployments along with the redesign of four Athena clusters to support collaborative learning are indicative of the new ways in which Academic Computing is meeting commitment to provide a modern information technology environment for supporting education at MIT. Enhanced access to Cable TV service programs and services are an important element of this environment.

As part of its expanded service profile, the Software and Tools program has not only continued Academic Computing’s traditional role of acquiring, testing and distributing a range of 3rd party applications software but also installed custom software configurations for laptops in 6 courses, developed solutions for shared access to parallelized Math applications (Mathematica) for high performance computing as well as GIS tools. A significant shift in academic computing services toward supporting sustainable academic software development and integration with enterprise infrastructure is also reflected in this quarter’s activities, notably in the development of HPC Math solutions using O.K.I OSIDs, in O.K.I work toward OSID refinement and documentation and through engagement in the Sakai initiative.

Academic Computing’s continued its efforts to find better ways to communicate with the community about educational technology initiatives and services: A new interactive, online newsletter, the Ed Tech Times, a new interactive, online newsletter was launched and the development of a comprehensive communication plan is underway.

In the period ahead Academic Computing will continue to address its programmatic objectives with particular attention to addressing issues related to software and services that cut across other IS&T units.
Academic Computing

MISSION

Academic Computing in IS&T promotes and enables technology-based education at MIT. In conjunction with other IS&T groups and MIT units, it provides a range of services to support the planning, adoption, integration and implementation of IT to meet the needs of academic programs, faculty and students.

OVERVIEW

In the first quarter of FY 2005, Academic Computing conducted several sessions to plan the work of FY’05. The highlights of work are grouped programmatically and include the following:

SPACES AND PLATFORMS

1. Provide academic computing spaces


2. Laptop program

- Supporting the following Fall 2004 scheduled classes:
  - Course 1.00 55 HP laptops
  - Course 2.671 44 Dell Laptops
  - Course 21L 18 HP laptops
  - TEAL 42 Dell Laptops

  IS Funded
  - Course 6.774 1 HP
  - 6.001 1 IBM Laptop

- Survey faculty to determine core software needs for laptops by Sep 2004
  A survey of software needs for teaching and learning has been conducted. The survey, focusing on needs for laptops, will build on this. Expect to have it completed in January for IAP.


Supporting the following Fall 2004 scheduled classes:
  - 3.205 22 students
  - 11.188 7 students
  - 11.204 53 students
  - 1.963 9 students

4. HPC Cluster Project

The first semester of the pilot phase continues with 3 faculty members using the cluster currently; Other possible locations more appropriate than 4-035 for this facility are being investigated.
5. Athena Cluster Maintenance

Provided cluster maintenance for 14 Athena spaces (24x7 access), plus 4 computer classrooms. Cluster 4-035 was repurposed to support the High Performance Computing UG teaching experiment (see below).

MIT Cable

A cable broadcast introducing Susan Hockfield as new MIT president took place on August 26.

September 2004 was the busiest month on record for live broadcasts. Ten broadcasts from remote locations were conducted for webcast through AMPS 10 broadcasts to the MIT community, 2 satellite uplinks for MediaLink (Discovery Channel and CNBC) and a satellite uplink for Enterprise Forum for approximately 50 hours of live, locally produced programming.

60 service requests were completed.

The Comcast Media Center narrowcasting pilot project concluded with all phase 2 goals successfully realized. This entailed swapping out equipment, a new pitch of 10 hours of content and scheduling data, and local playback synched to National Bureau of Standards time with one-second accuracy. We will continue to use the hardware to receive and play Zilo programming on channel 36. There was no requirement to install a dedicated network drop for this project, as it will continue to make use of the analog telephone line. Zilo is a production company that produces a weekly three-hour block of free programming for the university market. This programming is mostly network quality original programming and concerts by top bands with advertising mostly for feature films, video games, cosmetics, snack foods, etc.

An HDTV broadcast of WGBH-DT services as a test channel was set up to examine the characteristics of HDTV signal transport through our distribution plant.

Work continued on our network enabled converged media center (MythTV and VideoLAN) that runs on a Linux platform. The current installation is stable and allows viewing of live TV, scheduling of program recordings, playback and DVD video recording. Many of the functions can be accessed by a remote client on a LAN, or controlled by the Apache web server with a web browser.

SOFTWARE AND TOOLS

1. Software Deployment and Distribution
   - 6 software images were created (1 for each class) for the laptop loaner program.
   - The following software is provided for Fall 2004 classes in 37-312

CAD/CAM

Autodesk AutoCAD 2004
Dassault Catia 5r9
Discreet 3dsMax 5.1 Upgrade SP1

GIS Software
ESRI ArcDesktop 8.3
ESRI ArcInfo Workstation 8.3
ESRI ArcView GIS 3.3
ArcView GIS 3.3 Base
ArcView GIS 3.3 Base Plus GeoData
ArcView 3d Analyst 1.0
ArcView Spatial Analyst 2.0
ArcView Image Analysis 1.1
ArcView Network Analyst 1.0
PCI Geomatics Geomatica 9.1

Graphic Design/Multimedia
Adobe Illustrator 10.03
Adobe Photoshop 7.0
AliasWavefront Maya 5.0
Macromedia Flash MX
Microsoft Visio 2002

Statistical Packages
SPSS 11.5 for Windows
SQL Plus 92 CRL

Miscellaneous
HSC Chemistry 5.1
Nastran 1.0
Simul8 Simul8 r11 Education

2. Software Review and Evaluation
Drafted and reviewed a report on the viability of open AFS for key academic software. This report will be the topic of a Q2 ITAG review.

3. Software Service Deployment
• An O.K.I service development plan is being developed. Specifically, educational service requirements for digital repositories and for High Performance Computing (HPC) are being identified with an anticipated completion date of Jan 2005.

• Delivered a solution for High-Performance Mathematica for a pilot evaluation.

4. GIS
• Released v. 1 of the EAP profiler tool for use in Fall 2004 courses.
• Port MIT Ortho Tool to ArcGIS and installed it on 37-312, CRN Networks.

5. HPC
• Parallel Mathematica: created web interface for access to the application. Conducted usability review and have recruited participants to pilot the application.
• 4-035 cluster is available for use in undergraduate classes beginning fall semester 04.

EDUCATIONAL TECHNOLOGY CONSULTING

1. Inform the development of environment for sustaining educational initiatives.
• Drafted initial requirements document based on current landscape of educational technology initiatives.

• Drafted report on projects using educational technology for the Deans of the School of Science and School of Humanities and Social Sciences.

• Ongoing work is to continue collection of information.

2. Stellar Support

• While Academic Computing was not able to present at the New Faculty orientation (it was largely an orientation to Boston, MIT and governance etc) Rich, Jean, Daniel J. and Katie did a presentation on AC services to the Teaching Assistants. Half of room 54-100 was filled (approximately 150 people). Some on site Stellar consultation were a direct result.

• Academic Computing conducted 4 “Introduction to Stellar” classes. There were a total of 22 attendees. There were also 10 "by request" training sessions at client sites, some with 2 or 3 "students".

• Stellar: (https://web.mit.edu/stellar/admin/stats/nexus-counts.txt) 319 courses (fall '04) created to date. This number represents MIT academic classes. Other Stellar websites support MUST, SMA and projects, including L2L with minimal impact on CIS. The number of users per hour reached a new high in the fall '04 semester.

3. Support Faculty Use of Mathematics Software

Professor Radovitsky provided a sample Mathematica notebooks for 16.21. Daniel Jamous, with support from Software and Tools will do a conversion of the notebook for use in the fall semester.

4. Conduct Outreach and Communications

• Developed and distributed orientation materials for new faculty and students in August 2004.

• Drafted a communication plan for Academic computing training and services.

• Stellar and Athena training has been completed for this semester. Discussions are ongoing with CSS for a training plan but as of now, Rich is still operating much like Gary Dryfoos did in the past. Rich Garcia revised the class materials for the Intro to Athena and Unix, Emacs, LaTeX, HTML and Matlab minicourses. There were 4 Introduction to Athena classes reaching about 600-650 students. Attendance was small in the minicourses.

OPEN KNOWLEDGE INITIATIVE

1. OSID Work

Began draft of documentation for OSID 2.0 Java development.

2. (Special Initiatives) SAKAI

The project continues with project management, usability and requirements gathering, and OKI participation in writing OSIDs. The 1.0 version was released. A Style Guide was created and the Tools Team released v. 1.1 in Q1. See http://www.sakaiproject.org
III. Administrative Computing - Executive Summary

Administrative Computing had a highly productive first quarter. Our staff delivered a major project, performed an SAP infrastructure update, and continued to introduce and stabilize enhancements to our administrative applications.

The first phase of the SAP Plant Maintenance Project that replaced the Department of Facilities repair and maintenance software application, Maximo, with SAP was delivered on July 21st. During the first quarter, over 11,000 work orders were successfully entered into the new Plant Maintenance system.

