

The University of Texas at Austin
Information Technology Services (ITS)
Vision Plan
2005-2006

I. Summary of Requests

ITS requests \$2,545,936 to support ongoing programs, and \$105,000 to support one-time projects.

We also request \$720,000 to recover costs for the students' Microsoft licenses and \$343,500 for the students' software bundle, "Bevoware." The Microsoft and student bundle licenses are strictly pass-through costs that happen to reside in the ITS budget; amounts are based on existing contracts that must be paid to continue to provide software for use on student-owned computers and on university-owned computers used by students.

Additionally we request \$3,282,158, which is "Swap" money that was originally provided by state funding and was transferred over the years from the ITS budget to academic units and replaced with ITAC funding.

II. Overview of Current IT Programs and Infrastructure

Information Technology Services (ITS) provides mission-critical information technology infrastructure and services to University of Texas at Austin students, faculty, and staff. A significant part of the ITS mission is to support the University's academic programs by providing a ubiquitous and robust information-technology-based environment, technological capabilities, and able staff who can assist students, faculty, and staff in their learning, teaching, research, and outreach activities. The following services highlight how ITS delivers technology to the campus.

A. Programs & Infrastructure: All of the following ITS services require ongoing hardware, software and personnel costs in order to deliver the services. Additionally, since our scope of responsibility is for the entire campus, all of our services lay the infrastructure for other colleges and departments to build more specific college/department centric programs; therefore all of our ongoing operations are considered programs providing infrastructure.

1. Student Microcomputer Facility (SMF) Operations

SMF operations include computer facilities and staff on the second and third floors of the Flawn Academic Center (FAC). The third floor facility provides multi-media computers and printers. Two internet kiosks were also added to the first floor for quick access in FY 03-04. A total of 195 computers are provided through these services. The SMF experienced 323,601 total student logins for the period of January 1, 2004 through November 30, 2004. ITS replaces the equipment for the SMF every three years and maintains current releases of the software installed. All equipment was replaced this past summer. The SMF was repainted, re-carpeted and the lighting fixtures replaced in the Fall of 2004. New ergonomic chairs were also purchased. Although more students own their own laptops, the short battery life, lack of power outlets on campus, lack of secure physical storage and the hassle of carrying around the extra weight of the laptop has discouraged owners from bringing them onto campus according to informal student surveys.

2. Help Desk and Training Services

The mission of the ITS Help Desk (approximately 25 students and 13 full-time employees) is to answer questions and help solve problems for all computer users in the University community. The Help Desk also works closely with the ITS Training group to offer short courses to students on topics of interest and to help design and deliver a Freshman orientation program that communicates with more than 7,000 students at the beginning of each year. There were 109,961 total contacts at the Help Desk for the fiscal year ended 8/31/04., and 5,384 computers were brought to the Help Desk last fiscal year for repair and virus

remediation. Each computer takes an average of 3 hours to fix. Demand for the hardware repair and remediation service has quadrupled in the past two years.

3. BevoWare & Microsoft Software Suite

The Student Software Bundle provides licensing and support for a variety of popular software products for installation on student-owned computers. By providing a comprehensive set of products for the entire student body, ITS is able to improve information and network security as well as student collaboration while taking advantage of substantial large-volume economies. The Bundle includes a full suite of Microsoft desktop products – Windows desktop OS upgrades, Office Suite, Visual Studio development environments, and Virtual PC for Macintosh – the licensing for which transfers permanently to students upon graduation. In calendar 2004 alone, more than 100,000 Microsoft CDs were purchased through the Campus Computer Store. In addition, Macintosh OS upgrades, Red Hat Linux OS, and products in the BevoWare security bundle are licensed for student use. With the exception of Red Hat Linux and Mac OS, the entire set of covered products is also available for use by students in campus labs. The BevoWare security bundle for Windows and Macintosh computers includes Symantec anti-virus and firewall products, EMS Free Surfer (to block pop-up windows), Spybot Search & Destroy and Spyware Blaster (prevent and remove unauthorized “spyware” and cookies), Eudora e-mail client, Mozilla 1.7.3 Web browser, Trillian IM (multi-network chat client), Adobe Acrobat Reader, Apple Quicktime, Macromedia Flash Player, RealPlayer, Microsoft Windows Media Player, and eleven utility programs. Through the BevoWare distribution program, 232,205 products were downloaded between January 1, 2004 and November 8, 2004. From FY2002-2003 to FY2003-2004, downloads increased by 186%. The Campus Computer Store also sold 1,821 copies of the BevoWare CDs during FY2003-2004.

