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Letter from the Vice President

This annual report for FY06-07, OIT’s sixth full year, summarizes and celebrates our continuing efforts to support the University’s information technology needs. Among the various achievements of the past year, I would like to highlight a few of those that can be found within the pages of this report.

Over the past year, we conducted a university-wide planning process to identify those IT strategic directions that will be critical to Princeton’s success in the coming years. Over the course of several months, OIT reached out to over 1000 members of the Princeton community, conducting individual interviews and focus groups with faculty members, undergraduate and graduate students, administrators, staff and trustees. The four areas identified as highest priority include: security and data management; digital content management; collaboration tools and remote access; and IT support. We have begun to chart the directions we believe we must take going forward and are developing a set of specific initiatives that respond to these findings.

Working with the library, we are developing a comprehensive strategy for the production, management, preservation, and use of digital content. A three-year term position has been created for a digital content management architect, who will be responsible for developing an enterprise-wide digital content management strategy to maximize the utility of our digital assets, in support of teaching, research and scholarship.

In FY06, Princeton acquired three large central high-performance computing (HPC) systems dedicated to research computing. These computers provide faculty a world-class computational research environment and solidify the partnership between OIT and faculty in support of research computing. This past year, through a close partnership with PICSciE, the Provost’s Office, and individual faculty, we acquired our most powerful HPC system thus far, with a computational capability of 8.2 teraflops. We also acquired the /tigress file system, providing 50 terabytes of high-speed disk storage, to be shared among all of our HPC systems. Finally, OIT and PICSciE jointly created, and formally named, the TIGRESS High Performance Computing Center.

Our greatest organizational challenge this coming year will be the design of a new OIT building at 701 Carnegie Center in West Windsor. We are moving approximately 55% of our staff to this new building and consolidating 5 locations around campus. For the first time, a majority of our group will be located together, fostering opportunities for increased collaboration between all our departments.

We in OIT are grateful for the opportunity to serve the University. We will continue to look for ways to enhance Princeton’s IT infrastructure and services and are thankful for the continued support of the students, faculty, and staff we serve.

Betty Leydon
Vice President for Information Technology and Chief Information Officer

2006-2007 Annual Report
OIT Mission and Goals

The mission of OIT is to enable the effective use of information technology in support of the University. In pursuit of this mission, OIT’s goals are to

- Deliver information technology products and services that meet the needs of the University community and achieve the highest level of customer satisfaction;
- Support the use and development of information technology to enable innovation in teaching, learning, research, and scholarship;
- Provide leadership in planning for the effective use of technology;
- Provide a robust, reliable, and secure information technology infrastructure;
- Attract, develop, and retain quality information technology professionals;
- Enable communication and collaboration among information technology professionals and users of information technology at the University.

OIT Core Values

We strive to provide excellent service to the University community. We value professionalism, communication, respect, and integrity and we commit ourselves to:

**Excel**—We aim for excellence in everything we do. We endeavor to exceed the expectations of our customers and colleagues. We recognize exceptional performance.

**Learn**—We are committed to the professional development and personal growth of our members. We encourage collaboration and take advantage of learning opportunities.

**Listen**—We value the opinions of all stakeholders and give fair consideration to their perspectives. We listen and learn from each other, as good ideas can come from anyone.

**Inform**—We disseminate accurate information in a timely manner. We promptly share decisions with those affected by them.

**Participate**—We strive for inclusive processes and to reach decisions by consensus when appropriate. We are responsible for staying involved and informed.

**Show Respect**—We are honest, responsible, reliable, thoughtful, responsive, and well mannered. We act with integrity.

**Enjoy**—We foster an environment where creativity, diverse ideas, humor, and fun are encouraged. We enjoy what we do and celebrate our successes.
FY07 By The Numbers

166,100,000,000,000,000,000 Floating point operations performed by our high performance systems
500,000,000,000,000,000 Bytes of storage maintained by the University’s TSM backup system
14,139,482,177,536 Bytes of data stored in the /tigress high performance computing facility
2,767,729,983,488 Bytes of storage maintained within 164 administrative databases
1,300,000,000,000 Bytes stored in electronic discussion lists
1,500,000,000 Bits per second in combined Internet and Internet2 bandwidth
1,066,837,043 Intrusion attempts blocked
75,180,765 Files stored on central file servers
7,991,793 Sheets of paper sent through 42 cluster printers by 7,429 unique users
7,604,775 Distinct Logins to the Information Warehouse
7,206,901 Downloads of Lunch ‘n Learn podcasts from the Apple i-Tunes store
2,347,784 Launches of software on cluster computers
2,215,622 Logins to the princeton.edu domain
1,400,000 E-mail messages processed daily
579,594 Logins made to OIT cluster computers in 32 computing and print facilities
539,635 Help Desk responses to phone inquiries and e-mail inquiries
325,000 Dollars in software sales
211,491 Logins recorded to 232 public UNIX servers
147,373 Vouchers processed in the University Financials system
145,930 Donations processed to Alumni Giving
72,496 Calls answered by University operators
33,689 Purchase orders processed
12,562 W-2s printed for tax year 2006
10,076 Financial Aid applications processed
7,508 Customer visits served by the Solutions Center’s Clinic
6,380 Applicants who read their decision online within the first five minutes
3,400 Changes to telephone service or equipment
3,223 Housing units selected using the new online Room Draw application
3,202 Jobs performed by Media Services, including 796 course-related jobs
2,814 DVDs in our collection, an increase of 62% from last year
2,600 DeSC machines supported
1,897 Members of the University community attended 308 training classes
1,288 Computers sold in the Student Computer Initiative (651 Dell and 637 Apple)
1,006 Members of the University community participated in Strategic Planning focus groups
772 Migrations to Exchange e-mail
550 Student Computing Initiative computer re-imagings performed
478 LISTSERV distribution lists created
310 Courses using the Video on Demand service
200 New solutions added to the OIT KnowledgeBase
183 Computers purchased through the Faculty Computer Purchase program
135 Windows servers maintained
100 Submissions by employees to OIT Expressions, OIT’s first fine arts and crafts exhibit
89 OIT employees participated in Myers Briggs Type Indicator (MBTI) workshops
72 Participants in seven “Project Management Made Easy” workshops
61 Departments or programs served by 52 SCAD members
45 Print publications produced by OIT Communications Services
10 OIT Achievement Awards, to those who exemplify OIT’s Core Values
1 Very special friend and colleague, Dan Oberst, who we all miss and to whom we dedicate this report
0 Dial-in remote ports, retiring this legacy service and saving $35K annually
FY07 OIT Timeline

July 2006

The University simplifies the funding and accounting for basic network connectivity costs. For all academic departments and most administrative units, network connections are now provided through centralized funding. This eliminates monthly billing to departments for network connections and makes network access essentially free to academic departments and most other units.

The University increases its connection to the Internet to 1 gigabit per second (Gbps) and its Internet2 connection speed to 500 megabits per second (Mbps). The total represents a five-fold increase in bandwidth that will facilitate such activities as transferring large data sets, conducting interactive or remote research projects, and sending, or receiving, live lectures or large data sets, conducting interactive or remote research projects, and sending, or receiving, live lectures or remote research projects.

As a result of newly acquired disk technology and efficiencies achieved through better server management software, OIT expands e-mail quotas and reduced costs to users. Default quota for e-mail increases from 55 MB to 200 MB. This change applies both to users of the IMAP mail service as well as the Exchange service. The quota increase provides needed relief for customers who were battling to reduce their e-mail folder sizes.

PeopleSoft e-benefits goes live. The application permits employees to make their benefit changes via the internet. In prior years, employees had to fill out and mail in paper forms. The open enrollment period in the fall is extremely successful when 67% of University employees make their changes using the new web application. This is a great savings in time and effort for the Benefits department.

For the first time, incoming freshman entered their address and other personal information directly into an online web form integrated with the freshman website. This information is critical for communications about tuition billing and grade distribution.

August 2006

The University provides additional funding to OIT to improve its ability to make widely-used academic software available to academic departments through campus-wide site licenses.

Last year at this time, the University’s wireless infrastructure covered approximately 40% of campus. Recognizing the importance of a ubiquitous wireless infrastructure, OIT and the Provost’s Office initiate a plan that centralizes the funding of wireless and completes the rollout of wireless to the rest of campus. OIT completed the installation of wireless in the remaining academic buildings, administrative buildings, and the libraries.

OIT implements RSS (Really Simple Syndication) feed to help keep the campus community informed of updates on their favorite websites. RSS is an alternative way of getting information that is gaining in popularity on the World Wide Web. Using RSS, instead of directly visiting your favorite websites, the campus community can now have the information delivered to their desktop in a single consolidated interface.

The Blackboard course information system is upgraded to release 7.1 and delivers enhanced functionality, including a completely redesigned Discussion Board, enhancements to the Gradebook and Assessment modules, a visual text box editor, revisions to the Sectioning Tool, more powerful blog and wiki tools, and additional language packs, in time for the new academic year.

An open source product, Groundwork, replaces the existing IBM Tivoli monitoring software, reducing the annual maintenance fees by approximately $30,000 a year. The annual cost is now independent of the number of computer systems being monitored. As a result, we can more cost-effectively accommodate growth in the data center.

September 2006

The Productive Scholar learning series is OIT’s latest initiative in support of teaching, research, and scholarship. These weekly, one-hour, walk-in presentations are intended to demonstrate how desktop applications can improve the productivity of faculty and students without taking precious time away from their academic and scholarly work. Each session’s handouts include links for supplemental resources and a list of recommended references. Additional hands-on training is available for every session. Faculty can request follow-up, in-office visits, and supplemental sessions can be arranged for entire departments. Special, hands-on clinics have also been organized for various applications.

OIT implements online language placement testing through the Blackboard course management system, saving $15,000 annually on licensing and maintenance fees for custom software developed by an external consultant. As a result of the success using Blackboard, the Asian languages have also begun to offer their placement tests online.

OIT announces a new OIT home page that combines the best features of the previous OIT and Help Desk pages. The new page provides all the useful, timely information from the Help Desk page, as well as links to OIT services listed on the OIT page. The layout of the page is more consistent with the new Princeton University web page style.

The first issue of IT’s Us, an internal OIT newsletter, for and about OIT staff, is published. OIT employees volunteer to author and disseminate the electronic newsletter on a quarterly basis.

Matt Petty, Machine Room Facilities Manager receives the CIO award from Betty Leydon during the September 26 all-OIT meeting. Matt has worked at 87 Prospect for nearly 19 years. During the past year, Matt played a critical role in responding to machine room outages.
October 2006

OIT initiates an IT strategic planning initiative and begins to assess IT trends and perform IT comparisons with peer institutions in key IT service areas. Faculty, staff and students are invited to participate in focus groups to share how they use technology today and how they see using technology in the future.

OIT works with the Physics department, the Genomics Institute, and the McGraw Center to pilot the use of personal response units (“clickers”) in the classroom. Clickers are widely regarded as being useful pedagogically in large lecture classes, where they help keep students engaged, and provide personal feedback to the instructor on the extent to which students understand the material being presented. OIT purchases additional sets of clickers that can be borrowed for occasional use in any course.

OIT launches a server virtualization effort that consolidates many small systems onto just a few large servers. By reducing power and cooling, the University is achieving substantial net savings of electrical power.

The Office of Undergraduate Admission introduces the Online Checklist. Prospective students can now monitor the status of all aspects of the admission application.

OIT offers a new blog service (http://blogs.princeton.edu) to the University community. Blogs have become a standard tool for personal publishing on the web. Some University uses for blogs include course blogs; faculty blogs; collaborative research blogs; student journals.

The new OIT Buddy Program helps new OIT employees feel more welcome within the organization. Current employees voluntarily pair with a new employee, taking them to lunch, going on an Orange Key tour, or simply answering questions about life on and off campus. In addition, new staff members receive an OIT welcome packet, attend an OIT orientation session, and meet with the CIO in Nassau Hall.

November 2006

With the support of the Provost, the Office of Communications and OIT develop and implement a new strategy for website development. Department representatives can attend an Introduction to Roxen course and receive access to several standardized web page templates. Departments are now able to migrate their content, text and images as well as the navigation, to the new Roxen web content management system. Nearly 100 attendees develop approximately 50 web sites.

OIT extends cell phone service via the campus fiber optic cable system to the B level of the Frist Campus Center. Test results indicate that coverage vastly improves throughout the Frist B level as a result of this “targeted” deployment.

A newly documented procedure helps University departments and offices that need to send out e-mail messages to large groups or segments of the University community through the use of automatically generated e-mail distribution lists. OIT’s Office of Printing and Mailing now offers this service at no fee to those who receive proper authorization.

OIT begins a new, more cost effective approach to writing documentation. The strategy, minimalism, aims to reduce documentation page counts by 50% while focusing on what users really need to know. The new approach will reduce documentation costs, reduce time to develop documentation, and create a path for moving into a single-source documentation environment.

OIT develops a new internal Facebook to enable OIT employees to submit their own photos as well as to list special interests. The OIT Facebook provides a venue for OIT employees to network with their colleagues who share similar interests and is one of many initiatives aimed at making OIT a more welcoming environment for all employees.

December 2006

The University signs a contract with Ruckus Network, Inc. to permit students with Windows-based computers to download music legally from its 1.5-million song library. Although only a portion of the University’s copyright infringement “takedown” notices involve the illegal sharing of music, the agreement does offer a legal option for obtaining music.

Working with University offices and departments, OIT completes an assessment of identity management and system security practices at the University, facilitated by Oracle Corporation.

In conjunction with the Office of Communications, OIT actively promotes safer and more secure computing practices through the Password Security Campaign. The latest effort is the Change It - Don’t Share It campaign poster that is prominently displayed in many campus locations. At the end of each month, OIT awards a 4GB iPod Nano to an individual randomly selected from those who used the Password Management Facility to change their password that month.

Wireless connectivity, in addition to wired connectivity, is made available in the Hibben-Magie apartments for the first time. Wireless connectivity in the fourteen buildings of the Lawrence apartment complex was completed during the summer.

OIT upgrades Resource 25 / Schedule 25 to release 3.3 and delivers new functionality for classroom and event scheduling. A welcome new feature is the ability to have multiple web viewers to display room availability and reservations at the same time.

OnTime calendaring is decommissioned. All users have been migrated to other calendaring solutions, including the Microsoft Exchange e-mail/calendaring system. The use of integrated e-mail and calendaring functionality enables more timely and effective communications.
January 2007

Working with the Office of Disability Services, OIT delivers custom functionality within the University’s PeopleSoft system to address the requirements of students with special academic, medical, and housing needs. The new system offers specialized data fields, web functionality, technical support, backups, and access to their data within the University’s Information Data Warehouse.

With OIT’s assistance, the Housing Office introduces an online room draw process. The web room draw system consists of six sections: Undergraduate and graduate electronic contracts; Undergraduate room draw application; Graduate room draw application; Graduate room selection; and Waitlist application. The new system replaces a manual process in which students reported to a specified location at a scheduled time to select their rooms. The Daily Princetonian reports that the new system “is being met with general praise” and that it is “more convenient” with “really cool features.”

Microsoft makes available their new Vista operating system, the successor to Windows XP. While this exciting new product offers several enhancements and features, there are at this time no systems or applications at Princeton that require Vista. Until testing is completed, OIT does not recommend upgrading Windows operating systems to Vista.

In the winter issue of IT Matters, OIT begins the first of a four-part series discussing best practices for managing computer servers on campus. The purpose of this series is to describe the practices needed to keep these systems as secure as possible.

February 2007

Two faculty members, PICSciE, OIT, and a number of academic departments jointly contribute to the acquisition of the University’s fourth high-performance computing resource within the Terascale Infrastructure for Groundbreaking Research in Engineering and Science (TIGRESS) High Performance Computing Center. The new Dell Beowulf cluster, Woodhen, contains 192 nodes each with two dual core Intel Woodcrest processors and 8 GB of RAM. Following the arrival of the hardware in early February, OIT, PICSciE, and Dell quickly installed and configured the operating system and research software.

OIT purchases the Google Search Appliance to improve searching capabilities on Princeton University’s website. The first department to implement the appliance is the Office of Undergraduate Admission, when they deploy their new website for prospective students.

Working with the Treasurer’s Office, OIT implements the new Restricted Funds database and reporting through the Information Data Warehouse. Through a Warehouse “drilldown,” departments can view actual gift agreements.

Using the University’s training database and registration system, employees can now get reports showing their individual training history. With a click of a button, employees are able to obtain a listing of all classes taken through OIT, Office of Human Resources etc.

The University initiates a building study to re-locate most OIT staff to 701 Carnegie Center. The OIT Cabinet participates in a visioning session; OIT employees participate in a workplace survey, personal interviews and focus group sessions; groupwork observations are to be conducted.

Nearly 100 OIT employees, the OIT Leadership Group, and several OIT workgroups participate in Myers Briggs Type Indicator (MBTI) workshops to identify personal preferences and to improve communication and collaboration.

March 2007

On Sunday, March 4, all Exchange calendars are automatically updated using the Microsoft recommended Daylight Saving Time (DST) correction procedure.

OIT, PICSciE, and the faculty collaborate again to create a shared 35 TB data storage facility for use on all of the TIGRESS High Performance Computing Center resources. The TIGRESS user community gains access in early March. Purchased from IBM, the storage system uses IBM General Parallel Filesystem (GPS) to provide high-performance, shared access across a large number of systems.

The OIT Help Desk offers support through Instant Messaging (IM), as yet another way for the University community to reach Help Desk support staff. In recognition of the ever-increasing amount of time people spend online and the pervasiveness of text messaging, the new IM service allows users to receive instant support using a convenient and familiar technology.

OIT launches Enabled Voice Mail (EVM) service for all faculty and staff at no fee. EVM converts voice mail messages into audio files and sends them to individual inboxes as e-mail attachments. Customers can then listen to the messages, delete them, forward them, or archive them, as they would with any e-mail.

In preparation for the Microsoft Vista/Office 2007 migration, OIT purchases quick reference cards for all desktop productivity tools in the software suite from Nevada Learning Series, at a significant discount, eliminating the need to develop the quick reference cards in-house.

OIT sponsors Storytelling: Exploring Diversity/Building Community, a workshop facilitated by Susan Danoff ’75 (professional storyteller, author and teacher) and Hetty Baiz. Thirty OIT employees participate in two separate workshops in which storytelling and other creative communication tools are used to explore topics related to diversity and life experiences.
April 2007

After reviewing IT trends, assessing IT capabilities and services at our peer institutions, and conducting focus groups involving more than 1,000 members of the University community, OIT drafts Information Technology at Princeton in the 21st Century: A Strategic Direction. This document describes and recommends the steps the University should take to consolidate and strengthen its engagement with information technology.

OIT makes available nearly 800 digital files of public events and lectures on a new podcast website for downloading by audiences on and off of campus. Easily used by anyone with an MP3 player, the podcasts feature distinguished speakers dating back to 1999.

This year for the first time, undergraduate applicants learn whether or not they are accepted to the University via a secured online website. Offered as a supplement to the regular mailing, this new service is instantly popular. 13,000 of the 15,000 applicants who sign up to use the service view their decision online on the first day.

OIT offers two mobile computing solutions to faculty and staff traveling on University business. The BlackBerry Device Loaner Program offers a portable wireless e-mail solution for Exchange e-mail customers while on the road. Also available for loan are wireless broadband data cards that make high-speed Internet access possible over a wireless network using a laptop computer.

OIT’s Educational Technologies Center creates a Princeton University “island” in the virtual world, Second Life. The island is a place where members of the University community can experiment with potential uses of Second Life in teaching and learning.

May 2007

OIT implements TotalView, a parallel debugging software package that runs on the four major TIGRESS high performance computing systems: Della, Hecate, Orangena, and Woodhen. The software will help University researchers program more quickly and will eliminate errors within existing computational codes.

OIT introduces a security check-up service that assists University departments to safeguard confidential data. As part of this service, OIT reviews departmental systems for vulnerabilities, assesses information access controls, and evaluates the methods used for data exchange and backup. At the end of the check-up, OIT provides the department with a written report and recommendations for improving security.

The Emergency Preparedness Task Force implements Connect-ED, a new notification system that can quickly and efficiently disseminate critical information to members of the University community during campus emergencies. The University can use Connect-ED to notify the entire campus of emergency situations or to send targeted messages to certain individuals in a specific building or department when alerts do not concern the entire campus. On May 11, the University conducts a campus-wide test of its new emergency notification system. During the Connect-ED test, the University successfully makes 12,450 calls to cell phones and landline phones, and sends 14,000 e-mails and 896 text messages.

OIT offers a new service to graduating students, the Digital Suitcase. This is a suite of online tools to help those leaving the University “pack” their IT property, including their e-mail messages, server files, and blog entries.

To provide technology training to the entire University community, OIT begins offering an Introduction to the Computer curriculum within an environment that is non-intimidating to the new or inexperienced computer users. As a result of the popularity, OIT is expanding the curriculum to include e-mail, web browsing, and data management.

June 2007

The expansion of the New South data center permits OIT to expand the number of critical services ready for rapid restoration. Currently, services provided out of this alternate data center include Internet access, basic e-mail, access to main University web pages, and connectivity to eleven critical buildings. In the future, services will include University financial systems, human resources systems, Office of Development systems, student systems, Blackboard academic systems, departmental web pages, and centrally-licensed academic software.

Working with Dining Services, OIT deploys an electronic message board in Forbes as a pilot. As a result of the successful pilot, e-Menus are implemented at additional dining halls, including Rocky Mathey and the new Whitman College.

OIT hosts its first annual staff fine arts and craft exhibit OIT Expressions June 15 – June 30, 2007 at The Lucas Gallery. The exhibit features more than 100 submissions by OIT employees paintings, poetry, photographs, art glass, fabric art, wood carving, and sculpture. 150 OIT colleagues, family, and friends open the exhibit at a reception. Feedback, both internal and external to OIT, was extremely favorable “I have always believed that creativity runs rampant with so-called “technical” folks. This exhibit is proof of the depth and breadth of the creative minds in OIT; delightful and insightful.”

Princeton University Board of Trustees approve the lease for 701 Carnegie Center. Building program design begins to create "A Place For and About OIT." Building design principles are developed as a result of feedback collected by OIT staff.

OIT discontinues its out-dated dial-in remote access services. The services were initiated at a time when few alternatives were available. Today, with a wide variety of services being offered both in residences and for travelers, most members of the University community use other faster, more inclusive and economical services.
Who We Are

OIT consists of five major functional areas:

**Academic Services** [AS] is led by Serge Goldstein and supports faculty and student use of instructional technology. AS has seven groups: Database Application Services, Computational Science and Engineering Support, the New Media Center, Media Services, the Language Resource Center, the Educational Technologies Center, and Education and Outreach Services.

**Administrative Information Systems** [AIS] is led by Colin Currie and provides implementation and support services for the University’s administrative systems. AIS has four groups: ERP Systems, Custom Development, Data Warehousing and Integration, Package Adaptation and Customization, and AIS Collaborative Solutions.

**Enterprise Information Services** [EIS] is led by Donna Tatro and maintains e-mail and directory services, and installs and monitors the performance and security of the server infrastructure and systems applications. EIS has four groups: Systems and Data Management Services, Security Officer, Security and Data Protection, Enterprise Servers and Storage.

**Finance, Administration, and Planning** [FAP] led by Nancy Costa and is responsible for budgetary and financial matters, staff relations, recognition and development, project planning, process improvement, and supporting effective administrative processes through training, documentation and call support. FAP has four groups: Budget and Finance, IT Training, Documentation and Support, Project Office, and Human Resources and Administration (includes Printing and Mailing, and Process Improvement).

**Support Services** [SS] is led by Steven Sather and provides front-line IT support for all members of the University community. SS has six groups: Integrated Technology Services, Desktop Support (including Hardware and Software Support), Networking and Telecommunications, Distributed Computing Support, IT Policy, Customer Services (including the Support and Operations Center).
Refer to Appendix A for a complete set of all OIT organization charts.

2006-2007 OIT Achievement Award Recipients

For contributing significantly to their departments and OIT in one or more of the following areas:

- Creativity and Innovation
- Customer Service and Outreach
- Teamwork and Collaboration
- Technical Excellence
- Demonstrating OIT Core Values

Tom Camp
Marion Carty
Chris Dietrich
Marsha Jacobs
Robert Lawler
Donna Lawrence
Paul Lynn
Jill Moraca
Sorat Tungkasiri
Henry Umansky

2006-2007 OIT CIO Award Recipient

For outstanding service to OIT and Princeton University

Matt Petty
## What We Do

The following is a list of services OIT provides to the University community:

<table>
<thead>
<tr>
<th>Computing at Princeton</th>
<th>Setting-up Your Computer</th>
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<tbody>
<tr>
<td>Rights, Rules &amp; Responsibilities</td>
<td>On Campus</td>
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<tr>
<td>Guidelines for IT Resource Use</td>
<td>• In Your Office</td>
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<td>Policy Interpretation &amp; Reporting Violations</td>
<td>• In Your Dorm - Dormnet</td>
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<td></td>
<td>• Portable Computing - Mobile IP</td>
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<td>• Public Clusters</td>
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<td>• Wireless Computing</td>
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<td>Departmental Computing Support for Administrative Departments – DCS Program</td>
<td>Off Campus</td>
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<td>Residential Computing Consultants</td>
<td>• Virtual Private Network</td>
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<td>Support for Computing in Academic Departments - SCAD Program</td>
<td>• Wireless Broadband Access Cards</td>
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<td>Host Master Database Registration</td>
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<td>Global Internet Access</td>
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<td>FAX Gateway</td>
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<td>Linux Resources</td>
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<td>Macintosh Resources</td>
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<td>Print Services</td>
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<td>Server Hosting</td>
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<td>Site Licensed Software &amp; Download Sources</td>
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<td>Unix Resources</td>
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<td>Virus Protection</td>
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<td>Website hosting</td>
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<td>Windows Resources</td>
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<td>Administrative Systems</td>
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<td>Blackboard Course Management System</td>
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<td>Classroom Facilities</td>
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<td>Desktop Computing Applications</td>
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<td>Digital Media</td>
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<td>New Media Center</td>
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<td>In-office Technology Tutorials</td>
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<td>STAT In-office Technology Tutorials</td>
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**Humanities & Research Computing**

- Electronic Text Creation, Encoding & Collection
- Geographic Information Systems Support & Development
- Grant Writing Assistance For IT Projects
- High Performance Computing
- High Speed Networking - Internet2
- Humanities Computing Project Support
- Humanities Custom Application Development
- Princeton Software Repository
- Research & Quantitative Project Support
- Scientific and Engineering Programming support
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<td>▪ Student Oracle Database Facility</td>
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<td>▪ Video on Demand for assigned videos</td>
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What We Accomplished, FY07 Goals and Accomplishments

**FY07 goal: Continue the expansion of Princeton's IT infrastructure to meet the needs of the research community**

Last year, we reported that Princeton had acquired three, large central supercomputers dedicated to research computing and that Princeton has become a leader among higher education institutions worldwide in providing central support for researchers. Each of the three high-performance machines, *Della*, *Orangena*, and *Hecate*, has a different performance profile suitable for handling different kinds of computational tasks. Together, the three machines provide Princeton faculty a world-class computational research environment and solidify the emerging partnership between OIT and faculty in support of research computing at Princeton.