Administrative Computing collaborated with business process owners to update the SAP infrastructure with minimal resources over the weekend of September 18th. The infrastructure update included a comprehensive testing plan that involved the participation of more than 100 end-users during August and early September. The cutover to the new infrastructure went smoothly and the production system was available earlier after this infrastructure update than any other previous update.

Administrative Computing was also able to expand our ECAT vendor and e-commerce merchant-base and provide valuable services to the administrative community by creating and maintaining their fund center and profit center hierarchies.

Administrative Computing continues to make strong progress on our major Institute initiatives that includes the HR-Payroll, Environmental, Health and Safety (EHS), and SAPBud projects. The HR-Payroll Project is in the final stages of completing the Payroll and Time Management blueprint documents and will soon head into the realization phase of project. The EHS project has validated and locked the requirements for Phase 1 (PI Space Registration) of the project and is scheduled to go live on campus in November. SAPBud is finalizing development and is scheduled to deliver Phase 1 (Submit/Approve/Favorites/Review web application and initial set of BDM functionality) of the project in December.

The client demand for Administrative Computing services remains high heading into the second quarter. Our staff is continually called upon to participate at the ground level of researching and evaluating software and business solutions for our customers. These requests result from a focused client outreach effort; a strong presence on SAPbiz; and by conducting regular customer forums where we are able to discuss our projects and initiatives and prioritize customer requests.

We are looking forward to initiating the Departmental Database Application Development Project with the objective of making recommendations on the needed support, as well as other scheduled efforts to improve and sustain our enterprise and departmental services and business solutions. Also during the second quarter, we anticipate the addition of an Analyst Programmer III and an ERP Systems Manager which will help provide the necessary resources and expertise to further our progress and continue to meet our customers’ business needs. Administrative Computing will continue to transition from a primarily SAP support organization to an organization that supports applications on a multitude of platforms.
Administrative Computing

MISSION

- Administrative Computing Services exists to bridge technology and business expertise in diverse functional areas, including financial, logistics, and human resources. Administrative Computing Services provides business technology services for MIT, to:
  - Reduce administrative burden
  - Reduce the cost of transaction processing
  - Reduce the cost of administration against research budgets
  - Integrate information for better decision-making

Accomplishments and Goals by Program

PROGRAM: Departmental Services / Support

Service/Activity/Project:

1. Improve Departmental Business Processes

Accomplishments:

- Completed Phase 1 of the effort to reduce centrally printed summary statements and DTR. Modified the statement print program to suppress cost objects with no activity and to permit profit center group selection. Summary Statements and DTRs for cost objects with no activity in the current period and cost objects within the Executive Vice President’s organization are no longer being printed centrally. These changes are reducing the volume of printed monthly statement reports by 15,000 each month.
- Worked with CAO to develop a mechanism to enter “off-book” accounting entries into SAP. Included providing a new JV document type ‘FS” for quarterly closing accounting entries to segregate them for reporting. Involved changes to validation rules and JV upload program.
- Provided the ability to manually print Accounts Payable checks on blank check stock paper with MICR ink and signature from an authorized SAP printer. This effort was needed to replace an old impact printer and check signer that both were failing more frequently and were difficult to repair.

Goals:

- Work closely with the Travel Office and AAC II to identify opportunities for improving the travel process at MIT in three areas: travel credit card, online ticket booking, and electronic travel expense reporting.
- Provide a mechanism to identify and correct fund center name / cost object supervisor name discrepancies.
- Complete business requirements documentation and begin configuration for invoice automation for casual labor.
II. Sustain Administrative Solutions

**Accomplishments:**

- Migrated SAP's Internet Transaction Server to new hardware running Linux instead of Windows NT.
- Completed 336 Human Resources (HR) specific authorization changes; 3,123 SAP specific authorization changes; and 101 GRAD specific authorization changes.
- Processed 640 Termination forms for HR.
- Designed and completed the fund and profit center hierarchies for ESI.
- Added the Center for Real Estate and the Department of Chemistry departments to the Preventative Maintenance Program and performed updates to 147 other department, lab, and center (DLC) computers.
- Increased our ECAT vendor portfolio to include Apple, Airgas, and Nextel (for staff and students).
- Provided credit card functionality to the Sloan Student Club memberships, Career Fair, Lebanese Club, and Glass Lab.
- Completed Sloan Management Review customer registration and discount coupon features as well as roll-out of the summer issue article products.
- Built prototypes for MIT Museum, collections, and educational programs.
- Went live with Tufts Health Plan EDI 834 benefits enrollment.
- Finalized a new design for the ECAT web pages working with Publishing Services Bureau and Procurement.

**Goals:**

- Begin preparation for WebAS ramp-up.
- Add a minimum of two new departments to the Preventative Maintenance Program and host Preventative Maintenance Liaisons Meeting.
- Complete Primary Authorizer bi-annual reviews.
- Complete "Fund Center / Profit Center / PD Org review" for the School of Science.
- Review and adjust PI Fund Centers to make identification consistent in response to a request from Office for Sponsored Programs.
- Kick off "Departmental Database Application Development Project".
- Begin implementation with SciQuest (a considerable commitment in Q2).
- Deliver Nextel catalog for departmental purchases (using VIP Card).
- Deliver e-commerce sites for MIT Museum.
- Open Enrollment feeds monitoring for Blue Cross-Blue Shield, Delta Dental, and Tufts Health Plan.
- Deliver redesigned ECAT web pages.
- Deliver Minuteman Press sub-catalog for IS&T business cards.
PROGRAM: Enterprise Services / Support

Service/Activity/Project:

I. HR-Payroll Project

Accomplishments:

• Completed Technical Quality Assurance (QA) reports for all of the payroll business process redesign team (BPR) reports. The QA reports were used to modify some of the recommended business processes.
• Met with Project Sponsors to finalize answers to outstanding organizational, process, and technology questions related to the payroll BPR team recommendations and to present community feedback on the recommendations. Sponsors responded to the feedback by modifying some of the recommended business processes.
• Kicked off the fall Brown Bag Lunch series to communicate implementation status of payroll BPR team recommendations. Began work on development of a change assessment process. Began a collaborative effort within IS&T to create a Payroll Training and Documentation Resource Plan.

Goals:

• Produce Payroll Blueprint (detailed design) documents for time collection and evaluation, and payroll processing. The blueprint includes all system-related tasks, including a Testing Strategy Plan and a Payroll Conversion Plan.
• Begin Payroll Realization Phase.
• Partner with HR Officers to present “Pre-Implementation” activities at school and department meetings. Continue to communicate implementation status of BPR team recommendations at Brown Bag Lunches. Conduct Change Assessment sessions at school and department meetings. Finalize Payroll Training and Documentation Resource Plan.

II. EHS Project

Accomplishments:

• Validated and locked requirements for the PI Space Registration phase.
• Began implementation of SAP EHS and will leverage the integration with SAP HR and Plant Maintenance modules.
• Began development of a web-based user interface for use by DLCs.
• Developed EHS Data Warehouse reports.
• Worked with Lincoln Laboratory to develop a common solution that will meet the needs of both campus and Lincoln.
• Gathered business requirements for the next phase of the EHS project (Inspections, Consequences, Corrective Actions, and Incidents).

Goals:

• Go-live with PI Space Registration (phase 1) on November 8 for campus.
• Lock-in business requirements and begin implementation for Inspections, Consequences, Corrective Actions, and Incidents (phase 2).

III. SAPBud Project

Accomplishments:
• Completed Review Budgets development.
• Developed solution to resolve performance issues for Review Budgets application.
• SAPBud BDM (budget data management) application is in development. Development has been reviewed by an Office of Budget and Financial Planning (OBFP) team member.
• Began training and documentation development. Courses have been defined and curriculum developed. Training materials for a hands-on Submit Budgets training class are in development.
• Began quality assurance activities.

Goals:
• Complete remaining development tasks for Submit Budgets, SAPBud BDM, Approve and Reopen Budgets, and Cost Element Favorites application testing by the OBFP.
• Finalize Transaction Management (formerly Budget Reallocation) requirements.
• Complete usability, unit, and integration testing.
• Deliver Submit / Approve / Favorites / Review web application and initial set of BDM functionality to Production by December 10, 2004.

IV. Plant Maintenance – Phase 2

Accomplishments:

• Began planning exercises and conversations with team sponsors and members (Plant Maintenance Phase 2 does not begin until the second quarter).

Goals:
• Complete business requirements documentation.
• Begin configuration.