4. mail.utexas.edu (UMBS)

The University provides an e-mail service, mail.utexas.edu, providing 10 MB of storage space per mailbox with approximately 70,000 mailboxes. This count includes students who are not currently registered, as ITS provides a 6 month transition time. Enterprise wide anti-spam filtering tools were placed into production in 2004. As of September 2004, an estimated 86% of in-bound messages were identified as SPAM and filtered out before they could arrive in students' inboxes. During one week in September 2004, 22 million inbound messages were identified and caught with the new anti-spam technology. Beginning in the Spring of 2005, ITS will substantially increase the storage space quota as a result of the students' request. mail.utexas.edu also includes Webmail which permits easy web browser based e-mail access.

5. Webspaces

Webspaces provides 75 MB of secure, centralized disk storage and web publishing for each student to support personal Web pages, collaborative projects, and backup for personal devices (especially mobile and wireless devices). As of November 2004, there were 43,000 users of this service. The number of users has increased over 100% since FY 02-03. The total weekly logins for November 2004 were 65,039. The average HOME directory space size is 12.29 MB.

6. UTnet

Established in 1987, the Networking Services group of UT Austin's Information Technology Services (ITS) maintains UTnet. UTnet is a campus-wide high-speed digital data network available to all computer users on the UT Austin Campus. Fifteen years ago, the network supported a mere 400 computers at 20 sites. Today, there are approximately 65,000 computers on UTnet. The current network host population includes some 7,000 computers on ResNet, a 7,500 port dormitory network for students who live on campus. An additional 5,000 dial-in user accounts are supported by the 1,900 lines of the Telesys dial-in system. The Building Access Campus Security (BACS) system also utilizes and depends on UTnet.

UTnet also comprises a core set of network-based services, which are made available to all of its users. While everyone depends upon the UTnet system to get their work done, few people ever think about the network and fewer still know how the network functions. Instead, everyone simply assumes that the network will be there when they need it. This level of confidence is an appropriate response, since no one using e-mail or the Web should have to know how the underlying network system operates. This level of confidence is also a powerful indicator of how successful the UTnet system has been in delivering reliable, production-quality services 24 hours a day, seven days a week. From the outside, the network appears to most users as something so reliable that they can take it for granted. The UTnet capabilities to handle the new evolving

network based video conferencing technologies and the increased reliance upon data backup and storage across the network are significant as areas where the transparency of the network has been demonstrated. However, a look "under the hood" at UTnet reveals a complex and dynamic system in a constant state of change.

Wireless network services were implemented in 2002 and now provide over 800 wireless access points. Although departments and colleges provide their own funding for equipment specific to their buildings, the infrastructure to support those connections is provided and managed by ITS via ITAC. Student use constitutes approximately 94% wireless network traffic.

A student computer connected to UTNET is also connected to regional and national networks, and to the World Wide Web. Over the last 10 years, the combination of the World Wide Web and widespread adoption of low cost, high performance desktop computers led to an explosion in network access and utilization. Today, there are hundreds of Web servers on campus, and Web traffic is the single largest source of traffic on UTnet. Currently, 75 percent of UTnet traffic is Web-related, with hundreds of Web traffic flows per second (each flow is the result of a "Web-click") being delivered by the backbone routers during the busy part of the day. Reflecting this rapid growth, UTnet traffic levels have been increasing with no end in sight. Traffic moved across the UTnet backbone by routers was measured at 68Mbps during the busiest time of the day in 1993 to 177Mbps during the busiest time of the day in 2003. 2003 Internet traffic increased 100% over 2002.

