

INFORMATION TECHNOLOGY SERVICES

VISION PLAN

2006-2007

I. Summary of Requests

ITS is requesting \$3,224,297 for ongoing programs, which includes \$1,025,000 for existing student-focused programs that have not been previously funded by ITAC. In past years balance-forward funds were used for these services; these funds have now been exhausted. We also request \$265,000 to cover one-time projects; \$750,000 for the students' annual Microsoft software licenses; and \$185,000 to continue the students' software bundle known as "Bevoware." The Microsoft licenses and Bevoware bundle represent continuing contracts for software licenses already in force; costs are strictly pass-through accounts that happen to reside in the ITS budget. Finally, ITS requests renewal of the long-standing "swap" funding, in the amount of \$3,392,057, as explained in the Appendix, Section VI.

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 environment, a wide range of services, and able staff. Many ITS services are used directly by students, while other services used by faculty and staff support students indirectly. ITS services are summarized below.

A. Programs & Infrastructure

All of the following ITS services require ongoing hardware, software and personnel costs. Additionally, since our scope of responsibility is the entire campus, many ITS activities provide the infrastructure for colleges, academic departments, and other units to build their own unique services

1. FAC Student Computer Facilities Operations

Flawn Academic Center (FAC) student computer operations include facilities and staff on the first, second, and third floors. The third floor facility provides multi-media computers and printers, the Student Microcomputer Facility is on the second floor, and the first floor provides a computer classroom, computers, printers, and individual and group study spaces. Over 250 computers are provided through these services. The SMF experienced 367,901 total student logins for the period of September 1, 2004 through August 31, 2005. ITS replaces the equipment for the SMF every three years, most recently in Fall 2004, and maintains current releases of the software installed. During FY 04-05 and in collaboration with University Libraries, the Writing Center, DIIA, and the Information School, Information Technology Services assisted in the renovation of the first floor of the Flawn Academic Center by purchasing new computers for general student use and has taken over management and maintenance of all computers previously maintained by the University Libraries. In addition, ITS User Services has assumed responsibility for the management and operation of the new Information Desk located in the first floor lobby. The Information Desk is staffed with 18 part-time students working 19 hours per week (9 FTE). ITS has partnered with the Office of the Registrar in making 80 laptops available for checkout by students at the FAC Information Desk. The ID Center will relocate to the FAC Information Desk by the Spring 2006 semester.

2. Help Desk and Training Services

The mission of the ITS Help Desk (approximately 30 students and 13 full-time employees) is to answer questions and help solve problems for all computer users in the University community. There were 115,954 help desk requests for the calendar year ending 12/31/2004. The demand for repair and software virus remediation service has increased from 595 computers in 2002 to 2,368 in 2003, and to 5,886 in 2004, an increase of 889%. Each computer takes an average of 3 hours of time to fix. The Help Desk also works closely with the ITS Training group to offer 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.

3. BevoWare and Student 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, Front Page, 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 and products in the BevoWare security bundle are licensed for student use on a personally owned computer. With the exception of 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 and Firefox 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, 255,774 products were downloaded during calendar year 2004 and 182,955 for the first 10 months of 2005. The Campus Computer Store also sold 1,498 copies of the BevoWare CDs during FY 2004-2005.

4. mail.utexas.edu (UMBS mail service)

The University provides an e-mail service, mail.utexas.edu, providing 100 MB of storage space per mailbox. Mailbox size was increased from 10MB in January 2005 and the current average mailbox size has grown from 5Mb to 11MB. UMBS services approximately 70,000 mailboxes. This count includes students who are not currently registered, as ITS provides a 6-month transition period. Enterprise wide anti-spam filtering tools were placed into production in 2004. As of October 2005, an estimated 86% of in-bound messages were identified as SPAM and filtered out before they could arrive in students' inboxes. Mail.utexas.edu also includes a Webmail interface, which permits easy web browser-based e-mail access.

5. Webspaces

Webspaces allocations have doubled from 75 MB and now provide 150 MB of secure, easy-to-use 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 October 2005, there were 57,000 users of this service. This count includes faculty and students who are not currently registered, as UT provides a 6-month transition period. The average daily volume of data transferred exceeds 60 GB. Between 75% and 90% of Webspaces requests originate from off-campus addresses. The average home directory size is 17MB.

6. UTnet

Established in 1987, the Networking group of UT Austin's Information Technology Services (ITS) Telecommunications and Networking maintains UTnet the campus-wide high-speed digital

data network. UTnet is comprised of over 3,200 network devices (routers, switches, hubs, and wireless access points) distributed across our campuses. It supports over 65,000 computers -- including the 7,000 computer dormitory network (ResNet), and dialup (Telesys, with 3,700 user and 520 lines). Not included in those counts are the over 26,000 Public Network users making use of wireless and wired facilities across campus with their personal computers and personal digital assistants.

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 (and it is 99.997% of the time). 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. However, a look "under the hood" at UT net reveals a complex and dynamic system in a constant state of change.