V. Improve Enterprise Business Processes

Accomplishments:

• Completed Phase 1 of the Plant Maintenance Project. Replaced the Department of Facilities repair and maintenance software application, Maximo, with SAP Plant Maintenance. This included repair work order processes, preventive maintenance processes, air filter replacement program, and lockout / tagout procedure documentation.
• Completed development of an SAP solution for the Institute’s Annual Salary Review.
• Revised the functionality of the Employees tab on the SAPweb web site and the Employee Info tab on Employee Self-Service web site for usability, easy of maintenance, and access to additional fields of SAP HR data. Converted names in SAP HR to mixed case and eliminated a feed from Lincoln Laboratory’s PeopleSoft to the Data Warehouse.
• Developed a Training and Events Management (TEM) solution and project plan for solving TEM and HR master data integration points.

Goals:
• Deliver training for the Sponsored Research Staff Annual Salary Review in SAP to Assistant Deans; and to administrators in the School of Science, School of Humanities, Arts and Social Sciences and the Provost Area.
• Prioritize Training and Events Management enhancement list and assess resource needs for highest priorities.

VI. Sustain Enterprise Administrative Solutions

Accomplishments:
• Completed SAP fall Infrastructure Update project plan, test preparation, cutover scheduling, and coordinated process owner validations. The update consisted of database upgrades from Oracle 8i to 9i, patches to the SAP Application Servers and patches/updates to the SAP software components, such as HR and EHS.
• Upgraded ITS to new 6.20 release. The new platform will provide more stability to the SAPweb and Employee Self-Service web sites.
• Partnered with the Infrastructure Services Service Team (ISST) to set up a test IXOS scan station in support of SAP project team archiving efforts. This scan station was modified to conduct signed and encrypted HTTP communications with IXOS in order to prototype a security infrastructure for handling sensitive documents and forms (such as those associated with MIT HR applications).
• Built and piloted an updated SAP faxing solution using open-source fax gateway software and SAPconnect external communications interface.

Goals:
• Prototype Web Application Server environment to allow Administrative Computing to take advantage of new web technologies for future development efforts. Install the newly released 6.40 version of the SAP Web Application Server and work with SAP and IS&T staff to securely integrate it into the SAP version 4.6C landscape.
• Assume maintenance of Parking Pass and T-Pass applications.
• Collaborate with OIS and Server platform hardware and software vendors to decide on an SAP platform renewal strategy for calendar year 2005.
• Work with the HR project team to affect the software and SAP tax server updates required for the execution of Pension payroll year-end reports. Update the current SAP system landscape to support HR employee payroll 2005 project activities.
• Implement the open-source fax gateway and SAPconnect interface for Procurement Office faxing.
PROGRAM: Administrative Computing Headquarters

Service/Activity/Project:

I. Organizational Architecture and Program Management

Accomplishments:
• Filled Quality Assurance consultant position.

Goals:
• Fill Analyst Programmer III position
• Fill SAP Basis Administrator position
• Fill ERP Systems Manager position
• Send a resource to SAP’s TechEd 2004 conference in San Diego. This is an opportunity to gain practical knowledge about new SAP web technology.
• Annual SAP Public Sector Meeting
• Annual SAP Supply Chain Management

II. Performance Management

Accomplishments:
• Initiated 90-day plan process.

Goals:
• Complete 90-day plans for November 1, 2004.
IV. Client Support Services - Executive Summary

In Client Support Services (CSS), Q1 is normally a period of transition and renewal. Transitions include the beginning of the new fiscal year, closing the old year, and project work in preparation for the beginning of the academic year focused on improved client services. Q1 FY05 followed this historic trend, although the intensity of the work was at unprecedented levels.

The major news for MIT during Q1 was the announcement of Susan Hockfield as MIT’s new President. CSS, led by the efforts of VIP services, began to prepare for her full arrival in Q2.

The major activity in Q1 is always the back-to-school activities as we welcomed the class of 2008, returning undergraduates, new graduate students, and new faculty. The preparations for these broad ranging activities actually began last February and include several key deliverables along the way – computer recommendations to accompany the packet of material for incoming freshmen, the team work on creating the CD of MIT applications, updating of web pages, coordination with OIS for remote account activations, etc. The delivery of the back-to-school program encompasses a three week period beginning with the arrival of graduate students and international students. Activities reach a crescendo when the new freshmen arrive for orientation. Over 30 IS&T staff were involved in various activities during this period – Getting Connected sessions, IT Security seminars, New Faculty Orientation, IS&T representation at the Activity Mid-way, in person consultation for machine purchases in N42, general IT help and consultation, Training events, etc.

Client Support continued efforts to create a welcoming front-door to IS&T services. IS&T units were moved out of W20 to create a combined service center in N42. IS&T now presents more cohesive and comprehensive of in-person services to our clients. The number of visitors to N42 continues to increase.

In other space improvement activities, IS&T training has now been relocated to two rooms in W92 and one room in N42, and the IS&T Usability Lab in N42 has been re-designed and is now more comfortable and functional.

CSS continues to seek new avenues for collaboration with our clients. In Q1 we established an IS&T Student Advisory Board, composed of student representatives from across campus (Undergraduate and Graduate alike) and IS&T staff whose work and services have a direct impact upon the integration of computing into the full life of our students. CSS is also represented on the cross-Institute training advisory group called the Training Alignment Team. This group is charged with coordination and planning for the breadth of MIT training offerings.

CSS continued work the Request Tracker project, the open source trouble ticket management system intended to replace our locally developed CaseTracker system. At the beginning of Q2 a project review was conducted and resulted in greater alignment and agreements on the next steps for the project. In addition, CSS received the final report of the Content Management System Discovery project and will now work with all of IS&T to determine priorities and work going forward.

Daily provision of services to MIT clients is our stock and trade. The CSS organization has come a long way in working toward more cohesive services and consistent interactions with our client communities. Our expertise and professional skills are recognized on campus and beyond. The IS&T Web pages were recognized by with a second place award for Computing Services web site by the 2004 ACM SIGUCCS Communication Team (SIGUCCS – Special Interest Group on University and College Computing Services).
**Client Support Services (CSS)**

**MISSION**

Client Support Services works in partnership with MIT faculty, students, and staff to maximize their effective use of IT services and technology in fulfillment of MIT’s mission. With the goal of meeting client technical help requests wherever and whenever they may arise, Client Support Services cover a broad spectrum of activities: departmental technical support, initial contact and problem resolution through help services, training, communication and consultative assistance to the community, software products, and client security preparedness and response.

**Accomplishments and Goals by Program**

**Program: Improve Direct Services to MIT Departments, Labs, and Centers:**

**Web Communications Services (WCS)** completed a number of new web sites for MIT departments. In addition, WCS named a new team leader, Jeff Reed, who has stepped up to that role with the departure of Chris Sherrill. Web sites launched through WCS participation include:

- Admissions: http://web.mit.edu/admissions/
- FSILG Report: http://web.mit.edu/dsl/aurora/
- Visiting MIT: http://web.mit.edu/visit/
- The Vest Years Timeline: http://web.mit.edu/timeline/
- Arts at MIT: http://web.mit.edu/arts/
- DDFG (updates): http://web.mit.edu/ddfg/
- Civil and Environmental Engineering: http://eeweb.mit.edu/index.pl
- HST Good Clinical Practice site
- Ongoing maintenance: Teaching with Technology & MIT Faculty Club
- Installed and set up server for SMR in IS&T Co-location
- Launched RSS pilot program
- Ongoing technical advice for Student Financial Services

**MIT Home page team:**

- Implemented and customized the Google search engine for rollout to the community; improved the indexing, and customized search results for MIT Home page, News Office, and Offices Directory
- Programmed and rolled out the “Offices Directory” (aka blue pages) at http://web.mit.edu/officesdir. Soon this will be a link from the MIT home page.

**The Usability Lab** provided testing to a number of Institute units:

- Student Life website tested in lab
- Clusters web page review in Demo Center
- Sakai Project home page review in Demo Center
- Berkley Gradebook review in Demo Center
- Admissions testing in lab
- On-Line Commuting Services T-Pass review in Demo Center
- On-Line Commuting Services T-Pass testing in lab
- EHS PI/Space testing in lab
- Open Enrollment review in Demo Center
- In addition, the Lab completed a redesign of its space in N42 for improved testing environment.
IT Security Support provides services at an Institute and departmental level:

- The team contacted 30 of the 35 Fraternities, Sororities and Independent Living Groups (FSILGS) to resolve their outstanding security cases and to develop a dedicated set of security contacts in each of the groups.
- Ran the fall MIT Security Camp for approximately 120 security professionals in higher education.
- Initiated outreach for MIT residential units via the Dean for Student Life Housing Office.
- On behalf of the Institute’s interest in student entertainment services, the team documented a set of alternatives for review by Student Life and IS&T leadership.