We are pleased to report that Princeton has continued to make significant progress in strengthening its HPC resources, once again through a close partnership between OIT, PICSciE, the Provost’s Office, and individual faculty members. In the past year, we have:

- Acquired another high-performance Beowulf cluster. The *Woodhen* cluster consists of 768 processors, each running at 2.8 GHZ, for a total computational capability of 8.2 teraflops (making this the most powerful of all our clusters);
- Acquired the /tigress file system, providing 50 terabytes of high-speed disk storage, shared among all of our HPC clusters;
- Created, and formally named, the TIGRESS (*Terascale Infrastructure for Groundbreaking Research in Engineering and Science*) High Performance Computing center.

The first two of these accomplishments add significant new capabilities to Princeton’s growing central HPC facilities. The last, may be the most significant, as it creates an organizational structure within which the close collaboration between Princeton’s faculty and its organizational units can continue to be fostered and strengthened. Princeton has historically been a leader in the development of “dry” science, and it continues today to lead in the application of computational approaches to the solution of complex scientific questions. TIGRESS is showing that a centralized approach to high performance computing can be a strategic asset to Princeton as it seeks to continue its leadership in this vital domain.

**FY07 goal: Complete major networking infrastructure upgrades and develop a roadmap for future growth and enhancements**

*Provide significant upgrades to the University’s connections to the Internet and Internet2:* Bandwidth upgrades of the campus Internet and Internet2 services were completed by the start of classes in the fall of 2006. In addition, the network access to/from the Forrestal campus was converted to leased fiber optic cabling and the network connections were increased from 100Mbs to 1Gbs.

*Continue to expand the wireless network across the remainder of campus:* As of the start of classes in the fall of 2007, all campus buildings and the Eating Clubs have wireless network access.
**Video service improvements:** The campus video infrastructure was converted from coaxial cable to a fiber optic infrastructure. This change enhances video quality, reduces maintenance costs, and positions the campus to deploy additional video services in the future. In addition, on-campus video services such as simulcasting and computer-based video were expanded.

**Improve cellular telephone service on campus:** Installation of commercial telephone provider cellular equipment has been installed at selected campus locations. Verizon installed equipment on New South, which significantly improved campus cellular access. Work is underway to install equipment from AT&T at Fine Hall. In addition, OIT installed equipment, as a pilot project, which extends cellular telephone access to the multi-purpose rooms in the basement of Frist.

**FY07 goal: Replace the 30-year-old computing facility at 87 Prospect and expand the New South disaster/recovery site**

The data center at 87 Prospect Avenue houses the majority of the University’s research, administrative, and academic IT systems. Built to house the mainframe in an era before the Internet or even campus networks, the 87 Prospect data center has reached the end of its useful life. Lack of fire-suppression complicated by asbestos removal issues, aging mechanical systems, and overtaxed electrical and cooling systems are symptomatic of a facility built for an earlier era.

Growth in the number of servers and especially growth in the number of high-performance computing clusters has taxed the space, cooling, and electrical capacity of the building. Auxiliary cooling units have been installed to meet the immediate cooling needs. However, the transformers serving the building are running at 60% and 91% load, well in excess of the recommended 50% needed for redundancy and dangerously close to capacity. A UPS (Uninterruptible Power Supply) system designed to permit orderly shutdown of the equipment now only provides enough power to run the data center for approximately 15 minutes. There is no backup generator, which would prevent the shutdown of the center when power is lost for prolonged periods of time.

During FY07, working with the Office of Facilities, OIT continued making improvements to the current 87 Prospect facility, worked on a project to expand the backup data center at New South to handle expansion, and, most importantly, continued planning for the creation of a new data center, located just south of the Co-Generation plant.

**FY07 goal: Maintain and enhance a secure campus computing environment**

OIT remains vigilant in monitoring and protecting the University’s campus computing environment. This past year OIT has improved the University’s overall IT security. Tools such as intrusion prevention systems, firewalls, and automated system patching software now protect the institution’s network and computers.

Strong security is equally about an organization’s people. During FY07, members of the community were encouraged to participate in protecting their own digital identity through a major password education campaign. Beginning in the fall of 2006, OIT in collaboration with departmental managers and the offices of Human Resources and Dean of the Faculty, spearheaded a major cleanup of unneeded computer accounts. (Such accounts are often used by hackers to break into systems.) OIT has continued to work with departmental IT staff to keep their computers in compliance with the latest security and virus protection patches and to respond to any requests for assistance to strengthen the security of departmental servers. The sum of these activities equals a much more mature security awareness and set of strong protections across the University.

**FY07 goal: Consolidate resources for digitization**

Last year, we reported that OIT had begun working with the Library to study the feasibility of consolidating existing digitization services in a way that would leverage those services to provide maximum benefit to the campus. We reported on the growing use of digitization at Princeton, both in the Library and in a number of academic departments. We also reported that OIT and the Library had concluded that the University would benefit from better coordination of digital media and more assistance in collecting, cataloging and using these resources and recommended that the University consider creating a digital media center. To that end, we submitted a request to the Priorities Committee for a “digital media specialist” to study these needs further and develop a plan for addressing them.

The Priorities Committee was unable to fund this request. However, the committee recognized the need for better coordination of our digitization efforts and suggested that a more focused request might be submitted at a future date.
FY07 goal: Continue to deliver administrative information technology systems that meet the needs of the University

Information Warehouse and ReportNet: Development of the Information Warehouse continued as planned as we complete our multiyear deployment of these important new technologies. We expect that in fiscal year 2008 the Treasurer’s Office’s reports, the last existing reports in the legacy DataMall, will be converted and brought into this new environment. This will be a significant achievement for administrative systems data access and will put Princeton University in a leadership position relative to information reporting.

Also this past year, the reporting tool we use against the Information Warehouse was upgraded from ReportNet 1.0 to Cognos 8.0. This was an important upgrade that brings greater stability, security, and functionality to the application.

Labor Accounting and Princeton Receivables: Work on these custom systems development projects continued through the past year. Phase II of the Labor Accounting system is nearly complete as of this writing. This new system adds significant new functionality and provides a major improvement in reliability over the previous system.

The replacement of the current loans and receivables system, “Princeton Receivables,” is being carefully analyzed to ensure that we are applying our development and functional resources properly. New offerings for outsourcing and reconsideration of some business rules may enable us to reduce the scope on this multiyear project. We also had success in working with an outside vendor to fix some of the problems with the existing system that may enable us to run in that environment for a longer period of time than originally planned.

Housing: Six major housing system initiatives went live in FY07:

- Undergraduate and graduate electronic contracts
- Undergraduate room draw application
- Graduate room draw application
- Undergraduate room selection
- Graduate room selection
- Waitlist application

The new room draw system was a great success and was warmly received by students. This new system replaces the prior process where students reported to a particular building at a specified time to choose rooms from a map representing available rooms. To quote the Daily Princetonian, the new system “is being met with general praise.” It is “more convenient,” with “really cool features.”

Office of Disability Services: The Office of Disability Services (ODS) was recently established at Princeton. Working with ODS, OIT implemented new functionality within the University’s PeopleSoft system to address the office’s specialized needs, adding enhancements as needed. Using the PeopleSoft system gave us many advantages, such as web functionality, and made technical support, backups and access to the data in the Data Warehouse easier. It also avoided the need to acquire and implement a new package to specifically address ODS needs.

PeopleSoft Human Resources / Student Administration: Because of Oracle’s plan to discontinue support for the current 8.0 version of PeopleSoft’s Human Resources and Student Administration system in August of 2008, OIT began the project to upgrade to PeopleSoft’s new version, Human Capital Management and Campus Solutions 9.0, in the spring of 2007. With a target completion date of August 2008, this large undertaking will require involvement from multiple functional offices including Human Resources, the Dean of the College, the University Registrar, the Graduate School, the Office of the Treasurer, the Dean of the Faculty, and Undergraduate Admissions.

eBenefits: Starting in the Fall of 2006, faculty and staff were for the first time able to log into a website where they selected benefits and entered open enrollment data directly into our administrative systems. In the past, all benefits and open enrollment information was hand-entered on forms which where then used to type the information into our systems by back office staff. This was a time-consuming and error-prone process. New employees and employees who have qualifying life events can now make their changes online as well. During last year’s open enrollment process, two thirds of all employees made their selections online, making it a great success. Finally, for security purposes we customized the system to hide social security numbers from view.

Undergraduate Admission Online Decision: For the first time in Princeton’s history, applicants for the undergraduate class of 2011 were able to learn whether or not they were accepted to the University via a secured online website. As a supplement to the mailed paper decisions, this first year of the online decision was very popular. Of the 15,000 applicants that signed up to use the service, 13,000 viewed their decision online within the first day.

This new feature is complemented by another new system, the online checklist. This new application was added in the fall of 2006 and enables applicants to check the receipt of their application materials online. This gives applicants instant access to the status of their application and frees up Admission office staff from having to respond to these kinds of queries.

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FY07 goal: Make OIT a more welcoming and diverse workplace that attracts and develops the highest quality IT professionals

During FY07, OIT had 15 new hires, 17 reclassifications, 4 promotions, 5 University transfers, 2 retirements and 6 departures. Many of the OIT reclassifications and promotions, and all of the University transfers (i.e., OIT staff transferring to other University departments/offices), were among the participants in the OIT Team Learning Forum (TLF). The TLF is a process through which employees gather to help each other learn to think about the future and gain insight into the areas that are essential to understanding how to succeed professionally, personally, and organizationally. As discussed in Jim Collins’ book, Good to Great, we strive to recruit and keep the right people and to provide a supportive environment for them to achieve their potential.

Also during FY07, 7 OIT employees received certification in Human Resource’s Management Development program and 4 OIT employees are in the process of gaining certification.

The OIT Diversity Initiative seeks to make OIT a more welcoming and inclusive organization that values diversity and promotes learning from our differences. Working directly with the OIT Vice President and CIO, the OIT Diversity Task Force was created to identify specific efforts to help achieve these goals.

OIT pursued the following efforts in FY07:

*It's Us Newsletter* - Beginning with an inaugural issue in September 2006, OIT staff have authored and disseminated *It’s Us*, an internal electronic quarterly newsletter. *It’s Us* contains photos and interesting stories for, and about, OIT staff.

*Getting IT Together* - OIT created a program to enable employees to share similar interests and experiences. Several activities were offered to encourage staff to learn more about the University community including tours of the Art Museum and Princeton Plasma Physics Lab, an OIT Orange Key tour, and an organ demonstration/concert in the Chapel. A total of 126 OIT employees attended these activities. Also, 18 people from across the organization came together for the first Java “birds of a feather” affinity group/pizza party.

*OIT Buddy Program* - The new OIT Buddy Program has helped new OIT employees feel more welcome within the organization. Current employees have voluntarily paired with a new employee, taking them to lunch, going on an Orange Key tour, or simply answering questions about life on and off campus. In addition, new staff members now receive a standard OIT welcome packet that provides useful information about the OIT organization, attend an OIT orientation session, and meet with the CIO in Nassau Hall.

*Workshops* - OIT sponsored *Storytelling: Exploring Diversity/Building Community*, a workshop facilitated by Susan Danoff ’75 (professional storyteller, author and teacher) and Hetty Baiz. 30 OIT employees participated in two separate workshops in which storytelling and other creative communication tools were used to explore topics related to diversity and life experiences. Owing to the positive feedback received, OIT will offer three more workshops during the next fiscal year.

Nearly 100 OIT employees, the OIT Leadership Group, and several OIT workgroups participated in *Myers Briggs Type Indicator* (MBTI) workshops to identify personal preferences and to improve communication and collaboration. Susan Parks, a certified MBTI facilitator, led multi-session workshops that included both introductory and advanced materials.

*OIT Facebook* - OIT developed a new Facebook to enable employees to submit their own photos as well as to list special interests. The OIT Facebook provides a venue for OIT employees to network with others who share similar interests.

*Capturing the Past* – OIT is recording the history of computing at Princeton University over the past six decades. Jon Edwards, a long-time University employee, has collected many documents, artifacts and photos, conducted numerous interviews, and summarized the events that have shaped computing at Princeton since the mid-1940s. The effort has given OIT employees an appreciation of what came before them and a sense of the legacy on which they have been building.

*OIT Expressions* - OIT’s first annual staff fine arts and crafts exhibit, *OIT Expressions*, was held June 15 – June 30, 2007 at The Lucas Gallery. The exhibit featured more than 100 submissions by OIT employees, including paintings, poetry, photographs, glass art, fabric art, wood carving, and sculpture. 150 OIT colleagues, family, and friends opened the exhibit at a reception. Feedback, both internal and external to OIT, was extremely favorable – “I have always believed that creativity runs rampant with so-called “technical” folks. This exhibit is proof of the depth and breadth of the creative minds in OIT. Delightful and insightful.”

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effectiveness of the OIT organization. Valuing diversity and exemplifying the OIT Core Values are key components of leadership.

**FY07 goal: Continue to develop new funding models to address future IT needs**

The objectives for developing new funding models are to:

- Eliminate/simplify OIT billing to University departments;
- Identify new IT funding strategies that will address growing IT investment requirements within a sustainable and flexible operating budget;
- Review historical IT investments made, and potential future IT investments, to determine which funding models might best address the introduction of major new technology initiatives, as well as the decommissioning of obsolete technology.

During FY07, working with the offices of the Provost and Treasurer, OIT simplified the funding and accounting for basic network connectivity. As of July 1, 2006, for all academic departments and most administrative offices, network connections are now provided through centralized funding. This eliminated monthly billing to departments for network connections and provides network access at no fee to academic departments and most other offices.

During FY07, we restructured the Telecommunications group and have streamlined many support functions. In FY08 we will determine if we should apply the principles used to simplify the funding and accounting for basic network connectivity, to telephony services.

Also during FY07, OIT reviewed other cost recovery operations. As a result, effective July 1, 2007, OIT will be reducing our rates by 50% for disk storage. We anticipate that later in the year we will be able to raise the default quota for disk space provided at no fee. In addition, OIT will be reducing our rates by close to 40% for file backup/restore services for individual desktop machines.
What We Are Planning, FY08 Goals and Plans

FY08 goal: Continue the expansion of Princeton’s IT infrastructure to meet the needs of the research community

For FY08, our goal is to continue to strengthen the TIGRESS HPC facility, through the acquisition of additional computational clusters and the involvement of additional Princeton faculty members in the use, and support, of the facility. Specific challenges for FY08 are:

- Successfully move the large HPC clusters to the new Lewis Library machine room. This needs to be done with minimal disruption to ongoing research;
- Acquire additional HPC resources to bring Princeton’s total HPC capability to 25 teraflops+ (this will keep Princeton in the top 100 in terms of HPC resources);
- Ensure that the shared-governance model instantiated in TIGRESS works smoothly and that additional faculty members and research groups at Princeton develop confidence in TIGRESS as a doyen of Princeton’s computational resources.

FY08 goal: Complete major networking infrastructure upgrades and develop a roadmap for future growth and enhancements

Cellular telephone service:

- Continue to improve campus coverage through the installation of additional cellular telephone antennas (AT&T, Sprint, T-Mobile) on campus;
- Update the current in-house cellular telephone distribution system to support the additional providers;
- Discuss the possible benefits of extending the in-house cellular distribution system to additional campus buildings with other University groups, such as Public Safety.

Network improvements:

- Continue the process of upgrading the intra-building network infrastructure to provide 100Mbs service to the desktop;
- Plan for a future upgrade to provide 100Mbs locations in dormitories and housing units that are connected to the campus network;
- Install leased fiber cabling to the Butler Apartments providing increased network bandwidth and higher reliability;
- Evaluate the needs, benefits, and costs of extending the campus wireless network to provide access to additional outdoor locations such as athletic venues.

Planning for new locations:

- Begin the planning needed to provide campus network, video, and telephone access to the proposed university off-campus OIT staff building at 701 Carnegie Boulevard;
- Begin the planning for the new campus data center to be located near the co-gen plant. This location will, when completed, also house the network core;
Working with the Facilities Department, ensure network services will meet the needs of new buildings coming online, such as the Lewis Library, the ORFE building, and the Neuroscience building;
- Participate in the planning for moving the U-Store and bookstore to Nassau Street.

**FY08 goal: Replace the 30-year-old computing facility at 87 Prospect and expand the New South disaster/recovery site**

In FY08, the following improvements will be made to our existing data center facilities:
- Installation of a new UPS system in 87 Prospect;
- Installation of a new backup generator in 87 Prospect (currently under study);
- Expansion of 1,000 square feet in the New South data center;
- Installation of a dedicated backup generator in the New South data center.

One of the more challenging projects we will be working on in FY08 is the continued planning and design of the new data center. The complexity of the mechanical and electrical systems needed to provide a reliable and secure infrastructure requires outside expertise. The outside consultant originally brought in as a data center infrastructure specialist did not provide the expertise we were looking for. In collaboration with the Office of Design and Construction, we have recently engaged with IBM to now provide this expertise.

Moving ahead on all three projects is essential as demands on computing continue to increase and the essential role of the computing infrastructure to the University continues to grow.

**FY08 goal: Maintain and enhance a secure campus computing environment**

In FY08, OIT plans the following initiatives:
- Expand the server and data security check-up service for departments running their own systems;
- Implement a new identity and access management software suite. This new software will strengthen our protection of sensitive data and facilitate the University’s delivery of online services to constituencies beyond the traditional faculty, student, and staff groups;
- Enhance “log monitoring” activities to reveal and respond to any unusual activities on University servers more quickly;
- Expand the use of data encryption for safeguarding sensitive information.

Moving forward on these initiatives is critical as attempts by hackers to thwart strong security measures are constant and increasingly sophisticated.

**FY08 goal: Working with the Library, begin to develop a comprehensive strategy for the production, management, preservation, and use of digital content**

As a result of further discussions with the Library and the Provost, the University recognized the need for a person whose prime responsibility would be to help Princeton architect its growing digital resources in a way that would maximize the utility of these digital assets in support of teaching, research and scholarship. For this reason, a 3-year term position has been created for a digital content management architect. This person will be responsible for developing an enterprise-wide digital content management strategy. Specifically, the digital content management architect will

- Define a roadmap for the next steps in the integration of institutional digital resources;
- Define a comprehensive data repository “store,” along with mechanisms to archive, search, and retrieve data securely;
- Identify and help implement the hardware and software components to deliver effective collaboration tools to faculty, students, and staff;
- Document the proposed information architecture for Princeton;
- Guide the creation of policies that control retention and disposal of data;
- Create and lead a cross-functional advisory team that includes OIT, the Library, the Museum, the Digital Assets Management Committee, etc.;
- Establish an approach for consolidating data and eliminating redundant systems;
- Work with Departments to help them understand the benefits of using a consolidated data store.

We believe that having a person focused exclusively on these activities will go a long way towards helping Princeton develop a comprehensive strategy for the production, management, preservation, and use of digital content.

**FY08 goal: Continue to deliver administrative information technology systems that meet the needs of the University**

Upgrade the PeopleSoft Human Capital Management and Campus Solutions to version 9.0: The upgrade to the latest version of PeopleSoft’s human resources, benefits administration, payroll, student and campus community functionality is a major undertaking that will run through all of FY08. On the human resources, benefits and payroll side it is a four-version upgrade. On the student and campus community side it is a two-version upgrade. Significant
investments in people and consulting have been made to ensure the success of this project. Functional office involvement includes Human Resources, the Dean of the College, the University Registrar, the Graduate School, the Office of the Treasurer, the Dean of the Faculty, and Undergraduate Admissions. The target go-live date will be August 4, 2008.

Develop an online matriculation form: Incoming freshmen complete a myriad of paper forms in order to establish the critical data relative to their billing, housing, health, meal plans, and other needs. The information from these paper forms is then keyed into a number of systems in a time-consuming and error-prone process that costs the University countless hours of effort. In FY06 an initial step was taken to collect address and billing information via online forms. This project, known as the Permanent Address Information (PAI) project, was a great success and served as a pilot for automating the collection of other kinds of data. In FY08 we will be further developing the PAI into an online application that will collect nearly all of the remaining information that has until now been collected via paper forms. Incoming students will fill in one online form containing all the data elements required by the multiple backend systems. The data will then be parsed out as necessary to the appropriate department systems. This will save time and reduce errors for the University, and will be a great improvement for incoming students.

Continue to enhance our Housing systems: In our on-going effort to improve and modernize the Housing systems, three particular projects are on our slate for the coming year. In FY07 major improvements were made to the way undergraduate and graduate students select and contract for housing by enabling these functions to be performed on line. In FY08, working with the Housing department, we will design and begin development on similar improvements to the way Faculty and Staff apply for, and receive, housing. We will also complete the design phase of similar new functionality that will address the needs of Summer housing. Finally, we are developing and will deliver a new application that will enable graduate and incoming spring undergraduate re-admits to receive housing. These are large and complex applications each of which contain unique and varied business rules and procedures.

Implement Oracle’s Identity Management and Access Management systems: In FY08 we will implement software from Oracle Corporation that will dramatically change the way University NetIDs are generated, how system permissions are tracked, and how administrative systems are accessed. Oracle Identity Manager (OIM) is an intelligent “account provisioning” system that will sit between the University’s PeopleSoft Campus Community system and our “LDAP” directory. When a change is made to a Campus Community (e.g., admit, graduation, new hire, position change, retirement, etc.), OIM will interpret the data change and make an appropriate adjustments to the LDAP record. The updated LDAP record will then restrict or allow that person’s access to the appropriate set of University systems. It will also “de-provision” users who should no longer have access to any University systems.

The second major piece of software we will be implementing is Oracle Access Manager (OAM). OAM uses the data in LDAP to intelligently grant access to the University’s business systems. OAM can be set to require different kinds of authentication to different systems, thereby enhancing the security to systems where appropriate, or keeping our current level of authentication restriction if that is appropriate. OAM also enables “single sign-on” by tracking who has entered what systems and allowing users access to other applications if their security profile and level of authentication allows it.

The combination of OIM and OAM will greatly improve authentication and authorization security for University systems. It will also have a major impact on our efforts to eliminate duplicate entries and obsolete accounts and will enable us to add further data safeguards to our databases.

FY08 goal: Make OIT a more welcoming and diverse workplace that attracts and develops the highest quality IT professionals

We must sustain the diversity efforts currently underway. In addition, the following efforts are planned during FY08:

Exploring Diversity Through Books, an OIT book discussion group, will meet monthly (4th Wednesday of the month) over a brown bag lunch in a casual atmosphere (the Faculty Lounge at Fine Hall) to encourage inquiry and sharing. The readings, which will consist of works of fiction highlighting diversity and multi-cultural themes, will be facilitated by Alla Ryklin. Alla is a professional trainer in OIT and has organized and facilitated many book discussion groups. The first book selection is Monkey Bridge by Lan Cao.

Lunchtime Meditation, a weekly 45-minute meditation session, will be held on Fridays during lunch. The sessions will provide an opportunity for OIT employees to join their colleagues in a relaxing and refreshing break from the stresses of their busy schedules. The sessions will be facilitated by Hetty Baiz who teaches meditation in the Princeton area and has been doing meditation herself for more than 20 years.

Creative Thinking, an OIT workshop facilitated by Susan Danoff ’75 and Hetty Baiz, is being developed. As IT professionals, we are accustomed to using the left side of the brain - linear, logical, and sequential - to approach problems, but we know that that the learning and thinking process is enhanced when both sides of the brain participate in a balanced manner. This workshop will enable participants to break out of their usual way of thinking and explore using the non-linear, right side of the brain. The workshop will provide participants with an enjoyable and
stimulating half day with their colleagues, as well as an opportunity to tap into their own creativity in a supportive environment.

*Franklin Covey Institute*, sponsored by the OIT Leadership Group, will be on campus for a series of *Seven Habits of Highly Effective People* workshops designed for OIT –

- *Achieving Your Highest Priorities* to learn how our highest priorities can guide our time, our plans and our lives;
- *Achieving Your Full Potential* to learn enduring skills to become a more highly effective person.

*New OIT Building* - By far our greatest organizational challenge in FY08 will be the design of the new administrative building at 701 Carnegie Center. We are looking forward to moving approximately 55% of our staff to the new building. Critical to our success will be managing this change for our employees and ensuring that we create a workplace they look forward to moving to. Working with the design firms of KSS and DEGW, we have identified our design principles that will guide our building design efforts:

- The space will reflect the mission and core values we share working in OIT;
- The design of the space will foster circulation, collaboration and teamwork among and between all workgroups;
- Access to natural light and views are valued for all employees, in both individual and collaborative spaces;
- Physical spaces will balance openness, connectivity, security and privacy, according to need;
- The space will be designed to foster and support the work we do;
- The design of the building will be an expression of OIT as an integral part of Princeton University;
- Maintaining connectivity to campus is a high priority;
- The space will support organizational flexibility and growth;
- The design of the building will support the University’s commitment to sustainability;
- Governance and usage of the space will be guided by the needs of the community as a whole.

**FY08 goal: Execute phase II of the IT strategic planning initiative**

As a result of phase I of the IT strategic planning initiative (refer to Appendices B and C), we have identified the IT issues that members of the community believe will pose the greatest challenges to Princeton over the next five years and have begun to chart the directions we believe we must take to meet those challenges. In phase II of this process, we plan to:

- Share the findings of the report with the University community;
- Develop a set of specific initiatives that respond to the findings;
- Develop the implementation plans for each initiative that include details of funding, staffing and governance.