UT Austin is a member of the Greater Austin Area Telecommunication Network (GAATN), which has 250 miles of optical fiber connecting to educational and government facilities. The Pickle Research Campus and the main campus are also connected by GAATN. Access to the Internet is provided through the Texas Higher Education Network (THEnet). THEnet connects the UT System component institutions, as well as approximately 300 other educational, governmental, and industrial research organizations and to all major Internet backbones operated by commercial Internet providers such as Sprint, ANS, UUNet Technologies, and Performance Systems International.

UT Austin participates in several national academic networks, including Internet2/Abilene, National LambdaRail (NLR), and the NSF-funded TeraGrid. In addition UT Austin is a charter member of LEARN, the new Lonestar Education And Research Network, which is in the process of constructing a state-of-the-art fiber-optic network connecting the major cities in Texas, with interconnections to the commodity Internet, Abilene, NLR, and the TeraGrid.

7. Blackboard Course Management System

Blackboard is a course management system to help faculty make better use of electronic materials in their classes. Instructors create and manage course Web sites without having to know HTML. Faculty and students use Blackboard to communicate and collaborate through real-time chats, threaded discussions, class e-mail, and online file exchanges. From a pilot project in Fall 2000, Blackboard has grown into a system of 3,483 classes with 1,571 instructors and was used in Fall 2004 by 44,950 students. This represents a 172% increase in the number of instructors and an 84% increase in the number of students using the system since the Spring of 2002. This system has been funded from one time project money and now needs to be recognized and funded as an ongoing system that the campus depends upon.

ITS has also joined with the Division of Instructional Innovation and Assessment (DIIA) Center for Instructional Technology (CIT) to join the Sakai Educational Partners Program (SEPP). Sakai is a collaborative development project led by Indiana University, University of Michigan, MIT, and Stanford to explore the possibility of providing open source course management systems as an alternative or adjunct to proprietary systems. The project is also expected to help drive standards, articulate common needs, and may provide modules that can be used with commercial packages, such as Blackboard.

8. Student Community in UTDirect

ITS has created an electronic community support services function in UTDirect for the students, which should be available in January 2005. Following its release the following expansion of services is proposed.

- Web logs (blogs) for students
- Instant Messaging service
- Study resources site
- Feature enhancements for discussion board, reviews and electronic kiosk

B. Current/proposed funding for IT programs & infrastructure

ITS receives funding from the Available University Fund (AUF), State of Texas allocations, fees for services from departments, faculty, staff, and students, student fees, and grants. Due to reductions in state funding, elimination of the state Telecommunications Infrastructure Fund (TIF), and reduction in revenue for services such as Telesys, long distance calling, and printing, ITS is in the precarious position of responding to increased demand for services in the face of declining total revenues. Thus ITAC funding is a critical source of support for ITS infrastructure and services.