Departmental IT Resources provides a variety of services and enables several programs for IS&T services to Departments, Labs and Centers:

- 26 Service Level Agreements for 228 hours per week. Newest customer is the Audit Division and the Office of Budget and Financial Planning.
- Deployed 66 desktops, 4 laptops, 2 servers.
- For Preventative Maintenance, met with School of Humanities, Arts and Social Sciences to begin serving their customer base. Continued with current clients comprised of 147 visits during the quarter.
- Windows Server Implementation is nearing the end with approximately 127 of our original list of 147 NT4 domains completed.
- Worked with Joanne Hallisey, relationship manager for the BCS building, to provide an overview of DITR services to future tenants of that new building.

Q2 FY2005 Goals for this program:

WCS:

- SMR second issue
- School of Engineering E-Cue and EIA sites
- Campus Dining redesign
- Audit Department RACP site
- Technology and Culture Forum
- Technology Review web maintenance
- Four HST websites
- Center for Transportation and Logistics
- Hire new WCS consultant

DITR:

- Continue engagement for potential SLA’s with DLC’s
- Continue Admin-IT distributed support for preventative maintenance and for administrative desktop deployments and renewals.
Program: Improve Support Services to individual clients:

Computing Help:
- With the creation of the combined service center in N42, the volume of walk-in clients has increased.
- See CSS Scorecard for reports on cases, client satisfaction, problem categories, and responsiveness

PC Service:
- Completed approximately 500 work orders, of which 212 were warranty repairs, and dealt with a variety of computers and peripherals: 174 Apple, 170 Dell, 95 IBM and 77 HP (mostly printers).

Training:
- Experienced a number of new activities; primary among them has been settling into new training space in W92 and the soon to be opened room in N42
- Completed transition of training classrooms from W89 to W92
- Added 3 new Quick Starts (Understanding SAP at MIT, Cascading Style Sheets in Dreamweaver and Really Simple Syndication)
- Launched Six Conversation pilot in TCP

IT Security Support:
- Handled Stopit and information protection cases: 429 new security cases, and 290 new stopit cases.
- Presented the security orientation program to approximately 500 incoming students.
- Because of outreach and other active communications, fewer than 100 compromised machines arrived on campus with the beginning of fall term.

Departmental IT Support:
- Began Treo and Blackberry support projects for Professors in Biology and Civil and Environmental Engineering

Adaptive Technology for Information and Computing (ATIC)
- For new graduate student, set up a work process for the timely conversion of paper course materials to electronic text. (outline of process: Materials from professor -> to the ATIC lab -> search for electronic version, if none, scan and OCR text -> save to ATIC lab server -> e-text given to CMS graduate student to read with screen reader)
- For new graduate student in Economics: coordinated the installation of an accessible workstation in a departmental computer lab.
- Conducted 74 individual client consultations.
- Loaned 55 adaptive devices to clients.

Q2 FY2005 Goals for this Program:
Training:
- Complete training preparation for SAP projects (EHS, SAPBud, Grad Aid Module 3, training for ASR)
- Plan training for new software releases (Mac OS 10.4, Office 2004, FileMaker 7)
Program: Improve relationships, community outreach and communications to IS&T clients:

Back to School activities:
• Conducted nine events (Training, Midways, Open Houses): attendance ca. 700 at Training events and ca. 1300 at Open Houses.
• Published and distributed 2335 Student Welcome Packets
• Published and distributed 90 Faculty/TA Welcome Packets
• GovConnection reports that MIT had the largest back to school sales in their history.
• Publishing team in Training, Consulting and Publishing was very active this quarter. Much of their work is focused on the publishing needs for the beginning of the academic term.
  • Preparation and production of printed and on-line materials for Fall Readiness
  • Published new IS&T organizational web pages, Competency Group pages, and started work on redesign of IT Security web pages
  • Provided on-line help for SAPweb applications (e.g. Facilities, ESS); wrote and/or updated service and product pages (Spamscreen, Windows XP SP2)
  • Released documentation for several Linux products: Zephyr, Red Hat, TechTime, LPRng, OpenAFS
  • Continued to product IS&T newsletter and Digitalk column for Tech Talk

MIT Home Page Team:
• Published the MIT home pages with 8 spotlights a day (some on 2nd level pages)
• Supported announcement of the 16th president Susan Hockfield: coordinated email announcements, webcasting, home page spotlights and News Office articles (in the vacation absence of the News Office webmaster)
• Enhanced the campus map by adding 86 building photos to the MIT campus map (photography and programming)

IT Security Support produced the first Security brochure: "Ten Step to Safer Computing"

CSS Director established the IS&T Student Advisory Board

Q2 FY2005 Goals for this Program
Publishing
• Begin work on updating IS&T web site navigation
• Implement RSS-powered news page
• Begin hiring process for HR-Payroll Training and Documentation team
• Write product pages for SWRT and other software efforts (e.g. VirusScan, Virex, VPN, Open Office for Linux) and provide on-line help for new SAPweb applications (e.g. SAPbud, EHS, and Open Enrollment)
• Produce the IS&T Newsletter, several Digitalk articles, and the next Security brochure
Program: Improve Software services and processes

Trend is for increased demand from clients and increased volume of product distributions.

Software Release

- Products completed/released this quarter:
  - Red Hat Network - update service
  - Red Hat Enterprise Linux 3.0
  - VirusScan Enterprise 8.0i
  - Windows XP SP2
  - MIT Fall CD
- Working on the following release efforts
  - Oracle Connector for Outlook (OCFO)
  - Tivoli Storage Manager (TSM) 5.2.3
  - Cisco VPN Client 4.0.3 - 4.0.5
  - Kerberos for Windows (KfW) 2.6.4 & 2.6.5 (released 10/5/2004)
  - Virex 7.5 (vendor pulled product after it was released)

Software Distribution:

- Handled 1965 client requests (in Q1 FY2004: 1618 client requests)
- Distributed over 4300 items (CDs, licenses, etc.) (in Q1 FY2004: 5,750 items – of which 2,100 were a one-time distribution of Adobe Acrobat)
- Top licenses distributed this quarter by volume:
  - 533 FileMaker Pro 7 licenses in 62 requests
  - 217 Red Hat Enterprise Linux CD sets (112 U2 WS, 38 U2 AS, 67 U2 DOC, & 0 U2 Source)
  - 331 Maple 9 licenses in 44 requests
  - 297 Mathematica licenses in as many requests
  - 132 Matlab licenses in 59 requests plus 1,234 toolboxes associated with those requests
- Fulfilling requests to Software/License range from less than 1 day to 4-5 weeks. Working to improve this utilizing better systems including RequestTracker & ShopSite.

SW Licensing

- Worked on the MS Campus Agreement
- Worked on proposal for Matlab Concurrent license server for students.

Q2 FY2005 Goals for this Program:

- Implement download counting system with help from OIS
- Plan & Conduct a Software Town Meeting open to any clients for this fall or spring
- Implement new Matlab order processing and tracking system to handle expected 1,000 requests for Matlab in January
- Engage clients in the software release priority setting matrix under development at: http://web.mit.edu/swrt/swrt-priorities.xls
- Launch Expectations Level project to move away from support and not supported concept
- Release all products that we are currently working on and additional ones scheduled for this quarter (see attached SWRT Priorities)
- Expand discussion of SWRT Priorities to include clients
- Publish "Product Release Management for Beavers" guide book to the release process
- Engage the newly formed SWR Consortium (IVY+) with OCFO and Eudora efforts
- Begin distribution of media and licenses for the MS Campus Agreement
- Implement a student Matlab licenses server for/with AC
- Collect and report standard data on the community distribution of operating system, web browsers and e-mail clients for next quarter

Program: Improve CSS processes and technology for client support:

- Training completed transition to its new team structure
Transition of N42-186 to training classroom complete
RT project continued; relates to the efforts for Knowledge Centered Support
Created IS&T Student Advisory Board
Creation of the combined service center in N42: pre-sales consulting, hardware and software repair, software distribution, accounts, Athena consulting.
Increased focus on creating stock answers.
Conducted 6 CSS Forums as a means of sharing knowledge with colleagues; topics included: RSS, RT, Sakai, Wikis/Blogs, Project Management.

Q2 FY2005 Goals for this Program
• Develop resource model for training activities
• Clarify training roles for Academic Computing
• Project Review for RT project (done); get project back on track
• IT Security Support began working with a Sloan Research Assistant on the concept of Chief Information Security Officer in higher education.
• Determine feasibility and scope for ACD – with Telephony Services
• Determine how to move forward and resource issues for Content Management System.
• Work with IS&T ‘Big Initiatives’.