It is important that we clearly identify how we will meet the current and emerging IT needs of the institution. Our efforts will have been a success if we can achieve a broad consensus on the IT directions Princeton should follow and identify the resources that Princeton should allocate to ensure that its IT efforts appropriately advance the University’s standing as a leader in teaching, research, scholarship, and administration.
OIT Advisory Groups

Senior Advisory Group on IT

The Senior Advisory Group on IT (SAGIT) advises the Provost on the budgetary matters related to IT systems projects that have been endorsed by the Enterprise Systems Planning Group (ESPG) and other project that are presented to the Vice President for Information Technology and/or the Provost. The specific charge of the group is to:

- Evaluate systems project proposals and review the proposed funding mechanisms for capital and operating expenditures required for such systems;
- Assess steady state costs of maintaining current systems and required IT infrastructure;
- Identify systems opportunities that should be evaluated;
- Ensure projects are fiscally responsible and assess whether proposed funding mechanisms are satisfactory;
- Advise the Provost with regard to budgetary or other issues posed by projects.

During FY07, members of SAGIT were:

Mark Burstein, Executive Vice President
David Dobkin, Dean of the Faculty
Chris Eisgruber (chair), Provost
Betty Leydon, Vice President for Information Technology & CIO
Jed Marsh (secretary), Vice Provost for Institutional Research
Christopher McCrudden, Vice President for Finance & Treasurer

Highlights

At the request of SAGIT, OIT initiated a University-wide inventory of IT systems maintained by administrative offices and academic departments that are not funded and/or supported centrally by OIT, and to create a process for updating the inventory annually.

The goals of the IT systems inventory include:

- Enhanced functionality: The inventory will identify opportunities to fill gaps in centrally-provided IT systems and reduce departmental workload;
- Cost savings: The effort aims to leverage economies of scale for common IT systems used across offices and departments;
- Shared expertise: The project will identify departmental experts (in areas such as document management and digitization) who can assist the development of best practices for effective central solutions;
- Improved security: The inventory will provide a framework for performing “security checkups” on departmental IT systems.

Phase I of the initiative collected and consolidated data on IT systems in administrative offices. Working closely with the Academic Managers Group, phase II of the initiative is underway and will include the inventory of IT systems in academic departments.
Enterprise Systems Planning Group

The Enterprise Systems Planning Group (ESPG) critically assesses all IT systems efforts, determines existing needs, and identifies key opportunities to build on our IT investments. The specific charge of this group is to:

- Assure that the University’s systems meet the needs of faculty, staff and students;
- Evaluate current systems - identify gaps, needs and opportunities;
- Recommend the appropriate allocation of OIT resources for maintenance, upgrades, and development;
- Endorse project proposals that need to be passed to the Senior Advisory Group on IT (SAGIT) for further review.

During FY07, members of ESPG were:

Janet Dickerson, Campus Life  
Polly Griffin, University Registrar  
Ben Hammond for Mark Burstein, University Administrative Services  
Karen Zeierny for Robert Durkee, Office of the Vice President & Secretary  
Betty Leydon (chair), Office of Information Technology  
Nancy Malkiel, Dean of the College  
Jed Marsh, Office of the Provost  
Sandra Mawhinney for William Russel, Dean of the Graduate School  
Christopher McCrudden, Treasurer  
Kris Miller for David Dobkin, Dean of the Faculty  
Vikki Ridge for Michael McKay, Facilities  
Julie Shadle for Brian McDonald, Development  
Lianne Sullivan-Crowley, Human Resources  
Karin Trainer, University Librarian  
Carol Zanca, Academic Managers Group  

Ex Officio:  
Nancy Costa (secretary), Office of Information Technology  
Colin Currie, Office of Information Technology  
Serge Goldstein, Office of Information Technology

Highlights

During the past year, the ESPG:

- Changed its name from the Administrative Systems Planning Group (ASPG) to Enterprise Systems Planning Group (ESPG) in order to reflect expanded advisory and governance roles over both administrative and academic system initiatives;
- Provided oversight of the FY07 IT Project Portfolio and endorsed the FY08 Project Portfolio;
- Reviewed and endorsed OIT’s password security campaign – www.princeton.edu/password;
• Reviewed the results of the Project Managers Team’s identity management survey – creating awareness for systems that use personally identifiable information and balancing system ease-of-use with security risk mitigation;
• Charged the Data Managers Group to establish best practices for information access based on the University’s Information Security Policy;
• Received briefings on the use of digital approvals and the Alumni Council’s strategic planning effort;
• Reviewed and endorsed the process to conduct a University-wide IT strategic planning initiative.
Project Managers Team

The Project Managers Team (PMT) provides leadership and guidance on the delivery of University systems, and continues to support the application and data management principles established under Partnership 2000. The PMT acts as the “working group” in support of the efforts of the Enterprise Systems Planning Group (ESPG). The specific charge of the group is to:

- Identify, assess, and prioritize mandatory maintenance (regulatory updates, software upgrades) and enhancements (to fill gaps in current functionality and/or deliver new functionality) to University systems;
- Coordinate systems requirements across offices and departments;
- Facilitate activities that foster the improved use of IT products and services at the University;
- Achieve the highest level of customer satisfaction in meeting the IT needs of the University community.

During FY07, the members of the PMT were:

Betty Ashwood, Financial Aid, Student Employment  
Barb Basel, Public Safety  
Marvin Bielawski, Library  
Maria Bizzarri, Treasurer’s Office, Receivables  
Steve Blechman, Human Resources  
Christopher Brock, Athletics  
Joseph Broderick, Office of Research and Project Administration  
Justin Bronfeld, Graduate School  
Ted Bross OIT, Custom Development, Data Warehousing & Integration  
Nancy Costa, OIT, Finance, Planning & Administration  
Colin Currie (chair) OIT, Administrative Information Systems  
Janet Finnie, University Health Services  
Patty Gertz, Development  
Ash Hadap, OIT, Administrative Collaborative Services  
Dave Herrington, OIT, Database Application Services  
Amy Hughes, Registrar’s Office  
Paula Hulick, OIT, Educational Technologies Center  
Andrew Kane, Housing  
Donna Lawrence, OIT, Package Adaptation and Customization  
John Libra, University Scheduling  
Joanne McLaren, Treasurer’s Office, Payroll  
Kris Miller, Office of the Dean of the Faculty  
Craig Richmond, Treasurer’s Office, University Financial Systems  
Irina Rivkin, OIT, ERP Systems  
Alla Ryklin, OIT, Project Coordinator  
Laura Strickler, University Administrative Services  
Janet Strohl-Morgan, Art Museum  
Glenn Wemple, Undergraduate Admission  
Dave Tierney, TigerCard Office  
Mark Washington, Facilities
Ex Officio:
Chuck Augustine OIT, Systems & Database Management
Deborah Becker, OIT, Database Administration Services
Janice Guarnieri, OIT, IT Training, Documentation and Support
Charles Kruger, OIT, Unix Systems
Steve Niedzwiecki, OIT, Windows Systems
Lea Novak, OIT, Documentation
Sal Rosario, OIT, Process Improvement
Anthony Scaturro OIT, University Security Officer
Barrie Sutton, OIT, Project Coordinator
Donna Tatro, OIT, Enterprise Infrastructure Services

**Highlights**

During the past year, the PMT:

- Continued to invite new members from diverse business functional areas and OIT support areas to ensure that all resources required are involved in the planning of the projects;
- Reviewed and updated monthly the status of projects in the IT Project Portfolio – key projects included eBenefits, Web Room Draw, Labor Accounting, Princeton Receivables, Financials Data Warehouse, Development Information Systems (campaign priorities), PeopleSoft HR/SA/CC 9.0 Upgrade (initiation). Most importantly, the PMT discussed interdependencies across projects;
- Reviewed and endorsed OIT’s password security campaign: www.princeton.edu/password;
- Conducted an identity management survey in order to create awareness of systems that use personally identifiable information and to achieve a balance between the ease-of-use of systems and security risk mitigation;
- Participated in Phase I of the University-wide IT systems inventory initiative and helped to fine-tune the requested information;
- Participated in focus groups to gather input for the University-wide IT strategic planning initiative;
- In collaboration with all administrative offices and academic departments, assembled a comprehensive list of FY08 IT project proposals for ESPG review.
Data Managers Group

The Data Managers Group (DMG) is comprised of mid- and high-level University administrators who have stewardship responsibility for the data stored within University business applications. Data Managers are responsible for the collection and maintenance of specific data in their functional areas, enforcing corresponding policy and procedures, and providing accurate analysis and presentation of their data for reporting.

Data Managers serve as the primary source of information on their data, recommend security classifications and assign access rights for all their enterprise data, and are responsible for researching problems, recommending solutions, developing documentation, creating policies and procedures, and implementing processes required to address data administration issues.

During FY07, the members of the DMG were:

Betty Ashwood, Financial Aid, Student Employment  
Maria Bizzarri, Treasurer’s Office, Receivables  
Justin Bronfeld, Graduate School  
Ted Bross (chair), OIT, Custom Development, Data Warehousing & Integration  
Patty Gertz, Development  
Lynn Grant, Housing  
John Grieb, Registrar  
Tammy Knutson, Treasurer’s Office, University Financial Systems  
John Kraeck, Facilities  
Jonathan Lebouef, Registrar  
Janet Lute, Library  
Jed Marsh, Office of the Provost  
Laurie McVicker, Human Resources  
Kris Miller, Office of the Dean of the Faculty  
Craig Richmond, Treasurer’s Office, University Financial Systems  
Jeffrey Rowlands, Library  
Kathy Swick, Treasurer’s Office, University Financial Systems  
David Tierney, TigerCard Office  
Chiz Walter, Office of Research and Project Administration  
Glenn Wemple, Undergraduate Admission

Ex Officio:  
Suzanne Coletti, OIT, Data Warehousing & Integration  
Shane Farrell, OIT, Budget & Finance  
Ash Hadap, OIT, Collaborative Services  
Rita Saltz, OIT, IT Policy Advisor  
Anthony Scaturro, OIT, University Security Officer  
Leila Shahbender, OIT, Customer Services  
Barrie Sutton, OIT, Project Coordinator  
Dave Wirth, OIT, Telecommunications Services  
Liz Zodeiko, OIT, Project Coordinator
Highlights

During the past year, the DMG:

- Provided oversight for the transition from the DataMall to the Information Warehouse and from COGNOS ReportNet to COGNOS 8;
- Provided input to OIT in the creation of new practices and procedures for account provisioning;
- Worked on an ongoing basis, to resolve data issues between disparate central administrative systems within the University.
Desktop Systems Council

The Provost formed the Desktop Systems Council (DeSC) to standardize the University’s administrative desktop computer environment. By choosing a standard hardware model and a standard software suite, the University is positioned to negotiate favorable pricing, and provide computer support staff are better able to provide the best possible support for DeSC customers. Launched originally as the Princeton Desktop Initiative in 1996, the program was an essential part of the success of the implementation of new administrative systems at the University. The goals of the Council are to:

- Streamline the costs associated with application development, software installation, computing support, system administration, and software licensing;
- Ensure that the standard administrative computing environment is sustained;
- Enhance the delivery of administrative systems and productivity tools.

During FY07, members of DeSC were:

Charlayne Beavers (secretary), OIT, Integrated Technology Services  
Marvin Bielawski, Library  
Nancy Costa, OIT, Finance, Administration and Planning  
Joseph Crouthamel, Computer Science  
Sal Fattaros, Ecology and Evolutionary Biology  
Amy Hughes, Registrar’s Office  
Ellen Kemp, Woodrow Wilson School  
Paul Lynn, OIT, Administrative Information Services  
Dave Morreale, OIT, Desktop Computing Support  
Steven Niedzwiecki, OIT, Windows Systems  
Vikki Ridge, Facilities  
Steven Sather (chair), OIT, Support Services  
Leila Shahbender, OIT, Customer Services  
Barbara Sutton, Population Research

Highlights

Survey of Technical Staff
A DeSC survey was conducted and indicated that technical support staff are in favor of increasing the number of centrally managed computers.

Managed Environment for Macintosches
DeSC completed an evaluation for providing a managed Apple computer environment. The University purchased Casper Suite software from JAMF Software. This distribution server software is able to centrally manage both applications and settings on Apple OSX clients, essentially the same services that the SMS Server software provides for the Windows computers.

Managed Mobile Computing
During FY08, DeSC will expand its support to include Windows Vista desktops, Windows Vista laptops, and Apple OSX computers. Much of the testing to prepare for these implementations was conducted during FY07, which included data encryption solutions. In addition, DeSC approved best practices and guidelines to manage Windows laptops within the DeSC environment.
**DeSC Deployments**

DeSC deployed the DeSC Information Application, new software developed in-house, to all DeSC machines. The application helps users access vital support information about their DeSC computer (machine name, last TSM backup, IP Address, etc.). The application also generates a web page with the same machine support information. As a result, IT support staff can now more efficiently gain access to machine information during troubleshooting calls.

**Security**

DeSC increased the integrity and security of the DeSC environment by severely reducing the number of non-technical domain accounts. Working with Administrative Information Services, DeSC implemented a more rigorous process for testing the compatibility of Microsoft patches with University Business Applications prior to distribution to all DeSC machines and to many of the non-DeSC Windows machines on campus.

**In Memoriam**

DeSC and the University lost one of its members in November. Barbara Sutton’s dedication and insight will be missed by all members of the Council.
Research Computing Advisory Group

The Research Computing Advisory Group (RCAG) advises and collaborates with OIT on matters related to research computing at the University. The specific charge of this group is to:

- Advise OIT on the research computing needs of academic departments;
- Collaborate with OIT on various projects related to research computing;
- Advise OIT on the software needs for research computing.

During FY07, members of the RCAG were:

Mary Lynn Baeck, Civil and Environmental Engineering
Robert Calderbank, Applied and Computational Mathematics, Electrical Engineering, Mathematics
Roberto Car, Chemistry, Princeton Institute for Computational Science and Engineering
Emily Carter, Applied and Computational Mathematics, Mechanical and Aerospace Engineering
Kara Dolinski, Lewis-Sigler Institute for Integrative Genomics
Bruce Draine, Astrophysical Sciences
Hank Farber, Economics
Sal Fattoross, Ecology and Evolutionary Biology
Chris Floudas, Chemical Engineering
Serge Goldstein, OIT, Academic Services
Curt Hillegas (chair), TIGRESS High Performance Computing Center and Computational Science and Engineering
Scott Karlin, Computer Science
Daniel Marlow, Physics
Pino Martin, Mechanical and Aerospace Engineering
John Matese, Lewis-Sigler Institute for Integrative Genomics
Aleksandr Oganesov, Molecular Biology
Robert Ortego, Facilities
Jerry Ostriker, Astrophysical Sciences, Princeton Institute for Computational Science and Engineering
Josko Plazonic, Mathematics
Frans Pretorius, Physics
Stewart Smith, Dean for Research; Physics
Anatoly Spitkovsky, Astrophysical Sciences
James Stone, Applied and Computational Mathematics, Astrophysical Sciences
Daniel Trueman, Music
Chris Tully, Physics
Doug Welsh, Molecular Biology
Bill Wichser, Princeton Institute for Science and Technology Materials

Highlights

IBM storage system, /tigress
RCAG helped to identify the need for a centralized high performance storage system to be shared among the TIGRESS computing resources – Della, Hecate, Orangen, and Woodhen. The group also helped to validate and refine the design of the hardware and software configuration. As a result of these efforts, the University purchased a storage system from IBM. The new parallel filesystem software provides 200 MB per second access to a 35 TB filesystem named /tigress.
**Dell Beowulf Cluster, Woodhen**

RCAG advised in the acquisition of the new Dell Beowulf cluster, Woodhen. The new cluster provided another facet to the diverse strengths of the TIGRESS High Performance Computing systems. Woodhen consists of 192 dual 2.6 GHz dual core Intel Woodcrest processor systems each with 8 GB of RAM connected by a high speed Infiniband network. The 768 cores in the system double the computing capacity of the TIGRESS High Performance Computing Center.

**DSpace Pilot**

RCAG evaluated and provided essential input for the DSpace pilot system. RCAG helped to focus the service on the needs and preferences of University faculty. DSpace is an archival system for long term storage and web presentation of academic and research data. It can be used to store a broad range of raw and processed data including documents and images, and it can be used to provide persistent web addresses for such data so it can be referenced in publications.

**Other recommendations**

RCAG also helped to demonstrate the need for a number of software packages that were purchased this year including Loadleveler, a job scheduling package for Orangena; Totalview, a parallel debugger that can be used on all the TIGRESS systems; Webex, a web conferencing package; and Tecplot, a scientific plotting package. RCAG also advised OIT on the scheduling of the power outages needed to upgrade the data center power infrastructure. As a result, the needed work minimized the impact on faculty and research.
Committee on Academic Technology

The Committee on Academic Information Technology (CAT) facilitates communication and collaboration between IT providers and the University offices most directly responsible for the curriculum. The specific charge of the committee is to:

- Serve as an informational clearinghouse, so that those responsible for technology and those responsible for the curriculum are well-informed of each other’s initiatives;
- Develop new initiatives this may enhance the curriculum through information technology;
- Help evaluate IT initiatives that affect the curriculum and prioritize the distribution of resources;
- Take leadership to assure that the use of academic technologies in the curriculum receives appropriate assessment, both evaluative and formative.

During FY07, members of CAT were:

Kevin Barry, Library
Lin Ferrand, Office of the Dean of the Faculty
Serge Goldstein, OIT, Academic Services
Linda Hodges, McGraw Center for Teaching and Learning
Clayton Marsh, Office of General Counsel
Jed Marsh, Office of the Provost
Alberta Noon (secretary), OIT, Academic Services
Peter Quimby (chair), Office of the Dean of the College
David Redman, Graduate School
Janet Temos, OIT, Educational Technologies Center

Highlights

During the past year, CAT:

- Reviewed several requests to videotape classroom lectures and discussed classroom recording policies;
- Discussed the growing use and effectiveness of clickers (Personal Response Units) in the classroom;
- Reviewed the pending agreement with Google to make University public lectures searchable on the Google video website;
- Discussed the growing open-source course management system movement and the strongly adverse reaction in the academic community to the Blackboard patent – as a result, the University’s Blackboard license was renewed for a single year (rather than multiple years as in the past) in order to keep our options open;
- Discussed the growing use of Geographic Information Systems (GIS) on campus and the need for an integrated approach to GIS training and support;
- Reviewed the University’s acquisition of an online course evaluation system from CollegeNet, “What Do You Think” – will be integrated with PeopleSoft, and will be piloted with the Freshman Seminars next Fall.
The Productive Scholar

FY07 was the first year of the Productive Scholar, the revamped learning series that replaced the previous year’s Academic Productivity (AP) 501. The Productive Scholar focused on one session per week (Thursdays at noon) in a single venue (the Frist multipurpose room) to concentrate the audience and our resources. The new series also addressed the need for follow up instruction. Each Productive Scholar talk was linked with more extensive training that was available elsewhere on campus. To assure their accuracy and conciseness, significant time was spent in preparing the materials distributed during the sessions. Publicity included a poster campaign, carefully considered e-mails, and a new website that included information on additional training opportunities and software availability.

Software covered in Productive Scholar learning sessions included Microsoft Word (four topics), EndNote, RefWorks, Stata, LaTeX, PowerPoint, Matlab, GIS and Excel. The nine instructors included staff from OIT, the University Library, a graduate student (from the Office Visit program), and an outside consultant. Eleven sessions were presented each semester, with an average of 20-25 people per session. The highest attended session, on Microsoft Word Tips, filled the room with more than 50 people. The total for the entire year totaled slightly over 500 participants. In both the fall and spring series, academic staff accounted for the majority of the audience at 29% and 37%, respectively. Graduate students, likewise, took second place in both series at 23% and 18%. The remaining populations, in order, were administrative staff, undergraduates, library and other.

Complementary to the Productive Scholar learning sessions is the Office Visit Program. A total of 55 office visits were conducted, with the majority of visits covering Blackboard, EndNote and PowerPoint.

Improvements in the Office Visit program, which has been renamed STAT (Student Technology Assistants and Trainers), occurred towards the end of the year. A new website was created and a recruitment campaign yielded 49 applications, resulting in 35 interviews. The new team of students will, for the first time, include undergraduates. Ten undergraduates and two graduate students have received training and will staff STAT during FY08.
Lunch 'n Learn

The fall and spring sessions of the Lunch 'n Learn lecture series featured an array of speakers of varied affiliations. The roster included thirteen faculty members, eighteen University staff members (Library, OIT, Office of Research and Project Administration, Office of Communications) and two external speakers (Kevin Guthrie ’84, president of Ithaka, and Douglas Dixon from Manifest Technology). Appropriate to such a line up, attendance was brisk, with the largest audience of eighty-five for a digital photography roundtable filling the room beyond capacity. Twenty-five people attended a faculty presentation on computer graphics during the winter’s worst ice storm.

Most of these talks were documented in stories appearing on the “IT’s Academic” blog. Recordings of the talks were also converted into podcasts that have been available on the Lunch ‘n Learn web site since September and on iTunes since January, sending the numbers of downloads, remarkably, into the millions. By the end of the fiscal year, the eighteen Lunch ‘n Learn podcasts were downloaded more than seven million times.

The following is list of the 2006-2007 Lunch ‘n Learn sessions:

<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>5/2/07</td>
<td>Introduction to Office 2007</td>
<td>Jeanne Mrak</td>
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<tr>
<td></td>
<td></td>
<td>Marianne Crusius, Daniela Antonucci, Larry Danson, Yukari Tokumasu</td>
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<tr>
<td>4/22/07</td>
<td>Video on Demand at Princeton</td>
<td>Denise Applewhite, Douglas Dixon, David Hopkins, Lorene Lavora</td>
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<tr>
<td>4/11/07</td>
<td>Digital Photography Roundtable</td>
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<tr>
<td>4/4/07</td>
<td>A Second Life for the University: Immersive Reality in Teaching</td>
<td>Janet Temos</td>
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<tr>
<td>3/28/07</td>
<td>Geometry and Music</td>
<td>Dmitri Tymoczko</td>
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<tr>
<td>3/14/07</td>
<td>New Frontiers in Nanotechnology</td>
<td>Winston “Wole” Soboyejo</td>
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<tr>
<td>3/7/07</td>
<td>Campus Networking and the Internet: How They Work</td>
<td>Peter Olenick</td>
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<tr>
<td>2/21/07</td>
<td>All the News That Fits: Newspaper Resources at Princeton</td>
<td>Bobray Bordelon, Elizabeth Bennett</td>
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<tr>
<td>2/14/07</td>
<td>Modeling for Drawing</td>
<td>Adam Finkelstein</td>
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<tr>
<td>2/7/07</td>
<td>Clickers In the Classroom</td>
<td>Janet Temos, Joshua Rabinowitz</td>
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<tr>
<td>1/17/07</td>
<td>Bibliographic Management: No Longer a Chore</td>
<td>Audrey Betsy Wright</td>
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<tr>
<td>1/10/07</td>
<td>All Things Google</td>
<td>Wayne Bivens-Tatum, John Hernandez</td>
</tr>
<tr>
<td>12/13/07</td>
<td>Video Vivations: Constructing a Documentary in Real Time</td>
<td>David Hopkins</td>
</tr>
<tr>
<td>12/6/06</td>
<td>Teaching with a Tablet PC</td>
<td>Serge Goldstein</td>
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<tr>
<td>Date</td>
<td>Title</td>
<td>Author(s)</td>
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<tr>
<td>11/29/06</td>
<td>Content Protection and Digital Rights Management: Accessing Your Media in the Digital Home</td>
<td>Douglas Dixon</td>
</tr>
<tr>
<td>11/15/06</td>
<td>PlanetLab: An Open Platform for Developing, Deploying and Accessing Planetary-scale Services</td>
<td>Larry Peterson</td>
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<tr>
<td>11/8/06</td>
<td>Electronic Grantsmanship</td>
<td>Michelle Christy, Joseph Broderick</td>
</tr>
<tr>
<td>10/25/06</td>
<td>When Worlds Collide: The Papers of Thomas Jefferson in the Era of eBay</td>
<td>Kevin Guthrie</td>
</tr>
<tr>
<td>10/11/06</td>
<td>High Performance Computing: The Princeton Experience</td>
<td>Curt Hillegas, Mikko Haataja, James Stone, Bill Tang</td>
</tr>
<tr>
<td>9/20/06</td>
<td>Teaching with Blackboard: It Keeps Getting Better</td>
<td>Dennis Hood</td>
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</tbody>
</table>
The OIT Ambassador Program strives to provide an OIT Ambassador for every department, to ensure excellent communications between Ambassadors and departments, and to maintain a high level of departmental service and satisfaction. OIT ambassadors provide information about OIT services and announcements to University customers and bring back information about customer needs and issues to OIT. Ambassadors meet throughout the academic year on the third Tuesday of each month. 62 OIT Ambassadors serve 91 University departments and programs.