A student computer connected to UTNET is also connected to the world. In addition to the commodity Internet (where most of the World Wide Web is accessed through), UT Austin participates in national academic high-speed networks, including Internet2/Abilene, National LambdaRail (NLR), and the NSF-funded TeraGrid. 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 the interconnections to the commodity Internet, Abilene, NLR, and the TeraGrid.

Closer to Austin, UTnet peers with local networks, including Time Warner Road Runner, Apogee Communications, and Bestline Communications, to ensure high-speed access to campus resources for the majority of students living off campus. UT Austin is also a member of the Greater Austin Area Telecommunication Network (GAATN), which has 250 miles of optical fiber connecting to educational and government facilities. In Texas, UT Austin connects to the Texas Higher Education Network (THEnet), which services UT System component institutions, as well as approximately 300 other educational, governmental, and industrial research organizations and to all major Internet backbones.

7. Blackboard Course Management System

Blackboard is UT's primary course management system, widely used by faculty and staff since its introduction in Fall, 2000. Blackboard is very easy to use and enables instructors to 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. Blackboard has grown into a mission critical system of 3,596 classes with 1,611 instructors and was used in Fall 2004 by 46,915 students. This system has been funded from one-time project and balance-forward money (\$304,889 in FY 03-04 and \$395,429 in FY 04-05) and now needs to be recognized and funded as an ongoing system on which the campus depends.

ITS continues to collaborate with the Division of Instructional Innovation and Assessment (DIIA) to acquire and develop Building Blocks software modules that extend the functionality of Blackboard. These extensions allow Blackboard to be customized for integration into University business processes.

An active evaluation of the Blackboard Content System is underway. This system allows students and faculty to manage and share files. Librarians are able to create electronic reserves and manage copyright issues for instructors. Instructors are able to update materials once for multiple classes instead of updating each class one at-a-time. Electronic portfolios are also part of the system.

B. Current and proposed funding sources for IT Programs and Infrastructure

ITS receives funding from the Available University Fund (AUF), State of Texas allocations, fees for services from faculty, staff and students, student fees, and grants. Due to reductions in state funding, elimination in 2003 of the State Telecommunications Infrastructure Fund (TIF) Grants, and reductions in revenue for services such as dial-up services, long distance and printing, ITS has been under severe budgetary pressure in recent years, since demand for our services has been growing during the same period. Accordingly, many of the services listed above, which are not completely funded by ITAC fees, face cutbacks unless additional revenue sources are identified.

C. Best Practices

- ITS partners with UT Austin departments and colleges, with other campuses in UT System, and with other universities across the state and in search of the lowest cost per unit with the highest quality for both commodities and services. This practice lowers the overall costs for all participants and eliminates duplication of effort.
- ITS operates a rigorous staff development and training program that enables the University to develop and manage its own administrative information systems, resulting in millions of dollars in savings compared to commercial, off-the-shelf software offerings. Some of these information systems are used by other UT System campuses as well.
- The "UT Direct" portal provides one of the most comprehensive, integrated collections of online services of any university.
- ITS has provided the leadership for the creation of LEARN, the Lonestar Education And Research Network, a state-of-the-art statewide inter-university network coming on line in 2005, and, through LEARN, for Texas universities to participate in the National LambdaRail advanced research and education network spanning the U.S.
- ITS does not show SSN's (social security numbers) or request SSN's except when required by law or regulation.
- Password strength for EID passwords has recently been upgraded to improve security.
- ITS provides defense in depth by using an antivirus 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.
- ITS provides a central solution for anti-spam software that is of the highest commercial quality and accuracy to minimize any false positives (good email declared to be spam).
- ITS keeps all servers and lab computers current on security patches from vendors.
- ITS provides personal firewall software to all students, faculty and staff (including home computers) to improve security.
- 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 for personal use. 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 and allows faculty to make assumptions about what students have access to.
- 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.

- Access to mail.utexas.edu requires authenticated smtp access. All access to austin.utexas.edu is authenticated.
- At regular intervals, ITS updates its suggested hardware configurations for computers. Bulk contracts are offered to make it easy to purchase and bulk programs such as life cycle funding offer departments even better pricing.
- ITS facilitates the creation of needed IT policies and providing awareness training for all incoming students at orientation on critical IT issues.
- ITS alerts 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 publishing the survey results.
- A second element of authentication, the PADlock, implemented and an investigation for a pilot of a true second factor authentication is in progress.
- ITS implementations Service Level Agreements (SLAs) and Memos of Understanding (MoUs) on all products.
- Industry standards in software project designs whenever established are adopted.