C. Best Practices

- ITS partners with UT Austin departments and colleges, UT System, and other institutions across the nation to identify best practices and obtain the lowest cost per unit with the highest quality for both commodities and services
- SSN remediation: ITS does not display or request SSN's except when required by law or regulation
- (EID) Password strength for EID passwords have recently been upgraded to improve security
- Antivirus software: ITS provides defense in depth by using a central product to scan inbound e-mail for viruses and providing all students, faculty and staff with a second product to use on individual computers (including home computers) and servers
- Anti-spam software: ITS provides a central solution that is of the highest commercial quality and accuracy to minimize any false positives (good email declared to be spam)
- Software patches: ITS keeps all servers and lab computers current on security patches from vendors
- Personal firewalls: ITS provides personal firewall software to all students, faculty and staff (including home computers) to improve security
- Basic software licensing and upgrades: ubiquitous software such as Microsoft Office and Windows OS upgrades are fully licensed for all student, faculty and staff (including home use). Also included for students are Mac OS upgrades and Red Hat Linux for personal use (coming soon). Additional software (BevoWare) for security, connectivity and protection are bundled and available to all. Providing a common software platform eases security issues and makes it easy to exchange rich documents. Faculty can make assumptions about what students have access to.
- Secured transmissions: ITS's goal is to have no unencrypted data transfers of sensitive data. SSL security is used for applicable web applications. Historically insecure protocols such as ftp, telnet, pop, smtp, etc. are being replaced with secured versions
- Authenticated SMTP. Non campus access to mail.utexas.edu requires authenticated smtp access; this will be upgraded in the future to require all access to mail.utexas.edu to be authenticated except for certain reviewed situations. All access to austin.utexas.edu is authenticated.
- Promulgation of suggested configurations for desktops and laptops: At regular intervals, ITS updates its suggested hardware configurations. Bulk contracts make it easy to purchase and bulk programs such as life cycle funding offer departments even better pricing
- IT Policies: ITS facilitates creation of needed IT policies and provides awareness training for all incoming students at orientation on critical IT issues
- ITS notifies the campus of any IT threats and works with individuals and departments to remediate problems
- ITS annually surveys its customers to determine satisfaction levels and identify areas of needs and awareness. Survey results are published
- Second element of authentication, the PADlock, implemented and investigation for a pilot of a true second factor authentication
- Iterative and RAD cycles for all software projects with Executive sponsorship, Joint Application Development teams and project reviews on all major releases
- Adoption of industry standards in software project designs whenever established.
- Iterative training opportunities for technical staff to improve abilities and products, foster loyalty, and advance professional options.

III. Use of Previous Academic Year (FY 03-04) ITAC Allocations

Programs:	Budgeted	Additional Spent*	Total ITAC Spent
Salaries of SMF & Help Desk staff	\$ 1,363,147	\$ 30,888	\$1,394,035
Infrastructure:			
SMF and Help Desk operational costs (Includes annual survey, telephone system, staff training, staff equipment & SMF refurb)	\$ 360,000	\$ 243,691	\$ 603,691
Blackboard Course Management System	\$ -0-	\$ 304,889	\$ 304,889
Webspace	\$ 350,000	\$ 68,583	\$ 418,583
UMBS (mail.utexas.edu)	\$ -0-	\$ 2,062	\$ 2,062
UTNet	\$ -0-	\$ -0-	\$ -0-
Total Recurring Funding	\$2,073,147	\$ 650,113	\$2,723,260
Contractual Software Licenses:			
Bevoware/Student Bundle Licenses	\$ 273,000	\$ -0-	\$ 176,951
Student Microsoft Licenses	\$ 360,000	\$ 149,878	\$ 509,878
Total Contractual Licenses	\$ 633,000	\$ 149,878	\$ 686,829
One-time Projects:	\$ 174,911		
Student Community in UTDirect	\$ -0-	\$ 30,000	\$ 30,000
Help Desk Software, Remedy	\$ 174,911	\$ 6,597	\$ 181,508
Total One-time Projects	\$ 174,911	\$ 36,597	\$ 211,508
Total ITAC Funding	\$2,881,058	\$ 836,588	\$3,621,597
*Additional Amounts Spent are from prior year's balances set aside for multi-year expenses and projects that cross fiscal years.			
Other:			
ITS Payroll "Swap" funding	\$3,096,375	\$ -0-	\$3,096,375
Funds formerly from the State were moved from the ITS budget into academic budgets and replaced with ITAC funding. This particular payroll funding was called "Swap" money because the net result did not increase ITS's overall funding.			
Total Funding Including Swap funds	\$5,977,433	\$ -0-	\$6,717,972

IV. Needs and Proposed Use of Funds for FY 05-06

A. Programs & Infrastructure:

Student Microcomputer Facility (SMF) Help Desk and Training Services Payroll **\$1,444,936**

Salaries of our professional full-time classified staff have increased by an average of 3% per year for the past three years. This amount is a 3% increase over what was received FY 04-05.

SMF, Help Desk Operational Costs **\$ 275,000**

The operational costs include telecommunication, software, hardware, training, annual survey expense and SMF refurbishment costs to maintain a three year life cycle.