The following is a list of University Offices and Departments, and their OIT Ambassadors:

Admissions, Charles Kruger  
Alumni Council, Gail Martinetti  
Anthropology, Robert Hebditch  
Architecture, Annie Saunders  
Art and Archaeology, Anthony Scaturro  
Art Museum, Hetty Baiz  
Athletics, Matt Immordino  
Bendheim Center for Finance, Elliott Gonshor  
Brain, Mind and Behavior, Colin Currie  
Butler - Residential College, Kevin Mills  
Carl Fields Center, Robert Hebditch  
Center for Human Values, David Hopkins  
Center for International Studies, Peter Koppstein  
Center for Study of Religion, Matt Hood  
Chemical Engineering, Andy Rosenau  
Chemistry, Curt Hillegas  
Civil and Environmental Engineering, Mary Chang  
Classics, Dave Wirth  
Communications, David Hopkins  
Computer Science, Leila Shahbender  
Conference and Event Services, Kathryn Moncado  
Creative and Performing Arts, Hetty Baiz  
Development Communications, Linda Mule  
Dining Services, Mark Rodill  
East Asian Studies Dept., Charles Kruger  
Ecology and Evolutionary Biology, Grant Weed  
Economics, Chuck Augustine  
Electrical Engineering, Dave Wirth  
Engineering and Applied Sciences, Debby Becker  
English, Paula Hulick  
Environmental Health & Safety, Usha Patlolla  
Facilities, Evelyne Roach  
Firestone Library, Anthony Scaturro  
Forbes - Residential College, Kevin Mills  
French and Italian, Janet Hutton  
Frist Campus Center, Sally van Fleet  
Genomics, Jonathan Wilding  
Geoscience, Deborah Becker  
Germanic Languages and Literatures, Steve Albin
Health Services, Bob Stango
Hellenic Studies, Mary Ng
History, Ben Johnston
Housing, Marsha Jacobs
Human Resources, Sal Rosario
Humanities Council, Monica Parsons
Industrial Relations, Leila Shahbender
Latin American Studies, Ben Johnston
Linguistics, Dennis Hood
Mathematics, Charlayne Beavers
Mathey - Residential College, Kevin Mills
McGraw Center for Teaching & Learning, Sorat Tungkasiri
Mechanical and Aerospace Engineering, Janice Guarnieri
Molecular Biology, Evelyne Roach
Music, Lance Herrington
Near Eastern Studies, Charles Kruger
Office of Population Research, Mary Ng
Office of the Dean of the College, Serge Goldstein
Office of the Dean of the Faculty, Andy Rosenau
Office of the Dean of the Graduate School,
    Dennis McRitchie
Office of the Provost, Betty Leydon
Office of the Vice President and Secretary, Nancy Costa
Ombuds Office, Jill Moraca
Office of Research and Project Administration,
    Marsha Jacobs
Philosophy, Robert Hebditch
Physics, Charlayne Beavers
Photonics and Optoelectronic Materials, Andy Rosenau
Politics, Leila Shahbender
Princeton Investment Company, Emily Jeng
Princeton Materials Institute, Evelyne Roach
Princeton Writing Program, Mariann Miller
Princeton Institute for Science and Technology Materials,
    Dave Wirth
Psychology, Jennifer Chen
Public Safety, Shane Farrell
Registrar, Dennis Hood
Richardson Auditorium, Sally van Fleet
Rockefeller - Residential College, Kevin Mills
Slavic Languages and Literatures, Janice Guarnieri
Sociology, Monica Parsons
Spanish And Portuguese, Evelyne Roach
Study of Women and Gender, Mary Chang
Treasurer’s Office, Michelle Templon
Wilson - Residential College, Kevin Mills
Woodrow Wilson School, Chuck Augustine
SCAD/DCS Program

The Support for Computing in Academic Departments (SCAD) and Departmental Computing Support (DCS) programs complement OIT’s central computing support by providing departments with a higher level of individualized advocacy and attention. In an effort to bring up-to-date information and service to departments, their SCAD/DCS staff participate in OIT monthly meetings and training sessions that address common concerns and issues related to campus computing.

Both programs continued to grow at modest rates. During FY07, two departments joined the SCAD program and two departments joined DCS. A number of SCAD and DCS departments increased their FTE support percentage.

Fifty-six SCAD members serve a total of sixty departments. Thirty-eight DCS members serve a total of thirty-five departments. In addition, a working group of the SCAD/DCS advise and assist OIT in addressing specific issues related to computer security.

During FY07, training for SCAD/DCS members included:

- Vista Training and Demonstration (two day session)
- Getting Started for Windows Vista for IT Professional
- Office 2007 Demo
- Netscreen Firewall Training
- Advanced PHP/MSQL (two day session)
- Introduction and Advance Security Training (two sessions)
- “Developing with Style” Cascading Style Sheets
- Introduction and Advance Matlab (two sessions)

Upcoming training planned for FY08 includes Office 2007 hands on training; Vista Hands on training; Migrations from XP to Vista; Microsoft Vista Professional Certifications; and Mac OSX Leopard Training.

The following is a list of University Departments participating in the SCAD program:

American Studies Program, Michael Rivera
Applied & Computational Mathematics, John Vincent
Architecture, Erik Johnston
Art & Archaeology, Julie Angarone
Astrophysics, Leigh Koven
Atmospheric and Oceanic Studies, Sandy Clark
Bendheim Center of Finance, Matthew Parker
Center for the Studies of Religion, Tammy Williams
Center of Human Values, Andrew Perhac
Chemical Engineering, Eric Paul
Chemistry, Dan Nordlund
Civil and Environmental Engineering, Islam El Nagger
Classics, Donna Sanclemente
Comparative Literature, Jacob Tamler Carter
Computer Science, Paul Lawson
Council of Humanities, Jay Barnes
Creative Writing, Rick Pilaro
East Asian Studies, Zoltan Bekesi
Ecology and Evolutionary Biology, Sal Fattoross
Economics, Matthew Parker
Electrical Engineering, Jay Plett
English, Kevin Mensch
European Cultural Studies, Carolyn Hoeschele
French and Italian Languages, Michael Rivera
Genomics, Robert Kuper
Geosciences, Brian Mohr
German, Jacob Tamler Carter
Hellenic Studies, Carolyn Hoeschele
History, Carla Zimowsk
Industrial Relations, Jeannie Moore
Judaic Studies Program, Carolyn Hoeschele
Latin American Studies, Andrew Perhac
Mathematics, Josko Plazonic
Mechanical and Aerospace Engineering, David Radcliff
Molecular Biology, Alexander Oganesov
Music, Alexander Kass
Near Eastern Studies, Tammy Williams
Office of Population Research, Wayne Appleton
Operation Research Financial Engineering, Michael Bino
Philosophy, Jacob Tamler Carter
Physics, Vinod Gupta
Politics, Douglas Rosso
Princeton Institute for International & Regional Studies, Stacey O’Brien
Program in the Ancient World, Carolyn Hoeschele
Psychology, David Berkowitz
Princeton Environmental Institute, Axel Haenssen
Princeton Materials Institute, Dan McNesby
Religion, Tammy Williams
Residential Colleges, Marvin Waterman
School of Engineering and Applied Science, Karen Flamard
Spanish & Portuguese Languages, Michael Rivera
Sociology, Jay Barnes
Society of Fellows in the Liberal Arts, Jay Barnes
Study of Woman and Gender, Candice Kessel
Center for the Creative and Performing Arts, Tremayne Reid
Theater & Dance, Rick Pilaro
Visual Arts, Rick Pilaro
Woodrow Wilson School, Cathy Cuff
Writing Program, Keith Thompson

The following is a list of University Departments participating in the DCS program:

Administrative Information Services, Mark Zabielski
Alumni Council, Kathy Haney
Athletics, Dan Joyce
Art Museum, Janet Strohl
Career Services, Jaysen LeSage
Center for Study of Brain, Mind and Behavior, Randee Tengi

Dean of the College, John Green
Dean of Undergraduate Students, Victoria Haddad
Department of Public Safety, Alan Goldberg
Development, Kathy Haney
Dining Services, Mark Washington
Environmental Health and Safety, Marcia Leach
Facilities, Mark Washington
Friend Center, Karen Flamard
Firestone Library, Eugene Kaganovich
Friend Center, Karen Flamard
Frist Campus Center, Dino Palomares
Index of Christian Arts, Jon Niola
Human Resources, Maria Farrington
Language Resource Center, Barbara McLaughlin
Nassau Hall, Joe Delucia
Treasurer’s Office, Joe Keane
Office of General Counsel, Loretta Rice
Outdoor Action, Rick Curtis
Princeton-Blairstown, Gail Johnson
Pace Center, Catherine Kerr
Princeton Investment Company, Erin Smithouser
Program in Science and Global Security, Dorothy Davis
Registrar’s Office, John Grieb
Tiger Card Office, David Tierney
Undergraduate Admission, Glenn Wemple
OIT Teams

OIT Leadership Group

The OIT Leadership Group is comprised of 50-60 OIT managers, who meet monthly. The mission of the group is to:

- Serve as change agents for improving the effectiveness of the OIT organization. The group recommends and leads efforts to improve the effectiveness of the organization.
- Foster collaboration among OIT leadership. The group participates in professional development workshops that strengthen relationships, and which enhance management and leadership competencies among members.
- Provide cross-organizational communication for OIT projects and operational issues. The group will provide a forum to discuss projects on the OIT Interdepartmental Project Portfolio, as well as discuss OIT operational issues.

An advisory committee of five directs the OIT Leadership Group. During FY07, Hetty Baiz, Robert Hebditch, Donna Lawrence Annie Saunders, and Janet Temos, represented their respective OIT departments and served on the advisory committee.

Highlights

Diversity Task Force

Throughout FY07, the OIT Diversity Task Force, a sub-committee of the OIT Leadership Group, coordinated a variety of efforts to make OIT a more welcoming and inclusive organization that values diversity and shares affinities. Efforts included the IT’s Us newsletter, Getting IT Together activities, the OIT Buddy Program and the new OIT Facebook.

Members of the Task Force were Hetty Baiz (chair), Deborah Becker, Jon Edwards, Becky Goodman, Robert Hebditch, Paula Hulick, Irina Rivkin, and Evelyne Roach.

The Spring all-OIT meeting

The OIT Leadership Group coordinated the Spring All OIT Meeting. The theme of the meeting, Making Connections – Past, Present and Future, provided a most informative and enjoyable meeting.

J.T. Miller, Senior Associate Director of Strategic Partnerships and Planning in the Office of the Vice President for Development presented Connecting with the Past: An Illustrated History of Princeton. The meeting also featured a video presentation created by OIT Hardware Support and the New Media Center: 171 Broadmead - Making University Connections; Janet Temos introduced clicker technology; and Nancy Costa introduced the IT Strategic Planning Initiative.

Activities at Leadership Group meetings during FY07 included:

- The Oz Principle book discussion facilitated by Janet Temos;
- Myers Briggs Type Indicator workshop led by Susan Parks;
• University Emergency Preparedness Task Force briefing presented by Garth Walters;
• IT Strategic Planning overview presented by Nancy Costa;
• Disaster Recovery / Business Continuity case study and group exercise facilitated by Janet Temos;
• IT Disaster Recovery Plan overview and discussion led by Chuck Augustine;
• Faculty guest speaker, Emily Carter;
• The Vital Friends book discussion using clicker technology, coordinated by Robert Hebditch;
• An update on OIT process improvement projects by Andy Rosenau: The OIT Playbook, the Catalogue of OIT Services, and an enhanced Interdepartmental Project Portfolio.
OIT Cross-Functional Teams

Established in 2003, OIT cross-functional teams have become integral to addressing cross-functional information technology issues, that otherwise would not be addressed as effectively.

During FY07, six OIT cross-functional teams focused on Disaster Recovery, Facilities and Office Management, Information Technology Architecture, Software Coordination, University Training Coordination, and University Video Coordination.

Disaster Recovery

The Disaster Recovery team was formed to complete the work begun as part of Partnership 2000, to maintain a disaster recovery plan in case of a major disruption to the computing services at 87 Prospect. The Disaster Recovery Team identifies the resources and actions needed to restore the campus network and computing infrastructure if the current facilities are impaired. The team reviews and updates OIT’s disaster recovery plans by March 31 annually.

The Disaster Recovery Plan that includes:

- A timeline for the restoration of campus network and Internet connectivity;
- A timeline for the prioritized restoration of academic and administrative applications;
- A prioritized list of computing services and the steps needed to re-establish the operation of these services;
- Specific information about the location of backup data and restoration procedures for critical applications and services;
- Business continuity and restoration plans for administrative and academic activities in the event of a major disruption to campus computing services;

The team makes recommendations with regard to improvements to current physical and logical computing environments that would reduce the time needed to restore services in a disaster situation. The team also evaluates the existing network infrastructure, server deployment, and operational procedures to find ways of increasing the availability of computing service to the campus community (through reducing scheduled and unscheduled down-time reduction).

During FY07, members of the team were:

Charles Augustine (leader), Systems and Database Management
Deborah Becker, Database Administration Services
Colin Currie (co-sponsor), Administrative Information Services
Dave Herrington, Database Application Services
Charles Kruger, Unix Systems
Kevin Mills, Hardware Support
Steven Niedzwiecki, Windows Systems
Peter Olenick, Network and Telecommunication Systems
Anthony Scaturro, University Security Officer
Leila Shahbender, Student Computing Services
Donna Tatro (co-sponsor), Enterprise Infrastructure Services
Russell Wells, Administrative Information Systems
Dave Wirth, Technical Operations Highlights
During the past year, the Disaster Recovery cross-functional team:

- Developed a plan for locating Test and Quality assurance servers in New South and using them to host critical production services in the event of an outage. The effort will require major renovation to New South, which has been approved by the University and is currently scheduled to be completed by February 2008.
- Updated the off-site Disaster Recovery website combining the OIT Playbook application, a blog, and a document repository within a single site. The team also established automatic, secure replication of the OIT Playbook database to this site.
- Continued dialogue with Carnegie Mellon with regard to a reciprocal agreement for server hosting to provide basic computing services in the event of a disaster. Members of the team also visited Montclair State University to explore that location as a possible alternative to Carnegie Mellon.
- Researched failover options for Blackberry services with a planned implementation in FY08.
- Considered how to respond to staff unavailability, for example in a flu pandemic situation. The team recommended that defining a succession plan for systems support be mandatory for all services.
- Recommended that all OIT staff have an alternate e-mail address. Such addresses as well as cell phone, home phone, and home address are to be maintained in a location that will be accessible in an emergency. The team also worked in conjunction with the OIT Playbook project team. The Playbook application is now in operation with a copy maintained as part of the remote disaster recovery web site.

Facilities and Office Management

The OIT Facilities and Office Management team seeks to identify and improve OIT’s administrative processes and organizational effectiveness. As the OIT organization continues to evolve and develop, the team evaluates and recommends revisions to the OIT office allocation plan using the “OIT Space Principles.”

During FY07, members of the team were:

Joyce Bell, Administrative Information Services
Shane Farrell, Budget and Finance
Betty Leydon (sponsor), Vice President and CIO
Marie Messler, Finance, Administration, and Planning
Carol Morea, Support Services
David Morreale, Desktop Computing Support
Alberta Noon, Academic Services
Andy Rosenau (leader), Human Resources and Administration
Leah Targon, Office of the Vice President and CIO
Sally Van Fleet, Enterprise Infrastructure Services

Highlights

During the past year, the Facilities and Office Management cross-functional team:

- Dealt with numerous facility maintenance issues in OIT buildings;
- Updated the OIT Staff Hire and Exit policies and standardized the new employee orientation practices across OIT departments;
- Worked closely with the OIT Diversity Task Force to launch the OIT Buddy Program;
- Coordinated two “Getting to Know You” activities - an Orange Key Tour in November in which sixteen staff participated; and in March, a University Chapel organ concert/demonstration in which thirty-nine staff participated.

Information Technology (IT) Architecture

The IT Architecture team works collaboratively with staff throughout OIT and other campus departments to define and articulate the standards, technologies, processes, interfaces and best practices which form the University’s IT architecture.

During FY07, members of the team were:

Colin Currie (co-sponsor), Administrative Information Services
Deborah Becker, Database Administration Services
Jon Edwards, Education and Outreach Services
Serge Goldstein, Academic Services
David Herrington, Database Application Services
Robert Knight, TIGRESS High Performance Computing Center and Computational Science and Engineering
Charles Kruger, Unix Systems
Paul Lynn (co-leader), Administrative Information Services
Dave Morreale, Desktop Computing Support
Steven Niedziewicki (co-leader), Windows Systems
Peter Olenick, Network and Telecommunication Systems
Anthony Scaturro, University Security Officer
Donna Tatro (co-sponsor), Enterprise Infrastructure Services
Highlights

Prior to this year, the primary purpose of the team and the various sub teams was to document the different components of the Princeton IT architecture and to maintain that documentation. The team continues to review and update the IT architecture documents on a semi-annual basis. During this past year, the team met to discuss opportunities for prescriptive guidance. The primary areas identified were:

- Security
- Authentication
- Service Oriented Architecture (SOA) – Web Services
- Long-term file storage (DSpace, fedora)
- Public Key Infrastructure (PKI) – Certificates

The team formed a working group to investigate opportunities, identify issues and recommend strategies regarding the use of Service Oriented Architecture issues regarding web services at Princeton. The group identified the need for a directory of available web services. The group then undertook preliminary work on creating a registry/directory of web services.

Following demonstrations and discussion, the team collectively agreed that CAS (web-based single sign-on) and Shibboleth (inter-organizational federation) are good strategies to pursue for adoption at Princeton.

Finally, the Architecture Review Board (ARB), a sub-team of the IT Architecture team, reviews architectures presented by customers as they are deploying and/or enhancing University systems. The following is a list of system architectures reviewed by the ARB in FY07:

- ReportNet/DataWarehouse Infrastructure Enhancements
- Undergraduate Admission Checklist & Decision Reporting
- Firewall Proxy Replacement
- DeSC Information Application
- PeopleSoft User Productivity Toolkit
- Reunion Technologies
- CollegeNet Online Course Evaluation
- Resource25 WebViewer, Web Services and LDAP Authentication

Software Coordination

OIT formed the Software Coordination team to maximize the efficiency of software delivery by coordinating software selection, acquisition, and distribution for overall campus use and by introducing version control for publicly available applications in campus clusters and on public UNIX servers.

The OIT Software Coordination team represents a variety of OIT departments, all with responsibility for providing software to the University community. The team has worked to identify, coordinate, communicate and facilitate resolution of issues regarding software. It has established channels of communication with departmental representatives and defined a process through which members of the University community can identify software issues that need attention. The team strives to ensure that the software installed on OIT public clusters, OIT-imaged machines, and OIT central servers is compatible, and meets the needs of the University community.

During FY07, members of the team were:

Gary Eshbaugh, Student Computing Services
Ian Finch, Administrative Information Services
Serge Goldstein (co-sponsor), Academic Services
Becky Goodman, Integrated Technology Services
Curt Hillegas, TIGRESS High-Performance Computing Center and Computational Science and Engineering
Phil Immordino, Software Support
Charles Kruger, Unix Systems
Robert Lawler, Administrative Information Services
Steven Niedzwiecki, Windows Systems
Kevin Perry, Educational Technologies Center
Steven Sather (co-sponsor), Support Services
Leila Shahbender (leader), Customer Services

Highlights

Vista and Internet Explorer Version 7
The team sponsored a project to deliver the impact of Microsoft’s Vista and Internet Explorer version 7 on all segments of campus computing, including DeSC, the Faculty Computer Program (FCP), non-managed institutionally owned computers, Student Computing Initiative (SCI), as well as non-SCI student-owned equipment. The project team developed a time line and determined the best way to deploy Vista and Internet Explorer Version 7 to institutional and SCI machines. The project team supervised application testing, including University business applications as well as department-specific software. Training and documentation are in process with much progress made to date. The project will continue into FY08.

Fax Gateway Service
The team evaluated the campus Fax gateway service and recommended that support be terminated effective January 2008 – the OIT Cabinet accepted the recommendation.
Centrally Funded Software
The team evaluated centrally funded software, looking for areas that should be included. As part of the evaluation, team members reached out to faculty and students. In FY07, the following purchases were made:

- ArcGIS was expanded to a site license (effective September 2007);
- A one-year site license for Autodesk Design Institute (a comprehensive subscription license for all core Autodesk software);
- One hundred seat Solaris license for Stata SE (not Intercooled) version 10;
- A three-year license for Tecplot, to be permanently funded by OIT and offered at no fee to students and departments;
- A one-year twenty seat subscription for WebEx. Media Services will serve as site administrator/coordinator.

University Training Coordination
The mission of the Princeton University Training Team (PUTT) is to create a holistic and integrated framework for management and staff learning. The group seeks to improve and develop the training infrastructure in order to meet institutional expectations.

During FY07, members of PUTT were:
Megan Adams, Treasurer’s Office
Gregory Cantrell, Environmental Health and Safety
Nancy Costa (co-sponsor), OIT, Finance, Administration and Planning
Nicholas Diehl, Ombuds Office
Janice Guarnieri (co-leader), OIT, IT Training, Documentation and Support
Marilyn Ham, Music
Laurel Harvey, University Compliance Officer
Maureen Imbrenda (co-leader), Human Resources
Lorene Lavora, OIT, Education and Outreach Services
Maureen McWhirter, Academic Administration
Luisa Paster, Human Resources
Kimberly Roskiewicz, Woodrow Wilson School
Hannah Ross, Office of the General Counsel
Lianne Sullivan-Crowley (co-sponsor), Human Resources
Nicole Volpe, Human Resources

Highlights
During FY07, the group focused on delivering comprehensive programs for academic and administrative manager training and information needs, and for new manager orientation.

Financials and Compliance Training
To determine the training and information needs of the community in this key area, PUTT invited Megan Adams, Director of Risk Management and Assistant Treasurer, to join the group. Working closely with Megan, PUTT conducted focus groups with academic and administrative departmental managers, and reviewed information provided on the Treasurer’s Office website, the value of finance-related courses provided, and the use of the Management Standards Guidebook.

The focus groups provided a wealth of information and helped PUTT identify key information gaps in the area of financial training. The Treasurer’s Office is now in the process of revamping their website and establishing an updated financial training curriculum that will be offered to departmental managers.

New Manager Orientation
PUTT has been working closely with the Office of Human Resources to develop a new manager orientation program that will benefit not only to new managers, but to existing managers as well. Lianne Sullivan-Crowley, Vice President for Human Resources, shared her vision for a new program with PUTT. As a result, PUTT is now assembling a program that will accomplish the following goals:

- Orient managers to the University’s mission and values;
- Provide managers with an overview of the University’s structure, decision-making bodies, and key functions, for both academic and administrative managers;
- Articulate specific expectations for managers about their performance, and their responsibility for compliance with key University requirements.

University Video Coordination
The University Video Coordination team coordinates video production projects and video streaming events on campus. The team also maintains a portfolio of current and planned video projects and strives to sustain an open dialogue among the various video production, storage, and delivery groups at the University.
In addition, the University Video team:

- Coordinates the delivery of video services. The team will provide a venue for the discussion of video project proposals, and ensures that they are delivered as efficiently as possible.
- Seeks to avoid redundancy and duplication of effort, and to maximize the effective use of existing video resources.
- Develops strategies for video production and distribution. The team provides a forum to discuss current video delivery limitations and suggests ways to deliver video through streaming media and through use of cable TV facilities.

During FY07, members of the team were:

Julia Cheung, Woodrow Wilson School  
Marianne Crusius, OIT, Language Resource Center  
Su Friedrich, Center for the Creative and Performing Arts  
Serge Goldstein (sponsor), OIT, Academic Services  
James Grassi, OIT, Media Services  
David Hopkins (leader), OIT, New Media Center  
Karen Jezierny, Public Affairs  
Kristian Kauker, OIT, Media Services  
Donna Liu, Woodrow Wilson School, University Channel Project  
Michael Mills, OIT, Media Services  
Domingo Monet, OIT, Educational Technologies Center  
Cynthia Parvesse, Woodrow Wilson School  
Lauren Robinson-Brown, Office of Communications  
Anthony Rose, Woodrow Wilson School

**Highlights**

**Video Distribution of Public Events**
The team continues to examine possible replacements for the Vbrick system, to automate and streamline the process of video shooting, capturing, editing, streaming and podcasting public lectures.

**Central Video Storage**
The New Media Center installed a 4 TB storage server to expand the central storage available on the internal C500 hard drive (Princeton Server Group portable streaming and the large high-quality MPEG2 files).

**Video Shoot Request Form**
Karen Jezierny and Lauren Robinson-Brown reviewed the release and video request forms and streamlined the process. As a result, the team is now developing a video production form for the general public and for Woodrow Wilson School events.

**Channel 7 Subcommittee**
The team formed a sub-committee to review the delivery of programming on Channel 7 and to establish a process for marketing University events. As a result, the video channel will be used to promote campus events. The sub-committee also developed a template that can easily create public event slides for the channel.

**Video Server Transition**
OIT is in the process of developing a transition plan from the Real Helix video server, which has provided disappointing results, to a Flash video server. Currently, the Flash video server is being tested with Language Resource Center videos and public lectures. If testing continues to prove successful, a phased conversion from Real to Flash will be initiated.

The NMC is also researching automated systems for delivery of live events and the management of Video On Demand content management systems. Two of the companies under analysis are Podcast in a Box and Ingeniux.

**Rich Media Delivery in Classrooms**
To enhance the recording and delivery of public lectures, the Classroom Committee has agreed to fund a Rich Media classroom system. Such classrooms have mounted cameras and speaker tracking systems. The team selected the Anystream system, which will be installed in McCosh 50. An alumnus has funded the renovation of Woodrow Wilson School Bowl 1. As a result, the University will install a second Anystream in the bowl.

**Podcast Conversion Project**
The New Media Center worked with Podcast in a Box to convert 700 REAL formatted video lectures into audio MP3 podcast lectures. The company created an RSS feed from the entire list of lectures. The feed was then submitted to the Apple iTunes Store. During the year, the podcasts reached a rank of 12th overall in the “most popular” iTunes education category.

**Transition of Web Media Responsibilities**
The New Media Center assumed responsibility over the web media production process. The New Media Center met with the Athletics department to discuss the streaming responsibilities for all of their live events. Athletics agreed to assign one of their full time staff to help maintain the system.
The Undergraduate Event Calendar, “The Point,” requested the addition of an RSS feed to document the programming schedule on Channel 8 (The Student Channel). A similar feed will also support the Channel 7 (The Campus Channel) programming information on the Webmedia website.

**Commencement and the News Media**

Heightened interest from the news media in the speakers at last year’s commencement events drew attention to the need for improved video delivery to news bureaus. During the year, OIT and the Office of Communications reviewed service improvements, including the possibility of sending video signals from Nassau Hall to the Woodrow Wilson School, where the TVOne video line would be available for all news bureaus.
Office of Information Technology
Administrative Information Services

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Director, Administrative Information Services

Ted Bross
Associate Director, Custom Development, Data Warehousing and Integration

Suzanne Coletti
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Sharon Hughes

John Van Sant
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Donna Lawrence
Package Adaptation and Customization

Devaki Wagle
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Robert Lawler
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Mark Zabielski

Ashutosh Hadap
AIS Collaborative Solutions

Ian Finch
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Marsha Jacobs
Grants and Housing Management

Yuri Smolyansky

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Ashutosh Hadap
AIS Collaborative Solutions

Revised 11/27/2007
INFORMATION TECHNOLOGY AT PRINCETON IN THE 21ST CENTURY: A STRATEGIC DIRECTION

FINDINGS

Princeton must consolidate and strengthen its engagement with information technology.