Q1 FY2005 Selected positive client comments from Computing Help Spot Surveys:
• “The issue I called on was simple and solved easily. More valuable was a secondary question about handhelds and webmail that the support person had specific ready answers to.”
• “I’m always grateful for the help desk. I’ve always found staff to be prompt and efficient in response to any questions that I have. And I never have the feeling that what I’m asking is a ‘dumb question’. Thank you, always.”
• “I was VERY pleased that the technician took the time to come and see the printer personally. Thank you.”
• “Staff member immediately asked for further support from colleagues for questions he could not answer. Very satisfied overall!”
• “Equally important, in my opinion, to expertise is the attitude and efforts of the professional. Good experts are unfortunately; more common than those who are simply friendly, seemingly unhurried and simply polite. Great work!!!!”
• “Service on this case was great, and whoever handled it deserves praise for getting it resolved right and fast. Bravo.”
Q1 FY2005 Selected client comments for CSS improvement in the next quarter:

- “I was very impressed with the expediency of the reply. But I hope he had suggested laptops at various price ranges, instead of recommending 2 that are great laptops, but very expensive.”
- “She knew just what I needed. I did have a hard time finding the info I needed by searching for info online before contacting the help desk. It was bit confusing to me who handles network access for campus visitors – I looked at a/v then tried searching the IS&T pages. But once I called, I was directed to the site and go sorted out right away.
- “Unfortunately, I was informed that MIT does not support Mac OS Server X, so I was only able to get limited support. The person I spoke with was very helpful, and tried his best to assist me.”
- “I have backups on TSM and after a system crash and OS +MIT apps reinstallation; it’s not entirely clear what files one should restore from the TSM backup. The instructions on the web are very succinct. It would help to have a little bit more guidance there.”
V. Operations and Infrastructure - Executive Summary

The first quarter of the new fiscal year has been marked as a time of new beginnings. The planning efforts initiated at the IST-LT offsite a month or so ago, laid the framework and vision for our efforts as we move forward into the new fiscal year. Longer term projects continued on their pace towards completion achieving several milestones throughout this quarter, including the beginning of construction of the new Broad Institute building and significant progress as the new Brain and Cognitive Sciences building begins to take shape.

The changing seasons and beginning of fall brings the return of the student body to our community. Significant effort was spent during the first quarter completing several large efforts thereby ensuring that we were positioned for their return. Additional wireless coverage was added across campus and to a variety of public areas throughout the dormitories in order to enhance the collaboration and computing experience for all MIT students, faculty and staff. The MIT mail system saw several significant changes aimed at improving the speed and reliability of a system that was experiencing problems due to resource constraints at the end of the previous academic year. The mail system received a greatly needed boost of processing power with the addition of a cluster of Linux servers to handle the filtering of the increasing volume of Spam and virus e-mail, and as a result the performance and user experience have been significantly improved.

As a provider of enterprise services it is critical that we have an IT infrastructure internally that reflects and supports the type of services we would like to provide our customers. A strong backup and storage solution are integral to the performance, availability and recovery of our enterprise services, and this past quarter we have begun to develop our TSM backup service and HP SAN to provide higher levels of service and availability. Plans have been developed over the past quarter to address longstanding deficiencies in our HP SAN environment, and we have finally begun to achieve traction and momentum as we try to migrate the HP SAN into a highly available and high performing storage solution. TSM has been expanded to begin to utilize the L5500 ATL silos in both w91 and e40 and efforts to provide the backup and recovery services for all the servers within the OIS organization have been initiated as a result of the expanded capacity and recovery ability. The plan is to consolidate our several disparate existing backup solutions into one central solution in order to reduce costs in both staff and physical resources and provide improved backup and recovery services not only to IS&T internally but all our clients throughout the campus.

Finally the first quarter brought the Democratic National Convention to the city of Boston and caused significant logistic difficulties reaching campus and potentially responding in a disaster situation. OIS worked with the other IS&T organizations to ensure adequate daytime and off hours coverage was available throughout the DNC. This coverage involved staff staying overnight at MIT provided accommodations or working longer shifts during the day. Overall this past quarter has been a tremendously busy time of accomplishment of existing efforts and beginnings of new efforts as we look towards the remainder of the fiscal year.
Operations and Infrastructure

MISSION

Operations and Infrastructure Services provide the MIT community with the fundamental IT services such as network and network-based applications, service operations and data aggregation and administration to support the full range of academic, research and administrative activities. The Operations and Infrastructure Services teams work collaboratively with all other IS&T teams and other IT groups throughout MIT to ensure the highest level of support and service to MIT’s students, faculty and staff.

Accomplishments by Program

Major Building Projects

• Brain and Cognitive Sciences
  o Completed the installation of the initial MITnet connectivity for the new Brain and Cognitive Sciences building. The initial connectivity provides support for the Andover Controls system, which provides the heating and cooling for the building as we enter the winter months.
  o Installation of the wiring to support the telecommunications infrastructure has been completed on several floors and work continues into the upcoming months.
  o Began working with Joanne Hallisey as the newly appointed Client Relationship Manager to ensure our efforts in the telecommunications space are in-line with client expectations.
  o Identified additional network requirements and requests from clients, which will require some further analysis of the existing wiring and telecommunications room designs.

• Broad Building
  o Proposed, developed, and installed a new underground duct bank from our system across Main Street in support of the Broad Institute. While this will have a direct positive impact for the Broad Institute, it also opens the door for other service opportunities for our clients East of Main St.
  o Began meeting with representatives including Bruce Walker and his team at Broad to identify and build the IT requirements for the new Broad building.
  o Worked with Telephony to develop a method to provide a shared Telecom Room (TR) within the Broad building.

• Keeping it running
  o Replaced the 10Mb/s repeaters in building W31 with 100Mb/s switches and a switched backbone to provide higher speed service in support of the WIN.MIT.EDU domain.
  o Upgraded 10Mb/s switches in building 5, which support the Architecture Department’s special use computing cluster, to 100Mb/s switches.
- Installed several SM fiber circuits to support the ACES Beowulf cluster in buildings 54, E34 and Stata
- Installed several SM fiber circuits to support CSBI bio-imaging cluster located in buildings NE47 and Stata
- Repaired and installed drops throughout campus in support of keeping MITnet running

**Wireless Campus**
- Completely wireless campus by end of FY2005
  - Upgraded or replaced approximately 800 wireless access points to support 54Mb/s wireless connectivity throughout the campus wireless environment.
  - Began surveys of remaining portions of east campus and main group for total wireless coverage
  - Met with Karen Nilsson of housing to develop a plan to provide additional wireless coverage to the dormitories and reached agreement to provide complete wireless coverage to Eastgate as part of the East Campus wireless project.

**Wired Campus**
- Upgrade remaining 10Mb/s backbone links and entry devices
  - Began development of a plan to identify which devices need to be replaced and which of the Telecom Rooms have adequate space to house the new additional equipment
- Higher speed connectivity for the FSILGs
  - Began exploration of a plan to identify higher speed connectivity options for the FSILGs located on the Boston side of the Charles River
  - Met with several vendors representing a variety of technologies including wireless and free space optics, in addition to direct fiber connectivity options.
  - Began more in depth explorations with Verizon regarding direct fiber connectivity to the Boston FSILGs
- Storm and Sewer Outfall Pipes
  - Working with the City of Cambridge and others influenced the redesigned and/or the relocation of the cities storm and sewer outfall pipes on or near our campus that would have caused us to relocate all of our primary network and telephone cables.
- Level 3 Metro Fiber Ring
  - Establish a diverse and redundant pathway into the campus. Pending negotiation with the City for a new resolution. We’ve reached an impasse with the current owner (Forest City Development). Expected completion: 12/31/04.
- Vassar Street West Streetscape
  - Working with Facilities and others complete the plan to remove the overhead lines on Vassar Street west and relocated them underground. 2/28/05
**Network Operations**

- **Backbone Switch Upgrade**
  - Purchased the necessary hardware components to add a second backbone switch to our core backbone, providing redundancy for our current core switch.
  - Redundancy for the core backbone switch will address the first item identified within the network audit report.

- **Disaster Recovery**
  - Identified potential locations for hosting critical services such as DNS, Kerberos, Web, E-mail routing and other potential services. Next steps will require further exploration and analysis of the various locations.

- **Mail system upgrades**
  - Completed deployment of dedicated clusters of Linux servers to provide dedicated resources for spam filtering and virus scanning functionality
  - Removed the processing burden for spam and virus scanning from the post office servers greatly reducing their load and enhancing performance
  - Upgraded older DMZ mailer servers and began using McAfee’s anti-virus product to scan messages at our e-mail border
  - Modified our outgoing mailer configuration to accommodate distinctly separate paths for outgoing mail sent with authentication, in order to avoid mail potentially being blocked because of unauthenticated mail tainting the outgoing mail path.

- **Server hardware upgrades**
  - Began replacements of aging mailer hardware and began to order hardware to replace remaining servers scheduled for upgrade

- **External connectivity**
  - Completed agreement with Sprint communications for a 1Gb/s commodity Internet link.
  - Completed agreement with Level3 communications for a 1Gb/s commodity Internet link with 500Mb/s of available service
  - Completed installation of new 6509 router at 300 Bent street co-location facility to support the new Sprint and Level3 connections and to add redundancy to our external connectivity

- **Network path redundancy**
  - Added redundancy to the network serving the building 24-router facility by connecting it to two separate routers and configured the links for failover using HSRP.