Webspace File Storage **\$200,000**

Growth in demand for online disk storage is driven by need to support personal Web pages, collaborative projects, roaming e-mail access, and backup for personal devices (especially mobile and wireless devices). This requires a server and storage investment which is being amortized over three years for allocation of 75MB per student. The total amount includes a 3.0% increase to pay for annual salary increases for one full time equivalent employee supporting this service.

UTnet Wireless Access **\$376,000**

Wireless network services were implemented in 2002. In 2003-2004, 500 access points were added across campus, bringing the total to 800. Hundreds more are anticipated to be deployed in 2004-05. Although departments and colleges provide funding for equipment specific to their buildings, the infrastructure to support those connections is provided and managed by ITS. Student use constitutes approximately 94% of wireless network traffic. In order to continue these services, \$100,000 is needed for the additional required bandwidth (commodity internet) and \$276,000 is required for hardware purchases and personnel to manage the campus-wide, authenticated wireless services.

Information Security Office **\$110,000**

The ITS Information Security Office (ISO) strives to educate, support, and empower the UT community to maintain a safe and secure computing environment for University teaching, research, and public service. Their charge is to protect the security, availability, confidentiality, and integrity of the University's information technology (IT) infrastructure and resources. They manage IT security risk, direct university security policy and standards creation, monitor and test IT security, lead incident response and security investigations, and assist technology managers with security management. The ISO tracks incidents, defined as any event involving a UTnet-connected system that has been breached, infected, vulnerable to a high-risk exploit, or served an official Digital Millennium Copyright Act (DMCA) notification. The ISO was started in FY 02-03. In FY 03-04 there were 22,049 total incidents. Of this total 12,639 involved students. The total student incidents have increased 71% from FY 02-03 to FY 03-04. The ISO needs an additional 2 full time equivalent employees to handle the ever increasing workloads of student incidents.

Blackboard Course Management System **\$140,000**

Blackboard has become one of the University's mission-critical services. Faculty and students use Blackboard to communicate and collaborate through real-time chats, threaded discussions, class e-mail, and online file exchanges. From a pilot project in Fall 2000, Blackboard has grown into a system of 3,483 classes with 1,571 instructors and was used in Fall 2004 by 44,590 people. Funding is needed to support recurring costs of support staff, software licensing, and life cycle replacement of servers and database storage devices. Blackboard has never received ITAC support, despite its popularity and importance to the academic mission.

Pass-through Accounts:

Microsoft Student License \$720,000

The UT System Chancellor's office funded the Microsoft software license from September 1998 through August 2002. Beginning in Fall 2002 the amount of UT System support decreased each year until UT Austin assumed the entire cost of its portion of the license. Starting in the Fall Semester of 2004 the full cost of the student licenses was paid without any subsidy from UT System. This amount of ITAC funding enables ITS to offer to all students a suite of Microsoft software that most find essential: the Office suite (Word, Excel, PowerPoint, Outlook, et al.) plus Windows upgrades, plus Visual Studio, plus Virtual PC for the Macintosh, plus access to various Microsoft servers used on campus. Students may use this software on their personally owned computer or in computer labs. Upon graduation, each student receives a permanent license for the desktop products. UT Austin participates in the System-wide contract in order to receive the lowest possible volume pricing. Increases cover rise in official student count data and expected price increase; UT System pays one of the lowest, if not lowest, rates for Microsoft products.

Bevoware - Student Software Bundle \$343,500

The student software bundle refers to licensing and support for student-owned systems of additional software that delivers substantial large-volume economies while increasing information and network security, including anti-virus, firewall, other security and connection tools, Eudora, MacOS upgrades and use of Red Hat Linux on personally owned computers. With the exception of the operating systems, students also get the use of these products in student labs on campus. The increased threat of unauthorized worms, bots and cookies requires the purchase of more security tools and software. The list of software included in this bundle continues to grow in order to fulfill the needs of the changing computer environment.

“Swap” Funding Pass-through Payroll Account

ITS Payroll “Swap” funding \$3,282,158

Funds formerly from the State were moved from the ITS budget into academic budgets and replaced with ITAC funding. This particular payroll funding was called “Swap” money, because the net result did not increase ITS's overall funding. The requested amount includes a 3% increase to cover increases in salaries.