This is the principal message that emerges from a strategic planning process that has included reviews of emerging IT trends, assessment of Princeton’s IT compared to our peers, and presentations, interviews, and focus groups conducted with over 1000 members of the Princeton community, including 28 individual faculty members, 5 trustees, and 34 constituent groups representing department chairs, faculty, library staff, undergraduate and graduate students, administrators, and staff. The details of this strategic planning process, including write-ups of the IT trends, peer assessments, focus groups, and interviews, are presented in the second part of this document. In this first part, we present a summary of our findings.

IT TRENDS

“The last decade, in short, has seen a global revolution of unprecedented speed and reach in the creation and transmission of knowledge.” Edward Ayers, Professor of History and Dean of the School of Arts and Sciences at the University of Virginia, in “Doing Scholarship on the Web,” Journal of Scholarly Publishing, volume 35, April 2004

If the 20th century was the age of computer technology, the 21st is emerging as the age of information. IT is pervasive and all-encompassing. Our examination of IT trends reveals that:

- **We are deluged with data.** Last year, more raw information was produced than in all previous human history (IDC Corporation), including an explosion of audio and video materials. Much of this information disappears as quickly as it is produced because we have no way to store it and, even if stored, no effective way to retrieve it.

- **We are swamped with software:** Wikis, Blogs, Microsoft Vista -- we are everywhere besieged by new applications. Even the “old” applications, like Word, keep changing, requiring us to constantly race to acquire new IT skills just to keep up with our colleagues and students (not to mention our kids).

- **We are governed by gadgets.** From Ipods, to dual-mode cell phones, to GPS navigation, to Blackberries, to entire cities blanketed with wireless access points, we are ever more tethered to various forms of IT hardware and ever more dependent on IT to do our work, and even to live our lives.

- **We are wedded to the web:** More and more of the services we access and the intellectual resources we consume are being delivered online. People expect both information and information services to be easily, and universally, accessible. From ordering products, to reading reports, to researching history, to commenting on politics, to applying to college (and soon, to reading a book), people expect to be able to do it online.
We are exposed and vulnerable: Because so much of what we know and so much of what we do is online, we are increasingly susceptible to security breaches, as well as complex and costly litigations arising out of intellectual property issues. And, in education, the lack of clarity around the definition of “fair use” is making it harder to know what is ethical, much less legal.

These IT trends are already affecting, and will continue to affect, everything we do as an institution, from the way we teach and conduct research, to the way we attract new students and carry out the business of the University.

PRINCETON AND ITS PEERS

“Princeton simultaneously strives to be one of the leading research universities and the most outstanding undergraduate college in the world.” Princeton home page, www.princeton.edu

What Princeton will do in the domain of IT, how it reacts to these IT trends, must follow directly from its unique character as an institution dedicated to teaching and research, to intense faculty-student interaction, and to the involvement of students, not just in the acquisition of knowledge, but in the generation of knowledge. Compared to its peers:

- Princeton has few professional schools. It is relatively small and relatively centralized.
- Princeton is uniquely focused on undergraduate education, particularly on the involvement of undergraduates in scholarship and research.
- Princeton is, and will remain, a traditional institution when it comes to the students it educates (18-21) and the way it educates them (intense faculty-student interactions).

Princeton also stands out from its peers in its use of IT. Compared to its peers, Princeton:

- Leads in its support of ERP systems (PeopleSoft, Blackboard).
- Leads in its support of administrative desktop systems (DeSC and SCAD).
- Leads in its support of research computing systems (TIGRESS High-Performance Computing Center).
- Leads in its implementation of a core network infrastructure.
- Leads in its implementation of an effective IT governance model.

All of the areas where Princeton leads share a common characteristic: centralization. This centralization offers us a unique opportunity to leverage central IT resources to deliver cost-effective, robust services to a large part of our community, in a way that is almost impossible for our peers. Princeton's implementation of centralized ERP systems is the envy of the Ivy League and our recent initiatives in centralized research computing support are being studied and emulated by many of our peers. Less well known is our distributed administrative desktop support service (DeSC), which has allowed Princeton to leverage centralized support to provide robust and secure desktops to our administrative staff.

At the same time, Princeton:

- Lags in its implementation of new technologies, including web applications and social-networking software.
- Lags in the recording and dissemination of classroom lectures.
- Lags in its support for mobile and remote computing.
- Lags in providing authentication and identification services to the extended University community (“identity management”).
In some of the areas where Princeton lags, it does so deliberately. We have chosen not to be on the “bleeding edge” of technology innovation. We have chosen not to offer distance education courses. We do not plan to record and disseminate class sessions (except possibly as an aid to students who cannot attend a class). A number of our peers are offering these initiatives for their own good reasons. Princeton will follow its own path, one that derives from its unique strengths and responds in its own way to the needs of its community.

PRINCETON’S NEEDS

In talking with individuals and groups, we heard many different things, but a number of common concerns and needs were voiced. Our conversations reveal that:

**We need a “data lifeline.”** We are drowning in data, and everyone (students, faculty staff) wants the University to provide them with a “data lifeline.” The need is for a comprehensive data store, along with mechanisms to search and archive the data, and policies that control retention and disposal of the data. Such a system must have very broad applicability because the need is broad: email, research data, reports, forms, and all the various records produced by the University. The actual production of digital content (“digitization” in the narrow sense) represents a very small part of this need; more critical is the need for integrated data repositories that allow people to store, access and share data without burdensome quota restrictions and that will help the University respond to emerging judicial data-reporting requirements and reduce the widespread data duplication and proliferation of “shadow” systems that currently exists on campus.

**We want to collaborate:** Faculty, students, and staff want systems that facilitate collaboration, both at the level of data (shared data stores, collaboration software) and at the level of people (high-quality video conferencing). Collaboration software must therefore be an integral element in the design of our data repositories. And we must evaluate the need for spaces, equipment, and software designed to support high-bandwidth (high-definition) video conferencing.

**We want online access to everything, anytime and anywhere:** It is not enough for our data to be online and shareable. Faculty, students, and staff want data and services to be accessible to all of our devices and from all of our venues. There is a widespread desire for much improved, easier-to-use, and more accessible online services and a concern that we are not implementing web-based services fast enough. Faculty members want better access to data and services from the classroom, from home, and from abroad. Students want better access on their mobile devices. And everyone wants more uniform access to services. Currently, there is a wide disparity among departments (both academic and administrative) in terms of the online services they provide. What online services do exist are often hard to find, and even harder to use.

**We need to consolidate:** A recent survey (March 2007) revealed the existence of 284 departmental IT systems at Princeton. Many of these systems contain unique data or support unique services. But many also contain data replicated from central repositories or provide redundant services (services that are available centrally or have been separately implemented in multiple departments). Each of these systems comes with an associated
maintenance cost, and all represent a potential security exposure. Where possible and appropriate, we need to provide consolidated, secure, robust services that eliminate the need for these redundant systems. Where not possible, we need to provide IT audits for these systems to ensure that they meet stringent data security standards.

**We want more support, not just more technology:** The single, strongest message that emerged from the faculty interviews and from conversations with staff in administrative offices was the need for people who can help faculty and staff members understand how to use IT systems. Although some amount of enhanced online training will help, the most often voiced need was for people who both understand the work of the faculty or staff member and also understand IT well enough to act as a go-between, people who can explain and exemplify the proper use of technology to the individual user. Faculty members do not, in general, feel they know all of the technology they should, or could, know to help them in their teaching and research, and staff members feel that they are not able to leverage the software they have to maximum benefit or explain their IT needs adequately to the IT staff.

In summary, the members of the Princeton community are asking us to provide them with easy-to-use, consolidated data stores and online services that support collaboration and sharing, along with a cadre of knowledgeable IT support staff who also understand their academic and business needs and can help them use technology to maximum benefit.

How can we do this?

**PRINCETON'S PATH**

“We absolutely must move briskly into the future. Universities that stand still fall behind.” Shirley Tilghman, President of Princeton University, CPUC Meeting, March 2007

We believe that the right path for Princeton in the 21st century is a path that builds upon the one we have successfully followed in two specific areas: administrative systems and high performance research computing systems. These two efforts share a common set of elements that have been instrumental to their success:

1) Close collaboration between users and service providers.
2) Centralized facilities, hardware, software and staff support.
3) Centralized funding for infrastructure, with appropriate cost sharing by departments.

We believe that these three ingredients are key to the success of any large-scale IT effort at Princeton. They derive directly from Princeton’s unique qualities as an institution, notably its high degree of centralization in governance and funding. We believe that we can address the IT needs expressed by the community by continuing to strengthen our initiatives in administrative and research computing support and by incorporating the same elements that have made these two initiatives successful into a set of new initiatives in two areas. We recommend that Princeton:
BUILD AN INFORMATION INFRASTRUCTURE

We have successfully built a network infrastructure and we must continue to support and enhance that infrastructure in the years to come. But providing conduits for the bits is no longer enough. We must take the next step and build an information infrastructure, one that can help us manage the massive amounts of data that we are acquiring and generating, and one that supports collaboration. Core elements of this information infrastructure are:

- Massive central data storage (hundreds of terabytes, if not petabytes), centrally provided and managed.
- Development of comprehensive data repositories that support data access and archiving, along with the implementation of data retention policies.
- Reduction in duplication of data stores, with corresponding enhancement in accessibility of centrally stored information.
- Standardized, simple-to-operate collaboration software that facilitates sharing of data within and beyond the confines of Princeton.
- Digitization services that facilitate the conversion of information from analog to digital form.
- Enhanced support for mobile devices and remote access to University resources from home or while traveling.
- Standardized, simple-to-operate media facilities in classrooms that allow faculty and students to access and share information during class.
- High-definition video conferencing spaces that support real-time collaboration.
- Continued support for the networking and computing infrastructure on which all IT services depend.

BUILD A SERVICES INFRASTRUCTURE

Universally accessible shared data access is key to Princeton’s future as an institution dedicated to the accumulation, creation, and analysis of information. Equally important is online access to services. We are not proposing to replace face-to-face interactions (in the classroom, dorm room, or office), just the opposite. We are proposing a set of integrated, online services that will facilitate people-to-people interactions by simplifying and standardizing interactions between people and information. Essential elements of this services infrastructure are:

- A comprehensive and secure authentication and authorization system that enables all members of the extended Princeton community to access information services both from within the University network and from external networks.
- Easy-to-use and high-quality departmental and University web sites that support automation of routine information services, with ease-of-use being paramount; if it is not easy to use, people won’t use it no matter how functional, unless they have no alternative.
- Online forms, with secure access available both within the University network and from external networks.
- Replacement of “shadow” information systems with a set of secure, centrally-managed services that allow authorized users to access the information they need, when and where they need it.
- A cadre of “business” and “academic” IT specialists who can correlate business and academic needs with IT solutions and can advise and mentor users on how to use
technology in the most appropriate manner. These staff must either be co-located with their customers or be easily dispatchable to offices, classes, or dorm rooms.

We have begun to provide an information and services infrastructure for our administrative systems and our research computing systems, although we have more to do in each of these areas. As we look to other areas, we must keep in mind that Princeton is made up of many communities, and we will always have multiple centers of IT excellence and support; indeed, when it comes to customer support, models based on local staffing can be very effective (e.g., the Woodrow Wilson School). But the scale of the information problems we face demands unified, centralized solutions. Infrastructures are useful only to the extent that they are uniform and universal; we need one information infrastructure, one services infrastructure.

Princeton has a chance to do something that many of its peers cannot do. Because we are small, because we are relatively centralized, and because we are clear about our educational and research mission, we have the opportunity to develop and deliver a set of IT services that are fully matched and appropriate to the University and its mission. Princeton has described itself as an “early follower” with respect to IT. But the trends we have surveyed, and the conversations we have had, make clear that IT is becoming ever more central to the conduct of education and research. If Princeton is to continue to lead as an educational and research institution, it must consolidate and strengthen the IT services it provides to its community. The success of our faculty, our students, and our staff will depend on our ability to do so.
IT Strategic Direction On A Page

Vision
To provide valuable information technology services that enable Princeton University to simultaneously strive to be one of the leading research universities and the most outstanding undergraduate college in the world.

Mission
To deliver accessible and reliable information technology services to the Princeton University community that meet or exceed customer expectations.

Areas of Focus

- **Customer Requirements & Experience**
  - Implement a comprehensive and integrated security and identity management solution
  - Implement a comprehensive and integrated digital content management environment
  - Enable collaboration and conferencing through new software tools

- **Infrastructure Requirements & Capabilities**
  - Deploy improved remote access and support for mobile devices
  - Continuously evaluate cost-effective and functionally acceptable sourcing strategies

- **Organization & Resources**
  - Establish clear governance to sponsor and support strategic directions
  - Provide adequate IT support so that faculty and staff can effectively use current and planned information technology tools
  - Benchmark with peers and share best practices

- **Affinities across Departments & Offices**
  - Through a comprehensive IT systems inventory, identify opportunities to implement shared applications and services

- **Areas of Excellence**
  - Sustain a high-performance research computing environment
  - Continue to leverage our investment in administrative computing software

Office of Information Technology

September 2, 2007
Operating budget benefits from strong investment returns

Ruth Stevens

Strong returns on Princeton’s endowment will allow the University to allocate additional funds toward critical needs in its operating budget.

Princeton trustees have approved an increase in the University’s spending of endowment income that will provide $24.8 million for several key areas, including energy and renovations, faculty recruitment and retention, information technology, library acquisitions and staffing. The increase is intended to ensure that the rate of endowment income spending remains in the University’s target range of between 4 and 5 percent of the market value of the endowment.

The additional funds will be used primarily to provide permanent support for recurring expenditures in the University’s operating budget that have been funded in recent years through capital reserves and to rebuild reserves for energy costs and renovation. But the funds also will permit program enhancements in information technology and an expansion of library acquisitions.

Here is a breakdown of how the funds will be designated:

- $9.2 million will go toward energy and construction costs, which have risen rapidly in recent years. The University’s annual energy costs have jumped from $18 million in the 2004 fiscal year to a projected $28 million in 2006. The increases to the energy budget have been covered by scaling back support for the University’s renovations program. The allocation will allow the University to fully fund energy costs, begin to rebuild an energy reserve and restore cuts to its renovation budget.
- $5 million will enable the University to seed new research ventures and pay the costs of recruiting and retaining faculty members. The fund typically helps support start-up costs for new faculty in all divisions of the University, especially faculty who require sophisticated scientific equipment.
- $3.4 million will go to the Office of Information Technology, recognizing its status as “an essential backbone for research and education,” according to Provost Christopher Eisgruber.

The infusion will provide permanent funding for positions associated with a number of recent IT initiatives and will enable the office to implement a five-fold increase in bandwidth for the University’s Internet and Internet2 service, eliminate charges to academic departments and administrative units for Internet connections; centralize funding for shared educational software applications; improve support for University and departmental Web sites; and accelerate the schedule for

Continued on page 3

Budget

Continued from page 1

the completion of the campus wireless network.

- $1.1 million will be added to the library’s acquisitions budget, which has lagged inflation rates and increases at peer institutions.
- $6.2 million will cover the costs of an expansion of the development office staff that has already taken place. This allocation will support positions that are currently financed through unrestricted gifts, term funds and capital reserves.
- $1.9 million will go toward permanently funding other term positions and initiatives. Until now, these have been funded through temporary allocations from the president’s discretionary fund, capital reserves or other sources. These funds will support positions in the compliance program, human resources, the art museum, athletics and student life.

This is the seventh time the University has adjusted its endowment spending policy since it was adopted in 1979. The policy seeks to achieve a balance between present and future needs of the University. It is based on a spending rule: that says the amount of spending per unit of endowment will increase each year by a stipulated percentage — currently set at 5 percent.

Applying this rule determines the University’s spending rate — the amount of its endowment spending divided by the overall value of its endowment. While Princeton’s policy does not establish an explicit spending rate — it results from the application of the spending rule and fluctuations over time in the value of the endowment — the University has long deemed it desirable and appropriate to achieve a spending rate between 4 and 5 percent. University trustees periodically have reviewed the spending rate to make sure it is falling within that range. The Princeton University Investment Co. (PRINCO) has achieved consistently strong returns on the endowment in each of the last three years, and the trustees accordingly determined that a review was needed. The adjustment approved by the trustees is effective for the University fiscal year that begins on July 1.
Lectures from Around the World
Brought to the Internet by WWS

Every day, at colleges and universities throughout the world, experts on the most important issues of our time—global stability, national security, the economy, health, law, science, and more—share their insights with small groups of students and faculty fortunate enough to be able to attend their lectures. Now, through a novel venture started by the Woodrow Wilson School of Public and International Affairs, some of these talks can be heard by anyone with an Internet connection.

The project, called University Channel (http://uc.princeton.edu), collects recordings of public affairs events from about 40 institutions—as close as the University of Pennsylvania and as far away as the University of Singapore—and posts them online in a variety of audio and video digital formats. The service, barely a year-and-a-half old, is already winning accolades: last December, Slate magazine named it one of 2005’s Top Ten Podcasts.

University Channel is the brainchild of its director, Donna M. Liu, a former CNN producer who covered, among many other events, the first Gulf War and the 1989 Tiananmen protests. Liu came to the University as a Ferris Professor in 2002 to teach a course on international television news. “It was at Princeton,” she says, “that I was struck by the amount of academic discourse that never reaches the public, and by the idea that we could get research and opinion on really important issues out to the public via the Web.” She approached Wilson School Dean Anne-Marie Slaughter ’80, who responded enthusiastically to the idea, and with “huge help” from the Office of Information Technology’s Educational Technologies Center, the channel went online in July 2005 with about 20 lectures.

Today that number has grown to more than 300 events on a multitude of topics. Visitors to the site can find discussions of the status of women in Afghanistan or preparedness for an influenza pandemic or the outlook for the global economy. There is an address at Tufts University by Hans Blix, former United Nations chief weapons inspector, or a conversation with social historian and writer Studs Terkel at the University of Chicago. And a number of figures prominent in contemporary civic life make appearances—U.S. Supreme Court Justice Stephen G. Breyer, who spoke at Princeton last spring; Treasury Secretary Henry M. Paulson Jr. (speaking at Columbia University), U.S. Senator Joseph R. Biden Jr. (University of Texas), and California governor Arnold Schwarzenegger (Harvard), to name a few.

The site is attracting an eager following: it receives 20,000 hits per day and is currently providing about 4,000 MP3 downloads a day. Visitors come from around the world, with about

University Channel broadcasts talks from many campuses.

10 percent entering through.edu domains, in search of commentary from all sides of the political spectrum.

The most frequently visited lecture? A talk at the University of California at Berkeley by Robert Reich, secretary of labor under President Bill Clinton, on “How Unequal Can America Get Before We Snap?” The most popular panel? “The Conservative Movement: Its Past, Present, and Future,” a three-day conference at Princeton last December.
Blogging in the Ivy League

By Claire Abramowitz and Sarah Hogarty :: PRINCETONIAN CONTRIBUTORS

Los Angeles has Pink is the New Blog. New York has the slightly more urbane but no less sarcastic Gawker. Now the Ivy League has not one, but two blogs of its own. Founded over the summer, IvyGate and IvyLeak use the Internet as a medium to comment on life at Ivy League schools with a good deal of snarky intelligence and humor.

IvyLeak was started by "two former Ivy editors," according to the site, but the writers of IvyGate won’t deign to even give the most basic description of themselves. Similar in tone as well as content, both blogs focus on covering the elements that, as IvyLeak phrases it, "the publications these two former Ivy editors used to run tagged . . . as off-limits."

"We’re here to take our beloved League to task where it’s deserved, but to call out praise when warranted, too," the IvyLeak website reads. And though the bloggers only began their sites this past summer, they have found no shortage of material.

One particularly creative entry is: "Faculty Studs and Temured Tempresses of the Ivy League" is IvyGate’s search for the most attractive professors. In case anyone was wondering, a Princeton professor won in the "Temptress" category. Meanwhile, IvyLeak is currently holding a contest calling for photos of the worst off-campus housing in the Ivy League. Entries featuring and mocking those undergrads with famous parents or book deals are also frequent.

However, the websites also address more serious news in the academic world. IvyLeak, not bound by the U.S. News and World Report’s request for a 24-hour prohibition on releasing its college rankings, posted the information a full day before any official media outlets or universities themselves. IvyGate responded to Harvard’s decision to end early action with glee, calling the system "the grotesque province of hypocritical applicants bent on improving their own odds at the expense of the disadvantaged."

The headline concerning Princeton’s decision to follow suit, by contrast, was "If Harvard Jumped Off A Bridge, Would Princeton Too?"

While these sites focus on Ivy League schools in general, mentioning particular colleges generally only when the juiciest news breaks, they have yet to address life at Princeton specifically. IvyLeak includes links to school-specific blogs at Yale, Dartmouth, Harvard and Cornell, and Columbia and Penn each have blogs hosted by on-campus publications. That leaves Princeton and Brown as the only Ivy League schools without general, official gossip blogs. But some students do their best to fill in the gaps. One example is freshprince.us, created by Josh Weinstein '09 immediately after his graduation from high school.

SEE BLOGS PAGE S4

(continued on next page)
Students take it to the Web

BLOGS

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Dear Diary

ONE HUNDRED AND SIXTY-SEVEN is the lowest number of hits per day Weinstein has recorded this month for his blog. The site, which includes both a traditional blogging section described as "an online diary" as well as a section for pictures and videos, often gets up to 300 unique hits a day.

"People really check out the site for the pictures," said Weinstein, who posted photos taken at Princeton sporting events, performances, parties and eating clubs once or twice a week throughout all of last year. Albums feature titles ranging from "Last Night of Partying before Classes" to " PASSOVER WEEK" to "GUSSY, Colonial, 71 October." 

Weinstein has maintained a blog of his daily life since his freshman year of high school. Friends comment sometimes, but he mostly writes for himself, he said.

"It can be really fun and funny to see how you change: how the writing style changes, the vocabulary," said Weinstein.

Weinstein said he felt his site had taken a significant leap in a backseat recently due to schoolwork and other responsibilities.

"Freshman year, the site came first. I'd get pictures up as fast as I could. This year, it's fallen by the wayside a little, but it's still important," he said.

"Sometimes you miss a day, or you miss two days, but you do what you can.

May-Gambino, whose site even features the subtitle, "at least this way things won't be lost if my computer crashes."

Still, May-Gambino has had his peers approach him on the street to compliment poems they read on his blog, which he always enjoys.

"There are high points and low points with pursuing any art. There are times when you think it won't work, " he said. "Hearing "like your stuff" every once in a while is great encouragement."

Beyond posting on his own blog and getting feedback from readers, Harper has become an active member of the blogging community, regularly reading a number of blogs from people all over the country.

"There's a lot of sludge out there, a lot of the ridiculousness of angry kids talking about their boyfriends and girlfriends," he said.

"But some people are really intelligent — these kinds of hipsters out age and older, mid-20s or people in cafes like this one," Harper added, leaving back in his chair at Cafe Vivian.

Harper explained his motivations for reading complete strangers' blogs at something beyond simple entertainment, though he did describe them as "really engaging.

"Hearing about people who are like you, see the same things as you, smell the same things as you, gives you a whole different perspective. Here they are; writing about in a different way," he said.

May-Gambino added, "It's in the same vein as reading a novel. A novel is an expression of things that influenced the author, and you don't know the author of a novel. Bloggs of people you've never met are like that too," he said.

"And Jason's entries are really eloquent," May-Gambino continued. His brushed off the comment with a modest wave. "It's a more structured narrative than 'I did this, I did this,' " Harper admitted. "In a way, it's the poor man's novel," he said, making air quotes with his fingers. "It's a good medium for people who can't get published."

Unlike May-Gambino, who views his blog as a stepping stone in terms of compiling enough work to be published, Harper made a distinction between his blogging and writing.

"I write separately from my blog," he said. "The blog is like a retreat."

This just in

DANNY SHEA '07 spent the summer as an intern blogger for The Huffington Post, a news website featuring links to other media sources and a variety of news blogs. He worked specifically for Eat the Press, a blog within The Huffington Post that focuses on coverage of the media itself and is geared toward a professional media demographic.

Under the supervision of only one full-time staff blogger, he had an active role in researching and writing for the blog, which he described as "meta media essentially covering coverage, how the media itself is covering the news."

Now, having returned to Princeton for his senior year, Shea continues to write for the site. He is also a columnist for The Daily Princetonian.

"It was Freshman Week, it was September 16th," Shea said. "I logged onto CNN's website, which was rebroadcasting the real-time coverage of what happened five years ago. I thought it interesting it was, how shocking, a time capsule. So I e-mailed his editor and I posted about it.

Though he had a background in journalism, Shea had never had any experience with what he now calls "new media," a category in which he places blogs, social networking groups like MySpace and Facebook, and "anything on the web and instantaneous."

As a result of the immediate nature of blog news sources, in which stories are posted constantly and as they happen without the limitations of print or film, shocking scoops have pervaded the blogosphere in recent years. One of the first blogs to receive national attention, The Drudge Report, broke the news of the Monica Lewinsky affair, and TAKD reported Mel Gibson's DJJ and anti-Semitic remarks this summer long before any newspaper or magazine.

Shea cautioned, however, that what makes many blogs so successful is also what prevents them from becoming entirely reliable news sources.

"People still don't trust blogs, and they shouldn't. Blogs get things first, but they don't always get them right," he said. Nonetheless, he has faith in the power of this "new media."

"The media is changing," he said. "It hasn't fully happened yet, but it's going to very soon."

Harper, who has been blogging since his sophomore year of high school, encouraged his friend and fellow prospective English major Julio May-Gambino '09 to follow him into the digital world last year. Gambino now maintains his own poetry blog, where he posts both creative writing assignments and pieces he writes for pleasure.

"It started as a way to get used to other people reading my work," said May-Gambino, who is currently taking WR 30. Introduction to Poetry and is considering creative writing as a career. "It's still boosts your self-esteem to get comments on your entries."

In addition to family and friends from his home in Chicago and peers at Princeton, a number of strangers he "met through blogging" regularly read and comment on "JML Harper's Scribbles."

In fact, Harper appreciates blog comments that he finds "disheartening" when their numbers drop, which explains why he will sometimes comment on other bloggers' entries in hopes of eliciting a response.

"It's just common blog courtesy for them to comment back," he laughed.

May-Gambino maintains a lower profile on the web. He listed only three friends he knew who regularly read his site, all classmates at Princeton.

In fact, much of his motivation for creating a blog stemmed not from the desire for feedback but from a "terrible incident" last year in which the work he had saved on his computer was almost erased.