- **Redundant Fiber Pathway from E19 to W92**
  - Design and construct a riser system from basement to sixth floor. While the project is substantially complete, unanticipated drains and acid tanks must be
relocated on the 5th floor of E19. This project will also provide a pathway for the Broad Institute. Expected completion: 10/31/04.

- **Post Office Redundancy**
  - Acquired additional storage devices to provide capacity for the W92 and 24 locations.
  - Identified potential issue in the 24-router room with a lack of UPS capacity to accommodate additional servers for redundancy, and will require further investigation.
  - Additional servers have been acquired for installation in 24 pending resolution of the power issues

- **Migrate MIT search engine from Inktomi to Google**
  - Google appliance has been installed and configured within our server room.
  - Optimized Google searching to reduce time for indexing MIT site from 90 hours to 24 hours. This should ensure that searches performed against the Google appliance always return relatively current data.
  - Created custom search results to brand the look and feel to the MIT home page, IS&T, the News Office, and the MIT "Blue Pages" Offices Directory.
  - In parallel, began to retire Inktomi special collections that were no longer being used by clients. For example, the "jobs available" special collection (now being handled differently by HR).
  - Oct 31, 2004: Launch Google on the MIT home page, IS&T, News Office, and Offices web sites. This should accommodate about 60% of the web searching on the MIT network. Will have emailed announcement to the MIT community about the new Google search engine.
  - November 30, 2004: Will have presented a Quick Start class on the Google search engine, Is&t newsletter article, TechTalk announcement about Google, and "how-to customize your Google search" web site.
  - January 31, 2005: Assist the conversion of our clients' custom search forms so that 80% of the search queries are routed to Google (rather than Inktomi)

- **WWW migration**
  - Through cooperation with the SIPB, migrated the www.mit.edu service from management by SIPB to IS&T.
  - Migration included providing compatibility for existing www.mit.edu services so as not to cause loss of services to www users

- **Establish Kerberos trust with CSAIL**
  - Established a trust between the ATHENA.MIT.EDU Kerberos realm and the CSAIL.MIT.EDU Kerberos realm.
This allows CSAIL users who utilize Kerberos authentication within CSAIL’s computing environment, access to centrally provided Kerberos services without the need for additional authentication.

**Infrastructure Services**

- **Hardware and Software Upgrade for EDI**
  - Hardware and software upgrade of the EDI server environment is scheduled for the second half of FY2005

- **Replace Templar Software with internally developed or 3rd party solution**
  - Work to be completed in the second half of FY2005

- **Provide desktop archiving solution for use by OSP and or the Treasurer’s Office**
  - Product offerings have changed, since merger with OpenText. Had exploratory meeting. Awaiting bid from vendor.

- **EDI**
  - Brought Apple and Airgas on as new Trading Partners.
  - Initiated weekly 834 Benefits feed to Tufts, and 810 invoices for Minuteman Press.
  - Rewrote API scripts and transports for multiple trading partners

- **RT**
  - Casetracker Replacement
    - Attended project review, working on next steps with tooltime team.
    - Completion date: TBD, dependent on tooltime team
  - Libraries’ Ask Us instance
    - Have received agreement for SLA with Libraries. Determining production hardware/software platforms to comply with new standards. Completion Date: 12/31/04

- **Kerberos**
  - Develop and release Kerberos 5 version 1.4
    - Major milestone reached as multi-threading support was integrated into the trunk. This allows additional external testing with threaded applications. Multi threading support is the primary feature goal for this release
    - Delivered development builds to Apple
    - Produced internal development builds of Kerberos for Windows using the new multi thread enabled Kerberos library for early application testing
  - Security Update
    - Worked with partner vendors and CERT to coordinate the development and release of several security fixes for vulnerabilities discovered during this quarter.

- **Internet Engineering Task Force**
  - Attended 60th meeting in San Diego
  - Provided significant effort into the ongoing discussion of the PKINIT standard
  - Hosted the Kitten BOF to evaluate improvements to the GSSAPI specification

- **Windows 64-bit**
  - Acquired a x86-64 computer for initial testing of Kerberos for Windows on the developmental Windows 64-bit operating system
General
- Released Kerberos v5 1.3.5 which included security updates
- Released security patches for Kerberos v5 1.2.8
- Apple released MIT provided updates for Mac OS X 10.2 and 10.3 as part of their Security Update 2004-09-07
- Released Kerberos for Windows 2.6.4 and 2.6.5 to the general Kerberos community
- Hosted developer from Novell to focus on integration issues and specific future Kerberos developments

WIN Domain development
- Windows Server 2003
  - Collaborated with NIST in upgrading the domain controllers and production servers from Windows 2000 to Windows Server 2003
  - Provide testing and code revisions in support of the transition
- Release 4.1.1
  - Provided the 4.1.1 package for domain distribution. Improvements included new OpenAFS and Kerberos for Windows versions.
- Disconnected Operations
  - Optimization of domain configuration scripts and group policy for the support of disconnected and remote operations began development
  - Reached internal testing
- Printing
  - Transition of technology from KLPR to LPRng
  - KLPR repackaged for easier future removal
  - Continued testing of LPRng in the domain environment
- Back End
  - Improvements have been made to the propagation of Group Policy Objects from one domain to another for testing and development
- General
  - Developed and updated domain scripts directed by customer feedback include: checkquota, ansify-profile, fix-path, and reassign

Athena Development
- General
  - Completed 9.3 release for Red Hat Linux and Solaris platforms
  - Produced subsequent patch releases for 9.3
  - Included Mozilla 1.7 web browser for both platforms
  - Updated many software components to more current versions
- Solaris
  - Includes change to using Sun install packages, reducing ongoing maintenance costs for the platform
- Red Hat Linux
  - Updated to Red Hat Enterprise 3; resolved many conflicts due to moved packages from prior Red Hat releases
- Contributed effort to the Red Hat Enterprise IS&T release effort. This release effort went live this quarter with IS&T support for Red Hat Enterprise 3, updates via the Red Hat Network and important third party software add-ons
- GridMathematica
- Assisted in the design and deployment of two Mac OS X based parallel computing clusters for the Research and Academic High Performance Parallel Computing Project
- Designed and maintain the development cluster in W92
- Provided assistance during primary cluster testing during the summer by faculty, students and IS&T staff
- Evaluation of OKI framework to access such services begun

- Working with HR/Payroll to develop a data integration plan for providing SAP HR data from the Data Warehouse
  - Waiting for completion of Cyborg data cleanup by MIT HR

- Design and implementation of next phase of AAADE
  - Work to be completed in second half of FY2005

- Design and implementation of Data Warehouse solution for COFHE
  - Work to be completed in second half of FY2005

- Migrate production Warehouse environment from Digital Unix Tru64 with Oracle 8.1.7 to Sun Sparc Solaris with Oracle 9i
  - Work to be completed at end of FY2005/Q1 FY2006

**Server Operations**

- Expand TSM capacity to provide more robust backup solution for IS&T servers
  - Installed and setup FC switch obtained through IBM Matching Grants
  - Setup TSM to access tape drives in STK ATL in E40
  - Purchased hardware (tape drives, servers) and TSM licenses to handle 1st phase (1/3?) of server backup using TSM as well as expected desktop client growth
  - Migrated approximately 50 non-AFS Athena servers to TSM – Project 917. Working with VMSST to implement TSM backups for Oracle based servers. The target is to use TSM for 90% of applicable servers by 3/31/2005.

- Upgrade MITVMA/C software including DB2 to maintain vendor support (pending client scheduling)
  - Activity to start in second half of FY2005

- Upgrade HP SAN Infrastructure
  - Completed “SAN Health Check” with HP/Compaq. Currently examining enhancement options and costs. The target is to update the HP SAN by 12/30/2004.

- Identify new hardware software platforms for enterprise servers
  - Working with Roger Roach as part of the SAP hardware replacement project. Current Linux efforts include installation and support of approximately 40 Linux servers.

- Administrative and Academic server hardware upgrades
  - Major efforts include progress on: SSIT Infrastructure – Projects 915 and 969, Decommission TRU64 Platforms – Project 968, Athena Ultra 5, Ultra 60 Demise – Project 971, and the identification of an additional 13 to 18 servers for
replacement in the FY005 hardware Plan.

- Maintain data center
  - Additional DOST members trained in HID (hardware installation/removal) process
  - Planned for greater role of DOST staff working with co-location clients, previously handled by DOST management
  - Planned for and conducted tour by operator, previously done by DOST management
  - An additional DOST staff member trained for weekend coverage
  - Held all-staff meeting (covering 3 shifts)
  - Started planning for greater utilization of space outside the machine room by DOST staff; improvements to work environment and data center appearance discussed as well
  - Installed 37 servers (de-installed 4) for Server Operations, installed 12 servers for co-location clients (de-installed 1), printed 1,262,377 pages and 12,324,000 lines, closed 45 hardware logs

**Goals by Program**

**Major Building Projects**

- Brain and Cognitive Sciences Building
  - Provide telecommunications and network services for new Brain and Cognitive Sciences building.
  - Initial core building network services for September 2004 with building wide network and telecommunication services by September 2005.