B. One-time Projects

mail.utexas.edu \$60,000

In order to provide adequate capacity for the new anti-spam and anti-virus services, two IronPort servers at \$30,000 each are required. If these servers are not purchased and deployed, delays of delivering e-mail will continue to be experienced during peak traffic times.

Pilot for Handheld Devices and Cell Phones \$45,000

Most students use cell phones on a regular basis and, according to the 2004 ITS Survey, an increasing number of students/faculty/staff/ are using PDAs like PocketPCs and Palms. Despite increased use of these devices, the University has not made significant strides in providing features or functions for these devices. We propose a technology investigation and pilot that will deliver services to handheld devices, with an emphasis on cell phones, which are used by most students. Some examples could include:

- Content suitable for delivery to PDAs and cell phones, e.g., campus events and news, and maps
- Searchable white pages directory available via phone or PDA
- Working with colleges and departments to deliver discipline-specific content and functions
- Explore ability to generate text message notifications to students

This project will require an estimated \$45,000, \$5,000 for mobile device hardware and software (PocketPCs, Palms, SmartPhones) and \$10,000 for infrastructure hardware and software pieces such as a test SMS Gateway for sending text messages. This technology investigation will result in a pilot Web site, whose usage can be monitored to determine the long-term viability of these services. In addition, we will begin the policy formulation process for these technologies. Staff costs will be \$30,000.

Multi-Year ITAC Funding

	<u>2003-04</u> <u>Expended</u>	<u>2004-05</u> <u>Budgeted</u>	<u>2005-06</u> <u>Requested</u>
Programs & Infrastructure:			
Salaries of SMF and Help Desk staff	\$1,394,035	\$1,414,841	\$1,444,936
SMF and Help Desk operational costs	\$ 603,691	\$ 360,000	\$ 275,000
Blackboard Course Management System	\$ 304,889	\$ -0-	\$ 140,000
Webspace	\$ 418,583	\$ 350,000	\$ 200,00
UMBS	\$ 2,062	\$ -0-	\$ -0-
UTnet	\$ -0-	\$ -0-	\$ 376,000
Information Security Office	\$ -0-	\$ -0-	\$ 110,000
Total Recurring	\$2,723,260	\$2,124,841	\$2,545,936
Contractual Licenses:			
Bevoware/Student Bundle Licenses	\$ 176,951	\$ 125,229	\$ 343,500
Student Microsoft Licenses	\$ 509,878	\$ 591,861	\$ 720,000
Total Contractual Licenses	\$ 686,829	\$ 717,090	\$1,063,500
One-time Projects:			
UMBS	\$ -0-	\$ -0-	\$ 60,000
Student Community in UTDirect	\$ 30,000	\$ -0-	\$ -0-
Help Desk Software, Remedy	\$ 181,508	\$ -0-	\$ -0-
Pilot for Handheld Devices & Cell Phones	\$ -0-	\$ -0-	\$ 45,000
Other	\$ -0-	\$ 155,000	\$ -0-
Total One-time Projects	\$ 211,508	\$ 155,000	\$ 105,000
Total ITAC Funding	\$3,621,597	\$2,996,931	\$3,714,436
Other:			
ITS Payroll "SWAP" funding	\$3,096,375	\$2,282,681	\$3,282,158
Beginning in 2004-05, fringe costs were centrally funded; thus reducing the total "Swap" allocation by an estimated \$813,694.		\$ 813,694	
Total SWAP funding	\$3,096,375	\$3,096,375	\$3,282,158
Total Funding Including Swap	\$6,717,972	\$6,093,306	\$6,996,594

Funds formerly from the State were moved from the ITS budget into academic budgets and replaced with ITAC funding. This particular payroll funding was called "Swap" money, because the net result did not increase ITS's overall funding; it only moved the source of funds from the state to ITAC.

Additional information about ITS programs and services can be found at <https://www.utexas.edu/its>

Questions may be directed to the Office of the Vice President for Information Technology, 248-U Flawn Academic Center, 232-910, email: vpit@its.utexas.edu. Thank you for considering this request.