"It really freaked me out," said
Dude, you’re getting a Dell! Well ... maybe not anymore. According to the Office of Information Technology (OIT), 45 percent of computers purchased this year were Macs, more than in any previous year. In 2003, when this year’s seniors arrived on campus, just 15 percent of them chose Macs. The next year, a quarter of incoming freshmen did, and the year after that, 38 percent. These statistics aren’t comprehensive, because some students choose not to buy their computers through OIT. Nonetheless, the upward trend is real. Macs are where it’s at.

The upswing is not limited only to students. “A relatively high percentage of faculty uses Macs,” said Steven Sather of OIT. “And that percentage has also increased over the past couple years.” Many faculty members in the Engineering School have adopted Macs despite the fact that some engineering software programs only run on Windows.

The popularity of Apples on campus might seem surprising, considering that Apple holds only 4.8 percent of the U.S. market share, according to the July 2006 issue of MacWorld magazine. This figure has risen 16 percent over the past year but remains dwarfed by Dell’s 32 percent of the market share.

Why is it that Macs have recently become popular and PCs less so among Princeton students? One possibility is the comparative reliability of the systems. In

See COMPUTERS page 53

Though PCs are still used most, in recent years, Mac has increased its popularity by appealing to students with hip new designs and user-friendly software.
Is it still PC to want a Dell?

COMPUTERS
(continued from page 51)

October 12, 2006, The Daily Princetonian

Many students may not be aware that the University has taken many steps to protect Windows machines from viruses and spyware. Dave Moreau, senior manager of ICT support, explained that "here at Princeton we have put services in place to prevent the spread of security risks on the Windows machines." These are services that much of the general public does not have for protection. Moreau notes that "Microsoft on-campus are very secure" and that "there are many more versions of viruses and spyware for Windows-based machines." In any case, ICT can provide support for either Macintosh or Windows machines.

Sather offers a different explanation for Apple's tremendous success among Princeton students over the past few years. "Different types of computers gain less popularity over time," he said. "Apple has done a very good job over the past several years at developing computers and software that appeal to students. Apple's products are fun to be on and made for use while they portray Windows machines as dull and unrelating - a strategy employed by Apple's recent ad campaign in which a college-aged hipster says to the Mac and telling businesswoman represents a PC.

Despite being a PC user, Rasing has not encountered many problems with spyware or viruses on his Dell but he admits that it can be a problem for people who do not operate their computers safely. Though Moreau has not had serious computer problems himself, he acknowledges that Macs generally offer a more stable operating system than PCs.

Maddie L. has always used IBM computers with Windows. She has not experienced many problems with her computers regarding spyware or viruses and she currently has the antivirus software offered free from the University. Current Apple PC owners say they first became interested in buying computers from the company because they were attracted to the unique appearance of the machines. Katherine Sanden really appreciated the sleek design of her laptop both in terms of hardware and software. Moreau, who has been an Apple user since 2001, describes his use of a PC as "just a neighbour." It seems that to many, the simple, clean, and modern design of the new Apple laptops stands out in a world of dull, utilitarian PCs.

Moreau offers yet another explanation. He believes that Apple computers have become much more popular on campus because of students' positive experiences with the Apple ID. "Some people are more open to trying new products," he explained. Since many students like their iPods, they are willing to try other Apple products.

Despite the popularity of Macs in recent years, there are still many loyal PC users who are not interested in switching to Mac. Rasing purchased a Dell this year through the Student Computer Initiative and has been happy with it overall. He does not have any experience with computer programming and he admitted that he "knows very little about computers." Rasing is reluctant to purchase a Mac because "she is not familiar with the operating system and she believes that it would be a frustrating experience to learn how to use it.

It has become very familiar with Windows because she has used the operating system for most of her life. Rasing said she "would not want to switch to a Mac because she would have to learn commands that are not intuitive to her in Windows.

"Macs are self-contained on Macintosh," said Moreau, or planning the built-in programs and can be hard to start using if you have never before. He has been a PC user all his life and prefers Windows because he is very familiar with

It has heard that Macs sometimes have to be shipped back to the factory for repairs, but for a PC, it could be done at a local store or shop. On the other hand, she says the support that is available from Apple is excellent. She would not consider switching back to a PC because she has had a good experience overall and is comfortable with the Mac operating system.

Perhaps Sudden put it best: "Mac is like a cozy car" and that it has users more loyal to their computers even than PC users. One never seems to hear about a PC user switching to a PC because of the other way around. As a PC user, Rasing has many friends who own Macs and has not used them many times before. "If you have a Mac, you really like your Mac," he said. "You're part of a close Mac community."
Macs on the Rebound

In the beginning, there was Apple.

“At one point, the Mac was the hot box on campus, for those of us who have gray hair,” said Kenneth C. Green, founding director of the Campus Computing Project, which studies the role of technology in higher education. “Apple has now tried to position itself as the hot box again.”

Apple’s chief financial officer, Peter Oppenheimer, announced last week that the company is emerging from its best back-to-school quarter ever for its higher education division, with shipments of Mac portables increasing 49 percent from last year within the sector, the increase driven, Oppenheimer said, by sale of the MacBook and Apple’s successful back-to-school promotions.

While Dell continues to grow and remains the overwhelming powerhouse on college campuses, Apple, which rapidly lost its market share on campuses in the 1990s, is now quickly expanding its presence at colleges and universities, according to experts who track both student purchasing and institutional trends. The rise of iTunes and the iPod, Apple’s marketing coup of positioning itself as an especially hip brand, and an overall increase in laptop purchases, a sector in which Apple proves particularly strong among college-aged buyers, all contribute to the trend, said Eric Weil, managing partner of Student Monitor, a national group that tracks college students’ consumer habits.

“If we look at ownership and purchase intent, among those students who plan to buy a new notebook, naturally No. 1 is Dell, but No. 2 is Apple. Which is huge. If we went back five years ago, IBM’s ThinkPad owned that spot. And now the average student doesn’t know what a ThinkPad is,” said Weil, who added that laptop ownership has nearly tripled what it was five years ago when ThinkPad sat securely on the silver medal platform.

A spring 2006 Student Monitor survey of 1,200 full-time four-year undergraduates at 100 campuses found Apple squarely situated as the No. 2 preference among the 19 percent of college students — equivalent to 1.1 million people nationwide — planning to purchase a computer within the next year. Among those students planning to buy a desktop, 41 percent said they planned to buy Dell and 13 percent Apple, with other companies, including Gateway, HP and eMachines, close behind Apple, with 9, 7 and 6 percent of the pie respectively.

Among those buying notebooks — which 68 percent of students who said they would buy a computer
(continued from previous page)

within the next year planned to purchase — Dell is still the leader, with 40 percent planning to buy Dell laptops. But Apple, with a 21 percent share, has no close competitor for second-place: HP and Sony Vaio, the next-largest players in the market, have just 6 percent of the share each, Well’s data shows.

Preferred provider agreements between colleges and computer companies, in which institutions enter into agreements (oftentimes with more than one computer company) to recommend or market a particular product, are changing accordingly. Green said that the proportion of four-year public research institutions with preferred provider agreements with Apple increased from 58.9 percent in 2005 to 66.7 percent in 2006, while the percentage of private research universities with Apple agreements jumped from 50 to 60 percent. Gains among public and private four-year colleges were smaller, at about two and three percentage points respectively, said Green, who mentioned that he thinks the price differential between comparable PCs and Macs, traditionally more expensive, may have fallen, increasing Apple’s desirability within the college student market.

Those numbers can’t be misinterpreted, however, to undermine Dell’s prominence in the arena. As Apple increased its share of provider agreements, Dell did the same by comparable or greater proportions, except among private research institutions, where the percentage of universities with Dell agreements dipped slightly by about one percentage point. But the percentage of public research institutions with Dell agreements increased from 69.7 percent in 2005 to 81 percent in 2006, and the proportion of public and private four-year colleges with Dell agreements increased by about 9 and 5 percentage points respectively, Green said.

Dell continues to grow in the education market, its spokesman, Dean Kline said, and Apple’s rise has not come at Dell’s expense. “One of the reasons why Dell has been very successful in education is of course the value of the industry standard technology we provide. We’re able to play across the entire portfolio of products if you will, from one end of the higher education market to the other.”

Kline cited Dell’s strength in offering standardized services for the four different computing sectors within the higher education market: student, administrative, academic and research computing. “Technology purchasing for higher education goes well beyond the student computing piece. That said, Dell continues to see successes in the student computing program,” he said.

“Apple had gone down so far that a large increase in sales still doesn’t take them to anywhere near where Dell is, but I think they’ve made an awful lot of progress,” said David Sobotta, a former director of federal sales and higher education manager for Apple who now writes a blog on Apple issues. “Apple pulled back from higher ed very strongly in the mid-90s; it really, really hurt them at some of the mid-tier schools.”

“Dell is pervasive,” Weil said. “Dell is about price. Dell is about convenience, and I certainly wouldn’t want to minimize the image of Dell.”

“But there’s an element that everything that Apple does is cool.”

In a culture that divides itself among Mac and PC people, Mac has emerged among students as the cooler of the two types of people to be, many observers say. Apple’s association with the iPods that students always have close to their ears — and their hearts — has helped lead music-loving college students toward the brand. Proof of that is no further away than a favorite student hang-out spot these days, Facebook.

In July, the social networking Web site announced a joint back-to-school promotion effort, with
Facebook pledging to give away 10 million 25-song music samplers from Apple’s iTunes. The promotion helped lure 523,000 students to the Facebook group Apple sponsors, which links to Apple education discounts, while about 3,200 are signed up for Dell’s sponsored group.

“It’s the silver laptop with the apple on top,” Dianne Lynch, dean of the Roy H. Park School of Communications at Ithaca College, said of the appeal of Apple. For the first time this year, entering freshmen in the communications school had to purchase a laptop — and they had to purchase a MacBook Pro.

Lynch, who used to write a column on women and technology for ABC News, said the school’s faculty chose the model because it can utilize both a Macintosh and a Windows operating system, but the coolness factor is an added bonus. “We love the idea that we’re cool and that the program is cool and that we get it, but we wouldn’t have done this just for the cool,” Lynch said, citing the “outstanding multimedia software package” already installed on the computers.

At Princeton University, probably about 25 percent of publicly available machines are Macs, and 75 percent are Dells, said Steven Sather, associate chief information officer for the office of information technology. Sather, who said the information technology department attempts to mirror student buying habits in its purchase of institutional computers — but of course is likely to fall behind if consumer preferences change quickly — said that while Dell still has the majority, he’s seen a steady growth in Apple sales over the past five years. Student sales conducted by Princeton’s information technology department this year were 55 percent Dell and 45 percent Mac, compared to 38 percent Mac the year before.

For Sather’s part, he said he doesn’t advocate one over another — and he doesn’t fall into easy Mac or PC categories, with both a MacBook and a Dell Latitude on his desk. “I don’t even know which way I’m going to turn, right or left, when I hang up.”

— Elizabeth Redden

The original story and user comments can be viewed online at http://insidehighered.com/news/2006/10/25/macs.
Social site aids in job search

By Jenny Day
PRINCETONIAN CONTRIBUTOR

Students looking for jobs quickly learn that solid credentials are good, but personal connections may be better.

Capitalizing on this reality is Doostang.com, a "professional networking" website intended to enable students and alumni to build the personal connections needed to get noticed — and hired.

The site, which was launched in June 2005 by Stanford graduate Marea Larizadeh and MIT grad Pavel Krapivin, has grown steadily in popularity at Stanford, MIT and Harvard and is beginning to generate buzz at Princeton.

Doostang student representatives Jesse Creed ’07, William Peng ’09 and Hosham Elhajr ’09 are currently working with full-time employee Chelsea Burkett on spreading the word at Doostang page 5

Facebook meets Monster’ site opens to U.

Princeton through organizations such as Business Today and the Pre-Business Society. They are also using facebook.com to invite their classmates to join the Doostang network.

Burkett, who has worked as a full-time Doostang representative since she graduated from Stanford in 2006, became interested in the site her senior year after noticing that students pursuing non-business careers faced a more difficult road to employment.

"College resources are strong in certain Industries such as Finance and Investment Banking, but beyond that resources are harder to come across," she said.

Creed echoed this sentiment, saying that students interested in the types of careers underrepresented on Tiger Tracks may appreciate having "a place to look for other opportunities."

The website claims to have helped hundreds of members get jobs in a variety of industries, including positions at Google, Kaplan, ABC, Goldman Sachs, MTV, Disney and Facebook.

Creed describes the company as "Facebook meets Monster," explaining that Doostang combines the sites' personal networking and job-search capabilities. Allowing recruiters and members to connect via groups and forums, the site offers a more personal career resource than most career websites, he said.

In enhancing the intimacy of online job searching and recruiting, Larizadeh said that Doostang is "making an extremely inefficient job market much more efficient."

Doostang employees said the efficiency of the site is largely due to its invitation-only exclusivity, which ensures that the quality and caliber of members remain high. Since its launch, the Doostang network has grown to include 60,000 members, including students and alumni from some of the world's most well-respected universities and business school programs.

"Companies say that they find the pool of applicants on this website are actually much more qualified [than those on other job websites]," Peng said.

One unique aspect of the site is that it allows members to see how many degrees of separation lie between them and other users. This feature of the site is based on Stanford sociologist Mark Granovetter '69's finding that connections of two and three degrees of separation are the most useful when job-searching, a paradox that has been dubbed "the strength of weak ties."

It still remains to be seen, though, whether Doostang will take off at Princeton. "The big challenge isn't the product," Burkett said. "It's just a question of access and impressing upon Princeton students the value of expanding their network — even for freshmen and sophomores."
Memorial service set for Oberst, Nov. 18

by Ruth Stevens · Posted November 12, 2006; 08:45 p.m.

A memorial service for Dan Oberst, a longtime staff member in the Office of Information Technology (OIT), is planned for 1:30 p.m. Saturday, Nov. 18, in the Edith Memorial Chapel on the Lawrenceville School campus.

Oberst died Nov. 9 after a year and a half battle with cancer. He was 58.

Oberst joined the OIT staff in 1987, and most recently was director of Enterprise Infrastructure Services. Betty Leydon, Vice President for Information Technology and Chief Information Officer, said he was a leader in developing the University's core computing infrastructure, widely regarded as one of the finest in the country. He was respected for building a set of reliable services in the face of changing technologies, increasing demands, and growing threats and vulnerabilities.

"While his job was always challenging, he directed his group with great skill, enthusiasm and good humor," she said. "He approached his job, and his life, with insatiable curiosity, always wanting to know how things worked. He cared about the details. And he personified optimism, nowhere more so than in his fight with the disease that took him from us."

Beyond Princeton, Oberst was a key player in the major IT forums, such as EDUCAUSE and the Common Solutions Group. He contributed to the development of Bitnet (the precursor to the Internet) and later the Internet.

"Dan will be remembered as a vibrant, spirited and charming man," Leydon said. "He will be missed by all who knew him. His life, and his contributions, will long be remembered. Princeton, information technology and all of higher education have lost an important colleague and a cherished friend."

Oberst is survived by his wife, Marti Richmond of Lawrenceville, N.J.; two sons, Caleb of Philadelphia and Jesse of Tokyo; and a daughter, Keturah of Lee, Mass.

In lieu of flowers, the family has requested donations be made to the Kidney Cancer Association. The Office of Information Technology also has organized a blood drive in Oberst's honor from 8:30 a.m. to 8:30 p.m. Thursday and Friday, Nov. 30-Dec. 1, in the Frist Campus Center.

Following the memorial service on Nov. 18, there will be a reception on the Lawrenceville School campus. Directions to the school and chapel can be found online. Those who wish to share their memories of Oberst are invited to visit a blog set up to celebrate his life.
Dan Oberst
IT specialist at university

LAWRENCE — Dan Oberst died Thursday at the University Medical Center of Princeton after a year and a half battle with renal cell carcinoma. He was 58.

He was a longtime staff member in the Office of Information Technology at Princeton University.

Mr. Oberst joined the OIT staff in 1987, and most recently was director of enterprise infrastructure services, leading the development of the university’s core computing infrastructure, widely regarded as one of the finest in the nation.

Born in Rochester, N.Y., he was a graduate of the University of Notre Dame, where he played in the marching band. He went on to study linguistics with Noam Chomsky at the Massachusetts Institute of Technology.

Before earning a master of philosophy degree from Teachers College of Columbia University, Mr. Oberst joined a combined Teacher Corps-Peace Corps program, spending a year teaching the children of migrant farm workers in Salinas, Calif., before serving four years in Malaysia. There, Mr. Oberst acquired the fourth of the five languages in which he was to become fluent, teaching science for two years in the rural Sultanate of Kelantan and then developing curriculum at the Universiti Kebangsaan Malaysia in the capital city of Kuala Lumpur.

Following the Peace Corps, Mr. Oberst directed the computing center at Marymount College in Tarrytown, N.Y.

In 1981, he moved to Lawrence, where he worked for Educom and contributed to the development of Bitnet, the precursor to the Internet, and later the Internet. In Lawrence, he served on the Lawrence Historical Society.

Mr. Oberst worked at Princeton University for nearly 20 years, and was a leader in developing its core computing infrastructure.

Son of the late Bernice Mooney Oberst and Charles Oberst, brother of the late Paul Oberst, he is survived by his wife of 26 years, Martha Richmond of Lawrence; sons Caleb of Philadelphia and Jesse of Tokyo; daughter Keturah of Lee, Mass.; brothers and sisters-in-law Eugene and Margaret of Rochester, N.Y., Steven and Betty of Irondequoit, N.Y., Jerome and Betsy of Oswego, N.Y., Philip and Mary Kay of East Irondequoit, N.Y., and James and Amy of Rochester, N.Y.; 19 nieces and nephews; aunt Elizabeth Mooney of Rochester, N.Y.; sister-in-law and brother-in-law David and Jean Bowman of Flagstaff, Ariz.; and mother-in-law Sonya Richmond of Lawrence.

A Mass celebrating his life will be celebrated 1:30 p.m. Saturday at Edith Memorial Chapel on the Lawrenceville School campus.

In lieu of flowers, memorial contributions may be made to the Kidney Cancer Association, 1234 Sherman Ave., Suite 203, Evanston, IL 60202, www.curekidneycancer.org. Remembrances may be left at http://blogs.princeton.edu/jordan/.

The Office of Information Technology has organized a blood drive in Mr. Oberst’s honor from 8:30 a.m. to 8:30 p.m. Thursday and Friday in Frist Campus Center on the university campus.
Letters to the Editor

Ruckus discriminates against students and musical artists

Regarding 'Quite a Ruckus' (Wednesday, Jan. 10, 2007):

I don't know if The Daily Princetonian's Editorial Board has noticed it yet in its use of Ruckus, but the network discriminates not only on the basis of computer type, but also on the basis of musical taste. While Ruckus has a more than ample supply of Pearl Jam, which suits me just fine, its catalog is rather lacking. I can account only for my own musical tastes, but it appears many major bands are missing. Radiohead and a little band called the Beatles come to mind. Ruckus offers only samples of albums by other major artists. It has every studio album by Bob Dylan, but only a few songs are available for download. Most clearly of all, Ruckus lacks a great deal of indie rock bands — even many of the more popular acts. Just because many people haven't heard of Califone doesn't mean I shouldn't be able to download their music.

While the catalog obviously won't have every song I would ever want to download, it's hard to see how Ruckus comes even close to the achievement which the USG originally announced it to be. It not only discriminates against students, but also tacitly promotes discrimination against those artists not available on Ruckus. It is free, and that's nice (assuming you only want to listen to music on your computer). But the freedom clearly comes at a cost.

Colin Anderson '07
Trustees hold the line on tuition, approve funding for key initiatives

Ruth Stevens

At their Jan. 21 meeting, the University's trustees adopted a 2007-08 operating budget that holds tuition at its current level but raises undergraduate room and board rates for an overall fee increase of 4.2 percent.

This is the first year since 1967-68 that the annual tuition rate has not increased. The overall fee increase is well below last year's overall increase of 4.9 percent and the previous year's increase of 5 percent.

The operating budget includes funding for a new child-care benefit for faculty and staff, which is part of a larger effort to make Princeton a more "family-friendly" environment. It also includes, among other initiatives, increased funds for special salary adjustments for faculty and staff, financial support for Ph.D. students who bear children, provision of a winter break allowance for international undergraduates, and 24-hour, seven-day-per-week onsite monitoring of the University's computing systems.

Because of strong performance by the University's investments and generous giving by alumni, the operating budget incorporates more funding for new initiatives this year than in recent years. While funding for several of these initiatives was recommended by the Priorities Committee of the Council of the Princeton University Community, others are supported by recently approved increases in the Uni-

Continued on page 6

(continued on next page)
Trustees

Continued from page 1

The mechanism for recommending fiscal and programmatic priorities.

"Like its predecessors, this year's committee considered the University's tuition and fee package in light of the University's commitment to the accessibility of higher education to all qualified students," the committee stated in its report. It noted approvingly that "over the past 10 years, the annual rate of increase to that package has been at the bottom end of the University's peer group."

According to the College Board, tuition and fees rose 5.9 percent at year-four private institutions and 6.3 percent at four-year public institutions in 2006-07.

For 2007-08, tuition at Princeton will remain $33,000. Total fees for undergraduates living on campus and eating full meal contracts will increase from $42,230 to $43,380, while students who elect reduced meal contracts will pay less.

The increases in room and board pricing are intended to reflect costs more accurately. In recent years, these costs incorporated substantial University subsidies, according to the Priorities Committee report. The new board charges also reflect planned improvements in quality and changes to the board plan structure.

The budget for Princeton's groundbreaking financial aid program will be increased enough to cover all additional room and board charges for students who qualify for aid. The University has significantly enhanced its aid program in recent years in an effort to make a Princeton education even more affordable, including replacing all required loans with grants that do not need to be repaid. This year the average grant for a freshman on financial aid is more than $30,000. Last fall the trustees reduced the work requirement in financial aid packages, resulting in a $500 grant increase for those with jobs in their awards.

These efforts have dramatically increased the economic diversity of Princeton's student body. Of this year's freshman class, 55 percent, or 682 students, are on financial aid. That percentage matches the record set by the class of 2009 and is a significant change from the class of 2001 — the last class admitted before the enhancements to the aid program — when 38 percent of the freshmen were on aid.

Child care and other improvements

In making its programmatic recommendations, the Priorities Committee noted that it operated under a much more favorable set of budgetary conditions than committees of the past two years, due primarily to increases in the University's endowment income spending that were approved by the trustees in June and November 2006. The first change was intended to "true up" the operating budget, providing permanent funds for many continuing charges that had been supported through term funds or capital reserves.

The second change involved major investments in capital items as well as in the operating budget in the critical areas of undergraduate education, graduate education, faculty research and alumni affairs.

"The trustees' allocations focused on core pedagogical and research efforts of the University," the Priorities Committee said in its report. "This focus allowed and encouraged the committee to pay substantial attention to the University's staff and its administrative support, both of which are critical to the University's mission but received less direct support from the spending rule changes."

The key initiatives include:

- A child-care benefit intended to assist employees with pre-kindergarten...
Trustees

Continued from page 6

children whose family income does not exceed $120,000 and who do not have a non-working spouse or partner who can take on primary responsibility for child care. The benefit advances a major priority of the University and of President Shirley Tilghman, who has indicated her commitment to making Princeton a more ‘family-friendly’ environment,” the committee wrote.

The awards are based on household income, are portable and can be used to pay for a wide range of possible arrangements, from in-home care to licensed day care centers. The maximum award per year for one eligible child is $5,000; an additional $1,000 grant per year is available for a second eligible child.

The deadline to submit applications for the new program is May 1 for the fiscal year beginning July 1. More information about the new child-care benefit for faculty and staff is available on the Office of Human Resources website at www.princeton.edu/hr/ worklife/ecdacc.htm.

A similar child-care assistance program for students is being funded by the spending rule change. The deadline to submit applications for the student program for the 2007-08 academic year is July 1. More information is available on the Graduate School website at <gradschool.princeton.edu/studentlife/childcare/>.

- Financial support for Ph.D. students who give birth during their graduate study at Princeton. This includes tuition, stipend and medical coverage through the student health plan during a three-month suspension of academic work.
- An increase to the promotion and adjustment pools that are used to cover the costs of employee promotions and reclassifications, and to respond to salary offers from outside employers. This measure, along with maintaining the size of last year’s salary increase pools into the coming year, is intended to recognize “the critical importance of competitive compensation to attracting and retaining the very best faculty and staff members,” according to the committee.
- An annual grant for international students to help cover costs during the winter break.
- The addition of two staff members in the Office of Information Technology Operations and Support Center to expand its service to include onsite monitoring of the University's computing and network infrastructure 24 hours a day, seven days a week.

Among other requests recommended by the Priorities Committee and approved by the trustees were: funding for additional graduate student instructional assistance; a new assistant dean of students to deal with student discipline and crisis management; and a half-time office assistant in the Lesbian, Gay, Bisexual, Transgender Center.

Continuing benefits from endowment, enrollment expansion

Throughout its report and in looking ahead, the committee noted several areas that would continue to benefit from the increases in the University’s endowment income spending.

In November, for example, trustees approved measures that will provide all juniors and seniors on financial aid with sufficient support to allow them to cover the cost of an average membership contract at an eating club. The changes also will support increased funding for assistants in instruction in graduate-level courses, which will add to the funding for instructional assistance approved through the Priorities Committee. In addition, they will provide expanded social, cultural, intellectual and civic engagement programming in the residential colleges.

The committee pointed out in its report that a portion of the income generated by additional tuition from the increased student body will be used to expand academic and administrative support to meet the additional demand generated by the larger number of incoming students. One area identified in this year’s Priorities Committee report for such support was University Health Services.

As recommended by the Wittenberg Committee report in 2006, the University is planning to increase the size of its enrolled undergraduate student body by approximately 11 percent, from 4,700 to 5,200, by the 2013-14 academic year. The entering classes in fall 2007 and 2008 each are expected to enroll about 1,250 — some 30 students more than the current freshman class.

The Priorities Committee report is available online at www.princeton. edu/~provost/priorities/07-08/final-report.pdf in pdf format as well as from the Office of the Provost.
Library joins Google project to make books available online

CASS CLAHT

A new partnership between the Princeton University Library and Google will make approximately 1 million books in Princeton's collection available online in a searchable format.