- Broad Building
  - Provide telecommunications and network services for new Broad Building.
  - Expand MITnet to the new building by second half of FY2005.

- Support one to three large projects
  - Provide telecommunications and network services as required

- Keeping it running
  - Provide the continuing support and maintenance necessary to keep the telecommunications infrastructure up and running.
Wireless Campus
- Complete wireless coverage for the MIT campus by the end of 2005
  - Provide complete wireless coverage to all campus building excluding resident halls by June 30th, 2005
- Additional coverage in the dorms
  - Develop a plan in conjunction with housing to add additional wireless coverage to the dormitories by December 31st, 2004
  - Add the necessary additional wireless units to expand the wireless coverage within the dormitories based on the plan developed with housing by June 30th, 2005

Wired Campus
- Upgrade remaining 10Mb/s links and entry devices
  - Replace remaining 10Mb/s building uplinks with either 100Mb/s or 1000Mb/s uplinks by June 2005
  - Retire aging router platform by June 2005
  - Replace older repeater based building backbone with switched technology by June 2005

Network Operations
- Backbone switch upgrade
  - Upgrade MITnet core backbone switch to 10 Gb and a redundant configuration by January 2005
  - Eliminate MITnet backbone switch single point of failure by January 2005
- Disaster Recovery
  - Develop and implement a plan to provide disaster recovery for critical infrastructure components and MIT’s presence on the Internet by June 2005
  - Provide disaster recovery solutions for key infrastructure services include DNS, authentication, Web and e-mail routing by June 2005
- Server Hardware Upgrades
  - Upgrade aging and underpowered server hardware to more recent supported versions by March 31st, 2005
- Network Path Redundancy
  - Add redundancy to critical networks and services by developing dual diverse paths for each backbone router to two distinct backbone switches and from core routers to critical building network entry equipment by April 2005
  - Use additional network redundancy to augment disaster recovery strategy for key services by June 2005
- Keeping MITnet running
  - Maintain and support the MIT campus network throughout the fiscal year
- Redundant fiber pathway between E19 and W92
  - Construct an independent and direct single mode fiber pathway from W92 to E19 in order to avoid single points of failure in NW12 and Building 24 by April 2005
- Post Office redundancy
o Implement a redundant set of post office servers with replicated storage and hardware to provide for failover in the event of a disaster or failure in the W92 computer room by April 2005.

• Migrate MIT search engine from Inktomi to Google
  o Migrate the current MIT search service used on web.mit.edu and other campus web servers from the Inktomi search engine to the Google search appliance by June 2005.

**Infrastructure Services**

• Hardware and Software Upgrade for EDI
  o Upgrade EDI server hardware, software and database to supported versions by April 2005

• Replace Templar software with 3rd party or internally developed solution
  o Provide a more robust and scalable template solution for interoperability with SAP by April 2005

• Work with HR/Payroll to develop a data integration plan for providing SAP/HR data from the Data Warehouse
  o Work with the Controller’s Accounting Office and MIT HR to identify the business requirements for new HR/Payroll data in the Data Warehouse, and use these requirements to ensure a smooth transition to SAP as the system of record for HR data by June 2005

• Design and implementation of the next phase of AAUDE
  o Build upon the work of the initial AAUDE effort to continue to develop an integrated reporting solution for the participating Universities by April 2005

• Develop and release Athena version 9.4
  o Develop Athena release 9.4 for Linux and Solaris platforms providing Operating system upgrades and updates to 3rd party software packages by June 30, 2005

• Develop and release Kerberos 5 version 1.4
  o Development and release of Kerberos 5 version 1.4 for Macintosh, Unix and Windows by June 2005

• Develop and release WIN.MIT.EDU version 5.0
  o Enhance and expand the existing TSM backup service to provide a viable backup solution for servers, which today perform the backups through directly attached tape drives by April 2005

**Server Operations**

• Expand TSM backup capacity to provide more robust backup solution for IS&T servers and external customers
  o Enhance and expand the existing TSM backup service to provide a viable backup solution for servers, which today perform the backups through directly attached tape drives by April 2005

• Upgrade MITVMA/C software including the DB2 database to maintain vendor support
o Upgrade the DB2 databases supporting Payroll and Property from version 7.1 to 7.3 by June 2005.
  o Upgrade the z/VM operating system from version 4.3 to 4.4 by June 2005.

• Upgrade the HP SAN infrastructure
  o Update our existing HP SAN environment to a higher capacity and more stable configuration by January 2005

• Identify new hardware and software platform for enterprise servers
  o Evaluate and identify a new hardware software platform for enterprise services, potentially Linux by March 2005

• Administrative and Academic server hardware upgrades
  o Upgrade aging and outdated server hardware to higher performance and more recent supported versions by June 2005

• Maintain and support Administrative and Academic computing environments
  o Provide the support, maintenance, upgrades and fixes necessary to keep the Administrative and Academic computing environments running

• Maintain Data Center
  o Provide operational support for servers (including hardware installations systems monitoring, backups), co-location services, and central print services
  o Plan for longer term utilization of current DOST staff by expanding roles and incorporating professional development as needed
VI. Telephony and Shared Services - Executive Summary

A major focus during this quarter was completing the negotiations for new carrier contractors, and implementing the subsequent system and procedural changes. These contracts will result in lower cost to MIT (in some cases reflected in FY05 customer billing; in other cases the customer will not see until FY06.) The transition of the calling card service from AT&T to Qwest was especially complex, and, due to unexpected issues on the vendor side, the transition was delayed until October 1.

Another major activity was upgrading the switch operating system. We experienced a bug in the SW, which, when combined with Democratic National Convention, vacation plans and other issues, resulted in a 3 month delay for implementation; it was completed as per the revised schedule. Some technical questions have developed since the upgrade, requiring vendor escalation, and thus delaying the rollout of some functionality. A related goal is to put the NameConnector in front of the switch (i.e., the NameConnector would be the default for callers to MIT); this is now targeted for early November.

Ongoing operations, such as telephony moves, adds, changes continued as usual, with volumes remaining essentially flat, and showing improvement in the ‘defect rate’ for service requests.

New initiatives included reviving the ACD project, initializing more formal VoIP investigation, and addressing cell phone coverage on campus.

In general, teams in Shared Services made progress on the goals. While many original target dates were not met, this typically reflected an agreed to change in priority, scope and/or approach. Work on high visibility projects such as Telephone and Network Pricing Project, the FY04 Fiscal Closing and the Cost of IT@MIT was generally on target.
Telephony and IS&T Shared Services

Telephony

MISSION OF TELEPHONY SERVICES

Mission: Telephony’s purpose is to provide robust, reliable, cost effective, and integrated telephony services (voice, voice mail, conference calls, etc.) to the MIT campus community. Ongoing/recurring activities include maintenance, repair, and documentation of the telephone infrastructure including the MIT owned telephone switch, handling customer requests for moves, adds, changes, repairs, as well as billing questions, scheduling the audio-bridge, and providing MIT directory assistance.

Program: Provide Telephony Infrastructure

Maintain the MIT owned telephone switch and telephony infrastructure

Major switch upgrade was applied during this quarter. Although this will position us to deliver increased functionality, such as caller id pass through and integrated cell phone, there have been technical problems, which has delayed the rollout of some new functions, including delaying putting the NameConnector in front of the switch, now scheduled for early Nov.

Completed an on schedule move of the microwave to a location with more stability / reliability.

Engage in large Voice over IP (VoIP) project

Meetings with Media Lab to understand their 200 person implementation, production issues, etc.. Meetings with vendors re: VoIP. Proposal for more specific next steps by 12/31/2004.

Implement new Automated Call Distribution (ACD) and introduce ACD service, working with Client Support Services, and other MIT groups interested in ACD

Identified a local consultant, used by Harvard for their CIM (Client Integration Management nee ACD) implementation. Admissions is interested. On track for having an actionable proposal by 1/31/05

New- Improve cell phone coverage on campus

Investigating options and getting proposals from various vendors to address the in-building issues; target is specific proposal for Brain and Cognitive Science building by 12/31/04.

New- Investigate MIT infrastructure and/or vendor relationships for MIT ‘independents’ (e.g. FSLIG, etc)

New – Investigate options for lower cost pricing for home connectivity
Program: Provide Telephony Customer Services

Provide telephony customer services, including orders, repairs, billing and operators
Reduced level of errors in service orders from 2.65% at the end of last quarter to 0.92% at the end of September, 2004

Support new buildings, major renovation projects
Engaged in Brain and Cognitive Sciences bldg, Broad building; coordinated telephony move for Credit Union; cleaned up old phones in NE43

Provide audio bridge audio conferencing services
Introduced new online request form for reserving the audio bridge.