In a move designed to open Princeton's vast resource to a broad international audience, the library will work with Google to digitize books that are in the public domain and no longer under copyright. The partnership is part of the Google Books Library Project, which digitizes books from major libraries and makes it possible for Internet users to search the collections through Google Book Search.

"Generations of Princeton librarians have devoted themselves to building a remarkable collection of books in thousands of subjects and dozens of languages," University Librarian Katharine Trainer said. "Having the potential of that collection not covered by copyright available online will make it easier for Princeton students and faculty to do research, and joining the Google partnership allows us to share our collection with researchers worldwide, a step very much in keeping with the University's unofficial motto of "Princeton in the nation's service and in the service of all nations.""

One of the goals of Google's library project is to make it easier for scholars and the public to find books they would not be able to find elsewhere, Trainer added.

Digital copies of books from the Princeton collection will be fully searchable, allowing users to employ any key words they choose to search the indexes, tables of contents and full text of books. Because the books being digitized are in the public domain, users will be able to view the full text of the books and download them for leisure reading, research or printing for later reference.

"We will be working with Google in the next several months to choose the subject areas to be digitized and the timetable for the work," Trainer said. "Library staff, faculty and students will be invited to suggest which parts of our distinctive collections should be digitized."

Princeton is the 12th institution to join the Google Books Library Project. Books available in the Google Book Search also include those from collections at Harvard, Oxford, Stanford, the University of California, the University of Michigan, the University of Texas-Austin, the University of Virginia, the University of Wisconsin-Madison, the New York Public Library, the University Complutense of Madrid and the National Library of Catalonia.
Computers' role in classrooms questioned

By Carol Lu
Princetonian Staff Writer

Technology may well turn out to be the new taboo on campus, as professors increasingly worry about laptops in lecture and other pitfalls of the 21st century.

Faculty members and technology experts debated the role of computers on campus yesterday, during the first Council of the Princeton University Community (CPUC) meeting of the new semester. CPUC and the Office and of Information Technology (OIT) have joined forces to form a Strategic Planning Initiative, which will attempt to address the various uses and misuses of technology in Princeton academics.

"We try to assess the present state of IT at Princeton and the manners in which we are constrained by its infrastructure," Betty Leydon, who is vice president for information technology, said. "Our objective is to look into the future and go in the right direction."

Currently, the Campus Outreach program is CPUC's main way of examining issues related to technology. Meetings and interviews with staff, students and focus groups — intended to culminate the most pressing concerns associated with IT — have so far presented two dilemmas, the panelists said: PowerPoint presentations and laptops in the classroom.

Concerning laptop use, faculty members said one of their worries is that the internet's ocean of resources makes it more difficult for students to decide what information is trustworthy. But for the most part, they said, the chief annoyance is when students use laptops in class for purposes other than academics.

"Laptops can be very beneficial to students who wish to organize at the end of the day, week or semester," former USG academics chair Caitlin Sullivan '07 said. "At the same time, I often see emails, [instant] messenger and even videos on their screens [during class]. Those are the two ends of the spectrum."

"Tradeoff," Sullivan said of laptops' benefits and drawbacks, "is the word that comes to mind."

Nevertheless, the University recognizes the benefits of laptop access in lecture accompanying its various distractions. Leydon noted that laptops cannot be outlawed from the classroom but must be regulated in some way. "Students learn in many different ways, and we must learn to accommodate that," she said. "We are certainly not, at this point, looking at a ban on laptop use."
"The consensus seems to be that it has many deserving functions," she added, "and our most likely path, if we are to take one at all, is to adopt something similar to an Honor Code in several years' time — something to put onto course syllabi to remind students to refrain from using laptops during lecture for purposes beyond research of class material."

PowerPoint slideshows were another concern addressed during the meeting. Though they are the standard format for many Princeton lectures, doubts surfaced yesterday regarding their merit as a method of instruction.

"Princeton prides itself on its precepts and lectures," history professor Graham Burnett said. "Those very precepts and lectures are now under siege ... [PowerPoint] induces a very static and ultimately boring presentation."

Slideshows posted on Blackboard, suspected to be a widespread excuse for truancy, are PowerPoint's second pitfall, the panelists said.

"I post presentations online so that my students are not scribbling furiously in class," computer science professor Brian Kernighan said, "but that can also inspire [students] to stay in bed and download all the notes."

"The real solution here is to get classes to be more exciting," he added, likening the use of technology in education to "decanting the old wine of teaching into a new bottle."

Slavic languages and literatures chair Caryl Emerson elaborated on how to craft a more engaging lecture.

"In a large class, there has to be some spectacular pacing to make it worthwhile to people to get together in the flesh, and if the professor cannot do that, he will have to be coached," she said. "Princeton is an institute of education, and this can be a great opportunity."

The CPUC hopes to implement concrete measures addressing these issues and others in the second phase of the Strategic Planning Initiative, scheduled for April.

"We have already had many wonderful ideas — more than we are likely to ever do," Leydon said. "We must organize our priorities, and among them will certainly be the question of responsible IT application."
A week without ... a laptop

By Isia Jasiewicz
Princetonian Arts Writer

On an ordinary Wednesday, I was sitting in a lecture hall, minding my own business, when suddenly the girl in front of me drove a stake through my heart. Not literally, of course. But as she took out a MacBook and turned it on with a "ding," my heart burst with longing. My own laptop was sequestered away in a drawer in my desk, inaccessible for four more days because I had given it up for a week on an assignment for The Daily Princetonian. At that moment, I missed it too much to bear.

Actually, scratch that. I'm lying. When I first received my assignment to give up my laptop for a week, I thought it would be impossible. I thought that I would literally feel physical pain whenever I saw somebody else indulging in the luxury of a laptop. So when my classmate turned hers on, I tried desperately to feel the longing that I thought I should. I thought it would make a good, dramatic opening for my article. Dramatic, yes, but true? No. I was perfectly content without my MacBook.

The truth is that giving up my laptop for a week was not only easy, but in a way, enjoyable. I cut out distractions, was still able to do my work and even did some exploring. According to the terms of my assignment, I was allowed to use any computer other than my own. This meant frequent trips to clusters, particularly since it was the first week of classes.

Of course, not having my laptop meant not only having to walk to use the Internet, but also not having access to my iTune, camera software and documents on my hard drive. Unfortunately, this all hit me the night before I was to give up my laptop. I was up late on Saturday frantically uploading pictures, downloading podcasts, updating my iPod and loading random documents onto my JumpDrive.

I must admit that at that point, I was cursing the 'Prince' for making me give up a comfortable luxury when I had more important things to worry about, like the beginning of spring semester classes. I was just as furious the next morning, when I had to trek outside just to check my email.

(continued on next page)
I live in Blair, and, though there's a printer just below my room, the closest computer cluster is in Joline. Of course, that's not far, but in last week's subfreezing weather, just having to go outside was enough to irk me. I had no choice but to brave the cold, however, and the basement of Joline became my second home for the week.

At first, I found the Joline cluster stuffy and depressing. I warmed to it surprisingly quickly, though, and found that it really wasn't that bad. I was worried I'd have to use the grumpy old Dells (which would be devastating for a Mac addict like me), but Joline has a lovely new iMac. I discovered that since you have to log on to the computer with your netid, you can set up your own preferences and have them come up each time you sign in to any cluster Mac; it was almost like having my own computer.

The Joline cluster, where I am now, is remarkably quiet. I've found that if anyone comes in, it's only to print something or to quickly check email. I've never had to wait for "my" iMac, and since it's so quiet, I can concentrate on my work even more easily than I can my room. Some of the other clusters that I've explored were more crowded, though I still never had to wait for a computer. The kiosks in Frist are often occupied, but even then the wait is minimal since people only use them to check email.

At the beginning of the week, I had printed off a list of clusters from the OIT website, and tracking them down actually turned into some rather enjoyable sightseeing. I have a class in Fine Hall, and I read that there is a cluster with Macs on the fourth floor of Jadwin, so I went on a mini-adventure to find it. Along the way, I discovered a totally different world from the ivory-tower Princeton I know. Jadwin Hall actually has blackboards lining the hallways, like in "Good Will Hunting." Little art-history-major me felt just a bit out of place with integral signs and pi symbols galore looking at me as I walked down the hallway, but it was mostly exciting; I could feel the math and science genius in the air.

I thought that having to go to places like Jadwin to track down computers would take up too much time, but I actually found that I had more free time this week. Not having my laptop cut out my primary tool of procrastination, so free time in my room was spent as it should be — reading and doing homework. I didn't waste any time on YouTube.com. I felt light and free, not dرونed out from useless time-killing.

Now that it's finally time to take my MacBook out of its drawer, I'm actually not that excited. I'll miss my cluster haunts, and I'm worried that I'll go back to wasting time. I wouldn't want to give up my laptop permanently, but if I really had to, I'd survive. It might be harder if everyone at Princeton went without their laptops and the clusters got crowded, but the way things are now, braving the cold is the only downside.
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Library joins Google project to make books available online
by Cass Clott - Posted February 5, 2007; 12:00 p.m.

A new partnership between the Princeton University Library and Google soon will make approximately 1 million books in Princeton's collection available online in a searchable format.

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A requiem for an iPod

Avi Flamholz
THE TECHNOCRAT

I find my usually sunny disposition towards the Apple Corporation darker than the horizons of that poor Malawian child Madonna recently adopted. My iPod broke. Seriously — the poor thing had been limping through life like a three-legged dog for the three months since its warranty ended. I resorted to such tried-and-true resurrection methods as dropping my iPod on the floor and dropkicking her. But my lovingly administered folk remedies only staved off her inevitable passing for a short while. And now I mourn the loss of my beloved shiny white music player, my refuge from human contact, my excuse for not saying hi as I pass you on my way to class.

But in my grief I found clarity. Now that iPod had passed, I was forced to reflect on what I really loved about her, what she meant to me in life. iPod brought me, indeed she brought us all, increased capacity for music. I found space on my iPod and in my heart for more music than ever before. iPod had saved me from my old ways of musical particularism and opened my eyes so that I might embrace more catholic taste.

But as my palette widened my hunger for new music grew. I acquired music of myriad styles and from myriad places. With the help of my trusty iPod, my external hard drive, and the glorious wonderland that is the Internet, my reach always matched my grasp. Only in retrospect did I realize that, in return for musical salvation, I had made a sacrifice, sealing the eternal covenant of iPod if you will. In return for all her bounty, iPod had demanded of me a certain moral dexterity that even I, a child of the digital generation, would never have anticipated.

Not long after I bought my first CD, I purchased my first CD burner. My first spindle of blanks came not long after that. The first coming of Napster followed soon thereafter. And yet even the Avi of the Napster era would have been shocked by what iPod had made of me. I committed all four cardinal sins of Record Industry Association of America. I downloaded; I ripped library CDs; I copied from friends; I gave music to other people.

Wiping the tears from my eyes, I wondered, "Have I been this bad all along, or am I just a product of my iPod?" Always an eccentric, denial came to me second. "Screw that!" I thought, "I'm not bad. I didn't do anything wrong. I wouldn't have bought the music anyway. And if I had, the record companies would have screwed the artists anyway."

But now I see the error of my ways, the fallacy of my poorly constructed syllogism. In a fantasy world where I had no iPod, no computer, no Internet and no desire for music, I wouldn't have bought that music I "acquired." But I do want the music. Or at least, I want the good bits of it. And I do owe something to the people who make those good bits. The fact that music is infinitely copyable does not mean I place no value on it. People worked hard to create that value. The fact that I cannot be forced to pay for it does not mean that I should not.

Can I reconcile my hypocrisy? What do I do to get more moral fiber into my diet? My hypocrisy is a vast thing, so I probably can't nullify it all. But even in this specific instance it's going to be hard. Record companies really do screw artists. And they screw them even more on online sales through iTunes than they do with CDs. Don't believe me? Check out the numbers (1). Ninety-nine cents a song hardly seems fair, especially if you don't think that Apple and the record label add most of the production value to the music you like. Dear god, I hope you don't listen to music like that.

For now I've settled on what I think is a happy medium. I don't download music. Instead, I borrow it temporarily. The semantics make all the difference. I listen on Pandora.com. I take CDs out of the library and I borrow them from friends. I'd use Ruckus if I owned a machine that could run Windows. If I like something I'm listening to I'll go to a show or buy the CD. If I don't like what I'm listening to, I delete it. I'm running out of disk space anyway.

NOTE: This article is in no way an admission of guilt. It is a philosophical discourse in the form of a first-person narrative for the sake of concreteness. Yes, it is.

(1) I'm gonna put an ad hominem attack in a footnote because I'm a cool hipster like those folks at the Nass. Oh, and the numbers are at www.downhillbattle.org/itunes/.

Avi Flamholz'07 is a computer science major from Tenafly, N.J. He may be reached at flamholz@princeton.edu.
Room draw made convenient

By Michael Juel-Larsen
Princetonian Senior Writer

The University's move to conduct this year's entire room draw process online is being met with general praise. Room draw is still a little over three weeks away, but students who have used the website to sign up for draw groups said it was both easy to use and informative. Jonathan Carroll '09 said he had not yet used the website, but a member of his draw group had showed him parts of it. He praised the website as "better than the old system" and "more convenient," with "really cool features."

Instead of reporting to a particular building at a specified time to choose their rooms, students will now log on to the Housing Department's room draw website. The site also contains blueprints of every dormitory and a spreadsheet detailing the order in which every room was drawn last year, among other things. Undergraduate residence committee chair Caitlin Higgins '07 said the shift was a move of convenience. "The paper [room draw] process is time consuming for the Housing Department and stressful for students," she said in an email. "Making the process available online allows students to be anywhere when they sign up for their room."

Students panned the old paper system as hectic and confusing. There were so many people," Monique Roberts '09 said. "There were people looking at the wall [where the list of available rooms was posted], other people crossing off rooms. There were just a lot of people trying to have access to a limited thing."

USG president Rob Biederman '08 said the change was convenient and overdue. I'm thrilled that now you can sit at your computer and look at the room draw guide and room list and have [AOL Instant Messenger] open instead of having to run across campus trying not to miss class," Biederman said. "I wondered over the last two years why it wasn't like it is now."

Avi Flamholz '07, one of four COS 333: Advanced Programming Techniques students who designed the USG's online room draw guide last year, said that technological constraints did not explain the time taken for the website's development. Making a website tends to be a not very difficult task in the realm of things you might do with a computer," he said. Flamholz is also a columnist for The Daily Princetonian. "It's hard to get institutions to make websites," he added. "They have to pay people to do it or do it themselves."

Higgins said the website has undergone lengthy testing and has long been in the works. The Housing Department spent a long time looking at online room draw at other schools (like Stanford) to make sure the system was topnotch," she said. Higgins said she is "not at all worried" about the system functioning smoothly during room draw.

[The online system] sounds like an improvement," Flamholz said, though he added that "room draw was never so terrible of a process that it needed to be done again. "For me, it was 15 minutes of my life, though it's nice not to have to miss class [anymore] for it," he added. "I just hope that it works out; I don't see why it wouldn't."

Princetonian senior writer Lisa Bendele contributed reporting to this article.
Network pros share their favorite freeware

Freeware, open source is used to manage Cisco, Windows and other networks

Special Focus  By Denise Dubie, Network World, 03/07/07

Freeware has long reigned as a go-to tool for network managers. Applications such as Etherereal, Multi Router Traffic Grapher (MRTG) and Snort provide an inexpensive means to monitor devices, traffic and security in even the largest networks.

More recently, freeware's community-supported cousins -- open source applications -- have emerged to tackle many network-monitoring tasks at no cost to their owners. Such projects as Nagios and open source products from commercial vendors GroundWork Open Source, Hyperic and Splunk have been gaining ground in enterprise IT shops.

Here, a few network managers in the know share their latest free finds:

1. DHCP probe

Network managers tracking down unauthorized IP addresses on their networks should check out this application developed by a member of Princeton University's IT team.

DHCP_probe "attempts to discover DHCP and BootP servers on a directly attached Ethernet network," according to its creator, Irwin Tillman of the Network Systems Group at Princeton University's Office of Information Technology. The application sends out requests to DHCP servers on a network, and if a nonauthorized server answers the requests, the software will alert IT staff to the server's existence.

Rick Beebe, manager of system and network engineering for ITS-Med, says the application addresses "a regular problem" at the Yale University School of Medicine in New Haven, Conn.

"Someone will bring a Linksys or Netgear wireless access point or an Apple AirPort in and put it on the network, so they can have wireless in the office. Only they plug it in backward and start sending IP addresses to a large part of the network," Beebe says. "Usually [devices that] get those IP addresses appear broken, because the IPs aren't actually usable, or someone attempting to share files on their machine checks the box that says 'share my Internet' connection, [which produces] the same result."

Last updated in 2004, DHCP probe was first developed to run on Sun Solaris and was ported to also run

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on Linux. Beebe finds its function useful, but says he is surprised it hasn’t been updated to be less version-dependent and easier to deploy -- considering the problem it solves.

“I find it hard to believe that we’re the only ones with this problem so I’m surprised there hasn’t been more development of it,” he says.

2. Password Safe

For Craig Bush, managing and securing passwords got a lot easier when he downloaded Password Safe, an open source project originally developed by security technologist and author Bruce Schneier.

Bush, network administrator at Exactech in Gainesville, Fla., says he regularly browses SourceForge.net for applications that might address a nagging problem on his network. The fact that Password Safe has evolved to an open source project especially appeals to Bush. “I use the one-off [freeware] apps when I need them, but I’d much rather use an application that has a good support community behind it,” he says.

For its part, Password Safe was last updated in mid-February, currently in Version 3.0.6, and it allows users to keep their passwords securely encrypted on their computers. The passwords can be unlocked with a single combination. The free Windows utility uses the Twofish encryption algorithm, a free alternative to Data Encryption Standard (DES) and features an intuitive interface that lets users set up their password databases.

3. Kiwi Syslog Daemon

This free tool makes collecting Syslog entries from multiple devices easier for James Kritcher, vice president of IT at White Electronic Designs in Phoenix.

The freeware (a licensed version with more features is also available) “receives, filters, logs, displays and forwards Syslog messages and SNMP traps from such hosts as routers, switches, Unix systems and other Syslog-enabled devices,” according to its keeper, Kiwi Enterprises.

Kritcher says the software features a “nice GUI for managing entries” and provides trending information. The software can also perform SNMP trap and MIB parsing, and DNS caching of as many as 100 entries to enable fast lookups, the company says.

“It is a great application that consolidates log entries from any Syslog-enabled devices. We use it to manage and monitor network devices such as routers and Cisco PIX firewalls,” he says.

4. Argus

For fans of such products as Ipswitch’s WhatsUp Gold or SolarWinds’ Orion, Argus represents a no-cost alternative.

The software application monitors systems, servers and routers to keep IT managers up-to-date on potential performance and availability problems. Longtime Argus user Kerry Miller, network engineer at First Victoria National Bank in Victoria, Texas, says now he is updating his deployment to also monitor the gear supporting advanced IP applications, such as VoIP.

“We are still using Argus to monitor our systems, and we’ve been expanding it to routers and VoIP (continued on next page)
equipment at several new locations,” he says. “We also use MRTG to monitor traffic on some of our more critical routers.”

5. Zenoss Core

Bruce Meyer is taking advantage of the latest wave of open source software available from vendors for free. Customers can choose to pay for support packages from GroundWork, Hyperic, Splunk or Zenoss, but it costs nothing to use their freeware applications.

Meyer, director of network services at ProMedica Healthcare in Toledo, Ohio, says he has installed Zenoss Core 1.0 to update his network and systems monitoring and collect data to create historical and utilization graphs.

“We’ve been using an older version of Ipswitch’s WhatsUp Gold and Statseeker, but I’m exploring other options in my spare time,” he reports.

Zenoss Core 1.0 is software available under the Mozilla public license that can be used to monitor network devices, operating systems, applications, servers, environment and power supplies for health and availability. The agent-less system is available as a single download and uses industry standard protocols, such as SNMP and Syslog, to collect management data from devices. It also uses Windows Management Instrumentation (WMI) to gather data from Windows systems.

6. Tera Term

ProMedica Healthcare’s Meyer also recently tapped the Tera Term freeware application to aid in deployment of access points.

The free software for Windows enables its users to perform such actions as emulation, telnet connection and serial port connection. It hasn’t been updated in quite some time (the Web site lists 1999), but that didn’t stop Meyer from making the most of it in his IT shop.

“Just recently I’ve used its macro language to upgrade and configure about 100 Cisco 1200 access points,” he says. “It’s a well-known serial/telnet/SSH client, and it’s pretty advanced.”

7. Splunk Server

Splunk last year made available a freeware version of its enterprise-data indexing and troubleshooting software. The product runs on Linux, Unix (including Solaris) and Mac OS X, and the freeware version offers users up to 500MB of data indexing per day.

Splunk Server searches for management data across logs, message queues, configuration files, SNMP traps and database transactions to more quickly correlate events that could be related to a failure -- and that network managers would typically have to search manually. For Yale’s Beebe, it saves time parsing through logs.

“It takes all of our various logs and stuffs them into a MySQL database. Then it provides a searchable sortable Web interface to the data,” he says. “It is a lot easier than grepping through the log files by hand. And more importantly, it’ll give access to our non-Unix-savvy operators.”
Faculty lead alums in educational globe-trotting
By Sam Fox Krauss
Princetonian Staff Writer

Last March, astrophysics professor Ed Turner climbed on a plane with a group of University alumni and set off to see Cairo in the dark. Led by Turner, a group of Egyptologists and amateur astronomers were on their way to Egypt to witness a solar eclipse. "Solar eclipses cause people to travel," he said. In this case, Princeton alumni and their families took a Princeton Journeys tour. Turner said the trip was one of the most fun things he has done in his nearly 30 years at the University, and "it was very nice to get to know some of the alumni."

The Alumni Association has organized tours for alumni for many years but created Princeton Journeys in 2004, hiring a staff and expanding the program to 20 trips per year. The Alumni Association coordinates among alumni, professors and tour operators, who serve as the logistical liaisons for trip planning. The trips generally last two weeks, taking participants to all corners of the world. The program is aimed at alumni but is open to current students and other interested travelers. Between 400 and 500 people participate each year.

Leslie Rowley, the executive manager of Princeton Journeys, said that robust travel programs at Harvard and Yale helped inspire the Alumni Association to expand the educational trips it offers. Before 2004, she said, trips were "few and far between."

"There was a time when we were just putting out one or two a year," she said. Rowley noted that the trips are multi-generational but that the participants are usually older. "Traditionally, it's been more the retired [travelers] because they have the time to put toward leisure travel," she said. Rowley explained that trips are often tailored to highlight one of the University's academic departments. As an example, she cited the program's upcoming Vanishing Treasures trip, which will coordinate with the Princeton Environmental Institute to take alumni to places like the Amazon.

Geosciences professor Lincoln Hollister, who led a cruise to Alaska in 2006, said he was struck by the diverse ages of trip participants. "The age distribution on the boat was from eight to 80 and was linear all the way through," he said. "Some of the groups use this as a family reunion." Though the boat ride was intended to educate travelers about geological matters, such as plate tectonics, a naturalist from Alaska who joined the trip garnered the participants' attention as well, Hollister said. He acknowledged that sometimes people were more interested in the naturalist's explanations of wildlife than his discussions of geology. Hollister said his lectures strive for simplicity, adding that some of the people on board the boat went to school before plate tectonics was discovered. "You have to talk
about really basic stuff that they had never really learned about [at] a level at which they could appreciate what they were seeing off the deck," he said.

Italian professor Pietro Frassica led a trip to northern Italy in 2006. Frassica prepared his alumni by giving them reading material about the culture of northern Italy and writings by authors from the region. "They appreciated this very much because they could see the relation between what we were reading, what we were saying, and what they were experiencing while we were there," he said.

Rowley said that one of her biggest challenges as manager of the program is to get professors to lead the tours, particularly because the Alumni Office tries to recruit professors who are "very popular." "[The professors] are with alumni 24 hours a day for days in a row," Rowley said of the trips, citing this as a possible reason professors are often hesitant to lead them. Turner acknowledged that the length of the trips can be a concern for professors. "[It is] a little difficult to be away that long during the term," he said.

But trip participants said they appreciated spending quality time with professors. Betty Leydon, the University's vice president for information technology, who went on Turner's trip, said in an email that the reading material Turner provided enhanced the travelers' understanding of the region they visited. "It was a great learning experience and made everything we saw so much more meaningful," Leydon said. "All in all, I don't think you can beat a Princeton Journeys trip!"
TECHNOLOGY

Professors use online blogs to foster new ideas

Tuesday, March 13, 2007
By Wesley Morgan
Princetonian Staff Writer

English professor Jeff Nunokawa has a facebook.com account, but he doesn't use it for the same reason his students do. For him, it's a blog. Some University professors have begun to post their musings online in recent years. While the regularity of their posts and the professionalism of their prose differ, they have all entered the "blogosphere."

Nunokawa, a Yale graduate and former literature professor, posts on Facebook at least once a day. His topics vary widely, but they are rarely directly related to his academic work. One recent post, consisting of three lengthy paragraphs, considers Yeats, Auden and "the imperative mood in ancient Greek." Another post reads, "1. Did Cain feel bad about killing Abel? 2. Who thought a remake of 'The Poseidon Adventure' was a good idea?" Popular films, art, literature and the Nixon administration are recurring themes.

"It's a separate but certainly not unrelated type of writing from professional writing," Nunokawa said. "It helps to ruminate and get feedback and just collect ideas." Students also read his posts. Nunokawa said he tells his classes that he uses Facebook, "just so that they know and can go take a look if they're interested. I'm surprised and pleased by how often a student I know — or sometimes don't know — writes something quite striking as a response."

Professors from across the University's academic departments also contribute to the "blogosphere." Computer science professor Ed Felten has his own blog; molecular biology professor Lee Silver writes for ScientificBlogging.com; and Wilson School professor John Ikenberry contributes to TPMcfe.com, a site that bills itself as "a public meeting place to read about and discuss politics, culture, and public life in the United States."

While Nunokawa started using Facebook only in recent months as "just a vehicle for my thoughts — I don't really know anything at all about computers or blogging," Felten said he has been writing on his blog "Freedom to Tinker" since 2002. Felten, too, divides his writing between academic work and other topics. "It's an extension of my mainstream academic work," Felten explained in an email. "Often, ideas that first appeared on the blog end up in my academic papers. I use it to discuss issues of interest, mostly relating to technology and public policy," Felten added. "Sometimes I use it to 'talk through' ideas that are still under development. Generally I write about whatever is of interest to me at the moment, in the hope that my readers will find it interesting too."

All of the professors write for what they see as a broad audience. "The intended audience is a combination of technologists, policy people and interested members of the public,"
Felten said. "I try to keep most items accessible to non-experts." For Nunokawa, the audience is more limited in size, though not by intent. "I guess it's really just whoever can see my Facebook posts, so largely people within the Princeton community," he said. This includes "students, mostly, and some others. I really just enjoy that such a large proportion of them have thought-provoking things to say." Nunokawa has 112 Facebook "friends" at Princeton, and he has 15 in other networks. He is also a member of five groups, four of which he created: "Really Interesting Film Theory," "Too Bad It's So Hard to Find Hawaii – 50 Reruns," "Erving Goffman's Cool" and "The Lionel Trilling Fan Club."
University offers archived lectures as podcasts

Cass Ciatt

Princeton has converted nearly 800 digital files of public events and lectures to make them easily available for free downloads from a new podcasts website. The podcasts feature a dynamic lineup of distinguished guests who visited the University dating back to 1998.

Audio of lectures by such notable figures as movie director Martin Scorsese, New York Sen. Hillary Rodham Clinton, children’s book illustrator Maurice Sendak, and Afghan President Hamid Karzai — in addition to such Princeton professors as computer security expert Edward Felten, poet Paul Muldoon and mathematician Ingrid Daubechies — can be easily downloaded as MP3 files for audiences on and off campus at <www.princeton.edu/WebMedia/podcasts/>.

The files have become part of a growing audio index of available public lectures that will continue to be updated with each new event digitally recorded by the academic services department of the University’s Office of Information Technology (OIT). According to Serge Goldstein, director of academic services, that amounts to an estimated 100 new campus lectures and events each year.

“It’s a treasure trove of material of interest to anyone because most of these public lectures are on cutting-edge topics given by outstanding scholars and personalities in their fields,” Goldstein said. “It ranges from the political, to the social and economic. And when we have famous artists and performers who come to Princeton and give lectures, but many people outside of Princeton have never heard them.”

For years through digital video, the University has offered anyone with an online connection a virtual front-row seat to hundreds of public lectures by some of the world’s pre-eminent political leaders, creative artists, scientists and policymakers that take place on campus.

But while the videos have been available via the online WebMedia site (www.princeton.edu/WebMedia), the University continued to receive routine inquiries for audio recordings of public events that reach capacity in venues on campus.

“We received requests from people who had viewed the streaming files on the WebMedia site saying they did not want to be tethered to their computer,” said David Hopkins, manager of OIT’s New Media Center in academic services. “They wanted the freedom to listen to a file on their MP3 player.

Others wanted the benefit of ‘push’ technology, which means the latest MP3 file is pushed to the person’s computer rather than having to go to the WebMedia site and search for the latest public lecture.”

To add portability to existing digital videos, OIT encoded them as MP3 files, and then created an easily updated data file known as an RSS — short for Really Simple Syndication — that will allow computer users with iTunes or one of the other digital media players to access the list of lectures.

“Our goal was to increase the availability of this resource, which was always intended to be available to the public for people interested in our events for scholarly or academic purposes, or simply because they find the events interesting,” Hopkins said.

Students studying the Big Bang, music enthusiasts interested in rapper Talib Kweli and financiers on Wall Street researching economic policy can now subscribe to a collection of files for automatic delivery to their MP3 player. The lectures aren’t live, allowing users to listen at their convenience.

OIT currently records only public events and lectures — not course lectures or material — but routine recordings of events such as Commencement, Opening Exercises and various academic conferences also are on WebMedia and have been converted for the podcasts site.

“We’re regularly adding to our vast array of materials on public events and lectures,” Goldstein said. “We’re always exploring innovations and finding new ways to make them available because they were always intended to be public material.”

The move to podcasts parallels other efforts across the University to open Princeton resources to national and international audiences. The Princeton University Library recently announced joining the Google Books Library Project to digitize up to 1 million books in the library collections that are no longer under copyright, and the University’s Woodrow Wilson School of Public and International Affairs’ University Channel initiative offers podcasts and vodcasts of some of Princeton’s academic lectures and many others provided by member educational institutions beyond campus at <nc.princeton.edu/>.
Name: Joyce Bell.

Position: Executive assistant to the director of administrative information services in the Office of Information Technology. Providing administrative services, support and departmental management to the director, senior managers, managers and members of the technical staff. Managing the daily operation of the department. Monitoring budgets and expenses.

Quote: “I’ve been at Princeton for 40 years, and loved every minute of it. I absolutely love my job and the diversity and challenges it presents. The AIS staff with whom I’ve had the privilege of working have made my professional life so memorable. And I’m grateful for the children’s educational assistance plan, which enabled me to send my three children to college.”

Other interests: Attending jazz concerts. Shoe shopping. Spending time with her three adult children and her six grandchildren.
NEWS ■ WORKING WITH WIKIPEDIA. While some institutions may be considering a ban on Wikipedia (www.wikipedia.org) as an acceptable source of academic information, Purdue University (IN) Assistant Professor of Communication Sorin Matei says mixing the online collaborative encyclopedia isn’t the answer: “Wikipedia is here to stay and, despite penalties, people are likely to continue using it.” Matei recommends using Wikipedia as a search engine and springboard to other resources, while staying on the lookout for possible errors and biases. Another wiki effort, Citizenjim (www.citizenjim.org), is aiming to improve the Wikipedia model by adding “gentle expert oversight,” and requiring contributors to use their real names. ■ SCANNING FOR GOOGLE. Princeton University (NJ) will become the 12th major university to participate in Google’s (www.google.com) project to scan the most famous literary works in the world and make them searchable over the internet. Princeton’s library system has agreed to digitize about 1 million books in the public domain. ■ A WIDE ARRAY. With the ambitious goal of providing Wi-Fi powerful enough to function as the primary network for students and faculty, Brigham Young University-Idaho is deploying a Xirus (www.xirus.com) array that will handle voice, video, and data communications throughout the campus. Each unit in the array combines the wireless LAN switch, integrated access points, and a multi-sector antenna system in a disc-shaped device designed to speed deployment and adjustments for scalability. ■ PORTAL EVOLUTION. What do you do when you’ve got a great portal that works just fine? At Western Michigan University, you ask students and other users how to make it better. The GoWMU portal is a seamless integrated environment via which users have accessed enterprise applications since fall 2005. But faculty, staff, and students continue to shape its usability. Read more at www.campus-technology.com/articles/45290. ■ ALL YOUR APPLES IN ONE BASKET? Over the next three years, Wilkes University (PA) will make the switch to become an all-Mac (www.apple.com) campus. Though nearly all of the university’s computer labs are currently Mac-centric, the commitment to replenish and upgrade existing computers will cost $1.4 million. ■ PEOPLE ■ CIO TRANSITION FOR WAYNE STATE. CIO John Camp retired from Wayne State University (MI) in January, after 21 years in IT leadership positions there. (See CT’s interview with Camp, page 16.) WSU received numerous awards during Camp’s tenure as CIO, including Sun Microsystems’ (www.sun.com) designation as a Center of Excellence for Administrative Systems, and recognition as a 2006 Campus Technology Innovator. (To enter this year’s Innovators competition, see page 6.) Patrick Grossman has assumed the role of Wayne State’s interim CIO. CT
Traditionally, the high-performance computing systems used to conduct research at universities have amounted to silos of technology scattered across the campus and falling under the purview of the researchers themselves. But a growing number of universities are now taking over the management of those systems and creating central HPC environments—a move that is returning benefits in time, money, and resources for both the university and its researchers.

Henry Neenan, director of the University of Oklahoma Supercomputing Center for Education & Research (OSCER), puts it plainly: “I’ve been seeing a growing trend in centralized HPC for two reasons: capability and practicality.” He explains, “When it comes to capability, you have to consider: What is the largest job you can run on a given machine? There are particular large jobs you can’t run on a system that doesn’t have a lot of capability. And there are the practicalities regarding cooling, space, power, and labor. If you have dozens of systems dedicated to HPC, you can’t just stick them in the closet anymore.”

Notably, the movement of cyberinfrastructure to central management (which includes high-performance computing, computer clusters, and the underlying network), has been gathering speed as more universities are making research a vital part of their institutional identity. On point, the July 2006 report IT Engagement in Research, issued by the Educause Center for Applied Research (www.educause.edu/ECAR), highlights the importance that some universities are placing on research. “Many universities have

More and more universities are now centralizing their high-performance computing resources—benefiting not only IT departments, but the researchers, too.

by charlene o’hanlon
made public ben that they will break into the top echelons of research institutions, and this has set off an arms race to find new sources of funding to construct new research centers, and to attract star researchers with proven grant-magnet abilities,” the study maintains.

As part of that drive to compete on a research level, many universities are seeking to attach themselves to regional and national research initiatives such as the Texas Internet Grid for Research and Education (TIGRE: www.tacc.utexas.edu/projects/tigre.php) and the National LambdaRail project (www.NLR.net). Having central management of the university’s cyberinfrastructure helps facilitate such pairings by pooling resources and creating a massive computing environment that wouldn’t be as impressive—or useful—as separate clusters distributed throughout the campus. In addition, central management provides constant monitoring and upkeep that a smaller, privately owned cluster might not enjoy.

Indeed, the oversight aspect of the issue is not a small one. “The most important element left out of most IT plans is the human element,” acknowledges Brian Voss, Louisiana State University CIO. “If we don’t have people to help us use the technology, we don’t get the most bang for the buck and it’s pretty much useless.”

Putting Power Behind the Research

Still, university IT directors don’t capriciously undertake centralizing management of the institutional cyberinfrastructure. Rather, most such initiatives are mandated by the CIO, with the aim of building out a hefty HPC environment that will enable the university to take a leading role in research, or at least approach such a position. An institution’s ability to attract and empower a CIO with experience in this direction can be key.

Jim Botum, vice provost for computing & IT and CIO at Clemson University (SC), was brought on six months ago specifically to lead the charge to build such an HPC environment. Formerly CIO and VP for computing at Purdue (IN), Botum also served as executive director of the National Center for Supercomputing Applications at the University of Illinois. “I was hired by Clemson to come and build a high-performance computing environment because I’ve been in the business for a while,” he admits, a bit coyly.

In his six months on the job, Botum has orchestrated Clemson’s membership in the Open Science Grid (www.opensciencegrid.org), a consortium of universities, national laboratories, scientific collaborations, and software developers that utilizes 1,000 desktops in student labs for certain applications. He also has directed the College of Engineering and Science to move its clusters to the university’s center, and he has been busy buying the big iron for the center. In addition, says Botum, as part of the Clemson University International Center for Automotive Research (CU-ICAR), Clemson will host CU-ICAR’s 10-teraflop system along with automaker BMW.

Botum reports that Clemson will boast more than 20,000 square feet of centralized high-performance computing space when the center is completely outfitted. “And we have tremendous expansion capabilities,” he adds, disclosing that by summer 2007 the center will house in excess of 12 to 15 teraflops. “We are putting significant money into this project and that will include rearchitecting the campus network. My charge was to build an aggressive infrastructure and get involved in national initiatives, and I feel like we are making some progress,” he says.

Another goal: Botum wants to connect Clemson to the National Science Foundation’s (www.nsf.gov) TeraGrid (www.teragrid.org), a research supercomputing project that boasts more than 102 teraflops of computing capability, and more than 15 petabytes of online and archival data storage distributed among nine partner sites.
Centralization: Aggressive or Organic?

Clearly, Clemson is being aggressive in its pursuit of research, while other universities have taken a somewhat more organic approach. Texas Tech University, for example, has had a central HPC environment of sorts since the late 1990s, set up specifically to facilitate a major visualization project. Once funding ran out in 2001, however, the university began to look at ways to set up the resources for use by the entire campus community.

“When we first took it over, we had to look closely at the HPC program and analyze who was using it,” says Sam Segran, Texas Tech CIO. “We took a business approach and discovered not only who was using it, but who wasn’t—and if not, then why. What we discovered was that most colleges were not really using the system for visualization (the original intended use); on the computing side, researchers don’t have the skill set to do visualization,” he says. “But the high computing—the pure data-crunching, multi-teraflop computing—that’s where we found a lot of interest. Researchers wanted to do a lot of that type of computing in a short amount of time.”

Based on that knowledge, the university set up a grid computing network for such high computing, purchased a Dell (www.dell.com) cluster, and is in the process of tripling its capacity to close to 5 teraflops. In addition, Texas Tech developed a community cluster, which five researchers have bought into. The concept behind the community cluster: The IT department manages the researchers’ systems and the institution matches the researchers’ investment, dollar for dollar. Researchers are guaranteed a certain number of nodes and they can use unused nodes whenever they need to, greatly improving their output abilities, says Segran.

At Louisiana State, HPC efforts are co-managed by Voss’ department and by Ed Seidel, director of the university’s Center for Computation and Technology—a department that was created in 2001 as part of the Louisiana Governor’s Information Technology Initiative to advance the use of information technology in higher education and scientific research. The center has more than 26 teraflops running on eight different machines from Dell, IBM (www.ibm.com), and Atipa Technologies (www.atipa.com). Voss more, he says, “The value of research beyond advancing science is underrated. Research is a feeder line for teaching.”

At Princeton University (NJ), the desire to enhance the institution’s research reputation, coupled with the foresight to understand where technology in general was headed, prompted the school to rethink its earlier strategy.

“When I came on board in 2001, there was little central support of IT services,” recalls Betty Leydon, CIO and VP for information technology. “So we started canvassing the faculty and asking what they needed. We quickly realized the then-current model of individual research

“IT management of HPC takes more than just an effort to educate the researchers; there has to be buy-in on both sides.” —Sam Segran, Texas Tech
HIGH-PERFORMANCE COMPUTING

got all the money we needed to buy Blue Gene,” Leydon recounts. “After we received the machine, everything grew outward from there. Now, researchers are advancing their work more quickly because by pooling their resources, everyone has gotten more resources than they would have been able to get otherwise, on their own.” Princeton has since been able to fund an additional two Dell clusters for research, using the same funding method, Leydon reports. The university’s HPC power is now up to 15.5 teraflops. “Once you get a model that works,” she advises, “it grows by itself. We’ve also been able to purchase centrally shared storage the same way. Faculty members used their research dollars to purchase this because those who are using it see the value.”

IT’s All About the Resources

Increased HPC capacity is but one advantage researchers have realized from central management. They have also discovered that the more mundane tasks of providing proper cooling, power, security, and IT support are no longer their problem, leaving them with more resources to devote to pure research.

Researchers at the University of Oklahoma are taking advantage of the central HPC resources there. “Currently at 7.7 teraflops across two clusters, and scheduled to increase to 12.2 teraflops later this year,” says Andrew McFarland, “the idea of central management is one less headache for the researcher.”

For its part, Clemson is selling the idea of central infrastructure as one less headache for the researcher. “Clemson is the leader in HPC,” says Jimmy Dickson. “It’s not a difficult sell to most researchers, but how do we keep them here?”

Tips for building an HPC environment

Jim Botum, vice provost for computing & IT and OIT at Clemson University, shares his top considerations for HPC from the ground up.

1) User base
   - Know what your users’ needs are and tailor your architecture to meet them.

2) Facilities
   - Do the diligence to assess HPC’s potential impact in all areas, including not just space but also power and cooling.

3) Architecture
   - Build a balanced environment.

4) Support
   - Decide what business you are in (e.g., hardware and systems administration only; application enablement and tuning; or environments), and staff accordingly.

5) Leverage
   - Determine what you can leverage (such as national facilities) so that you do not duplicate efforts and are able to stretch your resources.

Indeed, support for systems has been a major factor in getting researchers to sign on with central management. Explains Neeman, “In technology, you have two choices: ‘established,’ also known as obsolete; and ‘emerging,’ also known as broken. HPC is a ‘broken’ technology business, so you need to have full-time technology professionals to keep it going. At Oklahoma, we have professionals whose sole job it is to keep HPC resources working.”

That seems to be a trend among many universities. According to the ECAR report, 43 percent of responding institutions that consider themselves research-intensive have a research IT unit, and 47 percent of responding institutions that consider themselves balanced between academics and research have a research IT unit. Still, in some cases, the idea of central management has not been an easy sell.

“Researchers sometimes think that if high-performance computing is managed by IT, the money for it will end up being cannibalized for use by the administration, not for the HPC buildout,” LSU’s Yoss explains.

Says Botum: “At Clemson, we’ve had to establish credibility with the faculty, so we’ve had to go out and build that credibility. But we are not forcing the issue; faculty members are getting pressure from the deans and directors to turn over their systems.”

Texas Tech’s Segregan concurs. “Some researchers don’t see how we can manage their systems and they will still be able to do the research they need,” he says. “So we work with them to get the right equipment and still be within their parameters.”

Oklahoma, in contrast, developed its central IT management at the behest of its research community, which was clamoring for a robust facility. “It didn’t take much selling; in fact, [the facility] was created in large part as a result of faculty groundswell to make it happen, so an internal HPC group was formed.”
Relationship management on a shoestring

David Raths

April 16, 2007 (Computerworld) — Princeton University CIO Betty Leydon likes the concept of relationship managers, but she doesn’t have the budget to create the positions. Still, that hasn’t stopped her from working to improve communication between IT and her customers — the heads of administrative units and academic departments.

Soon after she arrived on campus in 2001, Leydon asked her 280 Office of Information Technology employees to volunteer as “ambassadors” to develop personal relationships with executives in the 50 academic and 30 administrative departments at the Ivy League university.

Betty Leydon

“Sometimes departments are limited in their use of IT because they don’t know what is possible,” she says. “The ambassadors can fill them in regularly on what IT can do for them.”

Surveys show that the program has improved the perception of IT responsiveness, Leydon says. And feedback to ambassadors has led to a strategic collaborative software initiative and a push for digital signature technology.

“The ambassadors aren’t the perfect solution,” Leydon notes, “but they were the best I could do given budgetary constraints. They are another link to our customers, and their focus on immediate needs can translate into strategic projects.”
CAMPUS LIFE
First online draw proves to be a success

By Julia Osellame
Princetonian Senior Writer

Almost a month after the earliest round of room draw, the final draw group of six sophomores logged on the room draw website and completed the Housing Department's first-ever online room draw with a click of the submit button on their laptops. After decades of "chaotic" in-person room draw, as Housing Department director Andrew Kane called it in an interview, the online system consolidated the process of room selection, which started March 28.

Room draw was a success by all the measures we might use," Kane wrote in a press release. The new system worked smoothly, and the University was satisfied with "the level of interest in the four-year college program," he added. In anticipation of the problems students could have encountered while trying to draw online, the Housing Department had extra staff on hand to answer calls. The department also set up computers in its MacMillan Building offices where students could go through the process with the help of housing officials.

Undergraduate Housing Manager Angela Hodgeman said that "only a handful of students" went to MacMillan to draw. Hodgeman and Kane both said they have received only positive feedback about the online system from undergraduates. Hodgeman added that she spoke with a student who completed room draw while abroad who was glad to be able to participate without having to assign a proxy, as was necessary for in-person draw.

While general upperclass housing remained the most popular option among rising juniors and seniors, 210 upperclassmen drew into Spelman Halls, and nearly 300 of them chose to live in the residential colleges. Having a solid residential base of juniors and seniors in the two new four-year colleges provides the anchor for the four-year community we are trying to build," Dean of the College Nancy Malkiel said in a statement.

In all, about 300 upperclassmen draw rooms in Mathey and Whitman Colleges, following a yearlong campaign to convince students to draw into the colleges as upperclassmen. "Changing the dynamic of residential life on a campus always carries some unknowns," Executive Vice President Mark Burstein said in the same statement. "But students have taken full advantage of the new options, demonstrated by the number of students represented among all the different options during room draw."

Of the 500 students who will be living in Whitman this fall, 200 are upperclassmen. The

Whitman draw, which took place March 28 through April 5, filled the upperclassman capacity expected for the college. Mathey's upperclass draw was only slightly less successful, filling all but six of the 100 spots reserved for upperclassmen. The remaining spots will be given to returning students who have been studying abroad or were on leave, Hodgeman said. Laura Johnson '09 and her roommate Shannon Clair '09 chose to draw into the same Mathey room that they live in this year. "For me, Mathey has been an amazing community," Johnson said. "I love the people here, the amazing opportunities like tickets to Broadway shows, the support and the college staff."
New campus notification system enhances emergency preparedness

EMILY ABRONSON

Members of the University community can now quickly receive news and instructions during campus emergencies, thanks to a new notification system recently implemented by Princeton officials.

Through the Connect-ED service, campus leaders can send simultaneous alerts to individuals in a matter of minutes through landline phones, cellular phones, text messaging and e-mail.

The system augments the communication tools the University already has in place to respond to a variety of crises, ranging from weather-related closings to unique emergency situations where time is of the essence.

“The recent events at Virginia Tech have shown that it’s especially important to have this type of mass emergency notification system that is capable of reaching all our community members using several methodologies,” Director of Public Safety Steven Healy said.

The University purchased the Connect-ED system in early April, days before the Virginia Tech shootings, after an extensive review of various emergency notification services.

Connect-ED can be used, for instance, to send targeted messages to certain individuals, such as people in a specific building or department, for alerts that do not concern the entire campus.

Messages are relayed through Connect-ED using the contact information provided by faculty, staff and students. Undergraduate and graduate students are encouraged to update their contact information through the Student Course Online Registration Engine (SCORE) at <www.princeton.edu/score> to ensure they receive critical information in an emergency. Faculty and staff should update their contact information through the Office of Human Resources self-service website at <www.princeton.edu/selfservice>. All such information is secure and will remain private.

Garth Walters, head of the Emergency Preparedness Task Force and director of environmental health and safety, said the new system is a great addition to the notification methods already employed by Princeton. He said the University will continue to relay critical information through various means including: Web announcements, e-mail, an automated message line, the new Tiger TV emergency alert system and local radio stations.

However, Walters noted that Connect-ED is only as useful as the contact information people provide. He said it’s especially important to register cell phone numbers so officials can reach faculty, staff and students wherever they may be located.

“The advantage of this system is that we can contact individuals directly rather than relying on people to check their e-mail or visit a website to view an announcement,” Walters said. “With multiple points of contact, people can rest assured they will still be reached with important information even if they are not on campus or tuned into the local news.”

The Connect-ED system allows individuals to register up to six phone numbers, in addition to e-mail and text messaging information. Students, faculty and staff should list their text message e-mail address, as an alternate e-mail address on the SCORE and human resources websites. The text message e-mail address depends on the cell phone service provider, and several template addresses are listed below:

- Alltel: PhoneNumber@alitell.com (example: if your cell phone number is (609) 123-4567, your text message e-mail address would be 6091234567@alitell.com)
- AT&T Wireless: PhoneNumber@mmode.com
- Cingular: PhoneNumber@mobile.myymobile.com
- Metrocall: PhoneNumber@pagemetrocall.com
- Nextel: PhoneNumber@messaging.nextel.com
- Sprint PCS: PhoneNumber@messaging.sprintpcs.com
- T-Mobile: PhoneNumber@tmomail.net
- Verizon: PhoneNumber@vtext.com
Name: Peter Olenick.

Position: Senior manager of networking and telecommunications systems for support services in the Office of Information Technology. Supervising eight people who manage the infrastructure of the campus data and voice network. Overseeing the design and monitoring the networks. Evaluating software. Troubleshooting.

Quote: “One of the reasons I’ve been at the University for 40 years is I’ve been able to keep my hand in the technology — in the early years I was doing punch cards and mainframes. Hopefully I’m able to mentor people new to IT at Princeton and give them a sense of the history of information technology and how dramatically it’s changed over time.”

Other interests: Traveling to England to visit castles and cathedrals. Woodworking.
By the numbers

As the University's technological needs and infrastructure have grown, the Office of Information Technology has become a much-utilized resource for faculty, staff and students.

- During the 2005-06 academic year, the OIT Help Desk responded to 58,786 phone and e-mail inquiries.
- The University's e-mail servers processed 600,000 messages a day last year. During the same period, there were 48.9 million files stored by members of the University community on OIT's central file server.
- The Princeton campus has 32 locations where students, faculty and staff can use OIT computers and printers to access their e-mail accounts and print documents. Last year there were more than half a million log-ins made at these computer clusters.
- OIT offers a number of instructional programs through the Academic Services New Media Center, which was established in 1994 to serve as a multimedia laboratory where faculty, staff and students can learn about and use cutting-edge digital media. Last year, 2,237 members of the University community attended 293 OIT training classes on topics such as “Intermediate Roxen,” “PeopleSoft Purchasing” and “Introduction to Page Layout With Adobe InDesign.”
- Last academic year, members of the University community attended 22 Lunch 'n Learn information technology seminars led by various faculty and staff on such topics as “All Things Google” and “The Truth About Females and Computing.” During the same period, OIT also sponsored 25 Productive Scholar seminars on how to use common desktop software to produce spreadsheets, scholarly papers, bibliographies and other documents.

**Sources:** Office of Information Technology annual reports and website.
Library Partners with Google to Make Books Available Online

The Princeton University Library will collaborate with Google in an ambitious project to digitize books and make them available online to a broad international audience.

As part of the Google Books Library Project, approximately one million books from the library’s collection that are in the public domain will be scanned into digital format. These digital copies will be fully searchable and, because they are no longer under copyright, will be available in their entirety for viewing, downloading, and printing. Their inclusion in Google Book Search will allow Princeton to share its extensive collection with students, faculty, scholars, and researchers around the globe.

"Joining the Google partnership allows us to share our collection with researchers worldwide, a step very much in keeping with the University’s unofficial motto of Princeton ‘in the nation’s service and in the service of all nations,’” said University Librarian Karin A. Trainer.

The Google Books Library Project was initiated in 2004, and includes collections from Harvard, Oxford, Stanford, the University of California, and the New York Public Library, among others. Princeton is the 12th institution to join the project.
"The Concert," an acrylic painting by Darcy Cotton, a senior computer graphic design artist in the Office of Information Technology, is part of an exhibition of original artwork by OIT staff members. Titled "OIT Expressions," it will feature more than 100 paintings, poems, photographs, art, glass, fabric art, wood carvings, and sculptures. The exhibition runs June 16-30 in the Lucas Gallery, 185 Nassau St.