Program: Provide 3rd party telephony services (long distance, calling card, etc.)

Implement new carrier contracts
Carrier contracts for local, long distance, international, student/residential, PRI/T1, were signed; all result in lower cost to MIT. Contract for calling card signed, and new calling cards rolled out; new Qwest calling card option went live Oct 1 (ahead of revised due date). Transition of calling cards involved contacting all AT&T calling card holders via email to notify them of the change, and getting the cards to them (in many cases via the AO).

Work with 3rd party audio conferencing services to identify high quality, low cost provider
 Evaluated responses to teleconferencing RFP; due to issues with the calling card rollout, the evaluation has missed the original target date; a revised decision date is 10/31/04.

Audit carrier invoices
In order to enhance our auditing of carrier invoices, and realize increased savings, we will be entering into a contract with a local firm (Profit Enhancement) that specializes in auditing and rectifying carrier billings. They also guarantee that the cost savings we receive will be at least equal to the cost of their contract.
IS&T Shared Services

MISSION OF IST SHARED SERVICES

Shared Services’ purpose is to provide quality financial, site and human resources services to IS&T staff, particularly the IS&T Leadership Team and supervisors. Ongoing financial services include preparation of quarterly forecasts, monitoring and reconciling expenses. Ongoing site and administrative services include site maintenance, scheduling meetings and trips, arranging events, coordinating office moves, receptionist. Ongoing human resources services include assistance with hiring, terminations (including layoffs), employee relations, staff development, and organizational design.

Program: Provide organizational administrative services (i.e. HR, financial and administrative services) needed to keep IS&T running.

Provide accurate and timely financial services, including quarterly reporting, transactional processing, etc.

The IS&T Finance team, with help from the site team, and cooperation from Directors and Managers, completed FY04 closing on time. As part of an Institute/EVP initiative to improve the linkage between the HR view of staffing and the Budget Office view, the Finance Team and CG worked together to implement the new process for quarterly position tracking.

Provide accurate and timely HR transactional support (hiring, terminations, promotions, compensation, etc)

CG continued to be the focal point for HR process. Allison regularly provided an updated Open Positions list, as well as sending a monthly staffing update to all IS&T staff. Between July 1 and Oct 12 over 60 positions had staffing related activity - 12 positions posted, and 13 posted positions were closed (an offer was accepted). The median time from posting to position closed was 56 days. (HR Executive, September 2004 reported that the average time to fill positions was 48 days). Nearly 40 staff were considered for discretionary bonuses, with 16 awarded. 8 staff left IS&T for an annualize attrition rate of 8%. There were also miscellaneous other staffing/HR related interactions: on average, during the quarter, CG Liaisons worked with over 90% of the key managers, and nearly 50% of staff. Submitted IS&T Affirmative Action report on time.

Provide helpful, effective, timely and accurate administrative services to IS&T staff;

provide building ‘landlord’ services to W91, W91 and N42

Site staff responded to over 2100 requests during the quarter, including security issues, coffee/tea/water, supplies, computer disposal, facilities, copier/toner/printer/fax repair, parking, meetings, food for meetings, deliveries, lost and found, phone moves, phone outages, keys, vacation reporting, etc. Site staff also handled over 1000 Support Staff and student payroll transactions.

Support IS&T VP projects such as IT Service Center pricing project, determining cost of IT at MIT, programmatic budgeting, Resource Model, etc

The Finance team provided significant support to the Pricing Project, enabling an on time delivery of a pricing proposal to Budget and Finance Steering Group; the Cost of IT @ MIT project, enabling on time delivery of preliminary results to IT-SPARCC;

Support Directorate projects, such as Cable TV business model; analysis of costs/revenues, etc
Program: Improve Organizational Effectiveness

Support more effective project management in IS&T
Competency Group’s planned project management activities were merged into the Project Management Methodology project in the IST-VP office, and the timeline for CG activities revised in light of the overarching project. Project tasks, such as some revised Project Management web pages, and discussion forums, were completed during this quarter.

Lead the way in promoting performance management throughout IS&T
Conducted ‘6 Conversations’ Performance Management process training in one CSS team; update training with Administrative Computing.
One goal - to facilitate IST-LT review of managers, ensuring IST-LT awareness of managerial strengths, opportunities for development and growth by 9/30/2004 - was not met; this has been revised to 2/2005.

Facilitate creation of an excellent work environment, one where the people we want to stay also want to stay
Developed plan for IST workplace survey, based on the Gallup 12 to be conducted in Oct (about a month behind original goal)
# IV. Appendices

**APPENDIX A: IS&T Quarterly Financial Report Q1 FY2005**  
Information Services & Technology  
Quarterly Financial Report  
Fiscal Year 2005 - First Quarter

## IS&T BASE GENERAL BUDGET

<table>
<thead>
<tr>
<th></th>
<th>Year to Date Actuals (July - Sept)</th>
<th>Remaining Projection (Oct - June)</th>
<th>Projected Year End Total</th>
<th>FY05 Annual Budget</th>
<th>Projected Year End Variance ($)</th>
<th>Projected Year End Variance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$ in thousands</strong></td>
<td></td>
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<tr>
<td><strong>REVENUE</strong></td>
<td>($376)</td>
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<td>($3,462)</td>
<td>($3,403)</td>
<td>$59</td>
<td>2%</td>
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<td><strong>EXPENSE TRANSFERS (OUT) / IN</strong></td>
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<td>($7,772)</td>
<td>($9,943)</td>
<td>($9,808)</td>
<td>$135</td>
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<td>Salary &amp; Wages</td>
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<td>Employee Benefits</td>
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<tr>
<td>Travel &amp; Professional Development</td>
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<td>$689</td>
<td>$772</td>
<td>$748</td>
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<tr>
<td>Materials &amp; Services</td>
<td>$1,680</td>
<td>$8,796</td>
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<td>($103)</td>
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<tr>
<td>Equipment</td>
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<td>Professional Services</td>
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<td><strong>Subtotal - All Expenses</strong></td>
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<td>$34,302</td>
<td>$43,151</td>
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<td><strong>NET TOTAL</strong></td>
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## TELEPHONE & NETWORK SERVICES CENTER (TNSC)

<table>
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<tr>
<th></th>
<th>Year to Date Actuals (July - Sept)</th>
<th>Remaining Projection (Oct - June)</th>
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<tr>
<td><strong>REVENUE</strong></td>
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<td><strong>EXPENSE TRANSFERS IN / (OUT)</strong></td>
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<td>Depreciation</td>
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<td>Interest</td>
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<td>$559</td>
<td>$559</td>
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<tr>
<td><strong>Subtotal - All Expenses</strong></td>
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<td>$5,589</td>
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<tr>
<td><strong>NET TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>($43)</td>
<td>-1%</td>
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### IS&T BASE GENERAL BUDGET

<table>
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<tr>
<th>Area</th>
<th>Year to Date Net Actuals (July - Sept)</th>
<th>Remaining Net Projection (Oct - June)</th>
<th>Projected Year-End Net Total</th>
<th>FY 2005 Annual Net Budget</th>
<th>Projected Year-End Net Variance ($) (Bud-Act)</th>
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<tr>
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<tr>
<td>Academic Computing</td>
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<td>Administrative Computing</td>
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<tr>
<td>Operations &amp; Infrastructure Services</td>
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<td>0%</td>
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<td>Client Support Services</td>
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<tr>
<td>Telephony Services</td>
<td>$7</td>
<td>$30</td>
<td>$37</td>
<td>$37</td>
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<tr>
<td>IS&amp;T Shared Services</td>
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<td>$1,089</td>
<td>$1,430</td>
<td>$1,430</td>
<td>$0</td>
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<tr>
<td>Other (includes Special Projects)</td>
<td>($124)</td>
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<td>VP for IS&amp;T</td>
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<td><strong>IS&amp;T BASE GENERAL TOTAL</strong></td>
<td><strong>$6,302</strong></td>
<td><strong>$23,444</strong></td>
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<td><strong>$29,746</strong></td>
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### TELEPHONE & NETWORK SERVICES CENTER (TNSC)

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<th>Profit Center</th>
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<td></td>
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</tr>
<tr>
<td>TNSC</td>
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<td>($1,749)</td>
<td>($2,947)</td>
<td>($2,990)</td>
<td>($43)</td>
<td>-1%</td>
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<tr>
<td><strong>TNSC TOTAL</strong></td>
<td><strong>($1,198)</strong></td>
<td><strong>($1,749)</strong></td>
<td><strong>($2,947)</strong></td>
<td><strong>($2,990)</strong></td>
<td><strong>($43)</strong></td>
<td><strong>-1%</strong></td>
</tr>
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