III. Use of Previous Academic Year (FY 04-05) Allocations

Programs	Budgeted ITAC	Additional Spent*	Total Spent
FAC Computer Facilities, Help Desk, and Training Staff	\$ 1,634,841	\$ 0	\$ 1,634,841
Infrastructure:			
FAC and Help Desk operations (Includes telephone system, staff training, staff equipment and SMF maintenance)	\$ 120,000	\$ 35,875	\$ 155,875
Student Survey	\$ 20,000	\$ 0	\$ 20,000
Webspace	\$ 350,000	\$ (233,229)	\$ 116,771
Blackboard Operations	\$ 0	\$ 285,762	\$ 285,762
UMBS (mail.utexas.edu)	\$ 0	\$ 187,292	\$ 187,292
Information Security Office	\$ 0	\$ 189,281	\$ 189,281
UTnet	\$ 0	\$ 166,081	\$ 166,081
UTnet - Wireless Access	\$ 0	\$ 492,413	\$ 492,413
Total Recurring Funding	\$ 2,124,841	\$ 1,123,475	\$ 3,248,316
Contractual Licenses:			
Bevoware/Student Bundle Licenses	\$ 125,229	\$ 47,194	\$ 172,423
Student Microsoft Licenses	\$ 591,861	\$ 0	\$ 591,861
Total Contractual Licenses	\$ 717,090	\$ 47,194	\$ 764,284
One-time Projects:			
Enterprise Directory Service	\$ 55,000	\$ 3,525	\$ 58,525
Blackboard Upgrade	\$ 100,000	\$ 9,667	\$ 109,667
FAC renovation	\$ 0	\$ 181,263	\$ 181,263
mail.utexas.edu (capital upgrade)	\$ 0	\$ 99,800	\$ 99,800

UMBS (mail.utexas.edu)**\$150,000**

The operational costs include hardware and software maintenance, systems administration and management.

UTnet**\$100,000**

The operational costs include bandwidth, hardware and software maintenance, systems administration and management.

FAC Guards**\$100,000**

ITS is now the building steward for the Flawn Academic Center (FAC) and as such has assumed responsibility for the contracting with UTPD for guard service formerly budgeted by University Libraries. Coverage has been reduced from an around-the-clock guard presence but still requires 2.5 FTE to allow for added security at peak times of the day. Costs include fringe benefits and emergency/extended coverage for finals.

UTnet-Wireless Access**\$500,000**

Wireless network services were implemented in 2002. To date there are over 1,300 wireless access points across our campuses. 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. Student use constitutes approximately 94% wireless network traffic.

Pass-through Accounts:**Microsoft Student License****\$ 750,000**

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. 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, Visual Studio, Front Page, Virtual PC for the Macintosh, plus access to various Microsoft servers used on campus. Students may use this software on their personally owned computer and in computer labs; University funds are used for the corresponding Microsoft products used on faculty and staff computers. 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**\$ 185,000**

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, and MacOS upgrades 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. The requested amount is

based on actual expenses incurred, which reflect increased security requirements and the potential exposure risks in today's computer environment.

C. One-time Projects

Campus-wide XML driven Events calendar with RSS feeds \$70,000

Most units around campus have developed their own version of a calendar of events. Our central portal, UT Direct, also manages a list of centralized events from across campus. Built on solid but inflexible technology, it does not allow for a fluid transition to a new service which could serve campus more completely and which could better inform students of academic, entertaining or social opportunities to enrich and augment their course work. There has been interest in a cross-department project to provide such a tool. The proposal is complete. To develop such a product would take 2 ½ FTE – 4 months, for a cost of approximately \$70,000. Hardware currently in use will suffice.

Mail.utexas.edu Upgrade \$150,000

Increases in mailbox size, mail volume, and access have resulted in a disk storage processor overload. Until the disk storage processor capacity can be upgraded, the mail system will become slower and slower.

Student Community weblog Service \$45,000

One of the most versatile technologies currently giving opportunity for student voices to be heard is the weblog. We propose provision of an EID authenticated weblog service that would integrate with publishing services already available. Costs of the hosting mechanism would be approximately \$45,000 once totally deployed. We would initiate it this year and grow the operation as its use became more mission critical.

V. Multi-Year ITAC Funding

	2004-05 ITS/ITAC Expended	2005-06 ITAC Budgeted	2005-06 Projected Expenses	2006-07 ITAC Requested
Ongoing Programs & Infrastructure:				
SMF and Help Desk (staffing)	\$ 1,634,841	\$1,669,220	\$1,669,220	\$1,719,297
SMF and Help Desk (operations)	\$ 155,875	\$ 120,000	\$ 280,000	\$ 280,000
Student Survey	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000
Webspace	\$ 116,771	\$ 339,544	\$ 180,000	\$ 180,000
Sub Total	\$1,927,487	\$2,148,764	\$2,149,220	\$2,199,297

Proposed Ongoing Programs & Infrastructure:

FAC Guard	\$ 0	\$ 0	\$ 97,000	\$ 100,000
Blackboard (operations)	\$ 285,762	\$ 0	\$ 300,000	\$ 0
mail.utexas.edu (operations)	\$ 187,492	\$ 0	\$ 150,000	\$ 150,000
UTnet - Wireless Access	\$ 492,413	\$ 0	\$ 500,000	\$ 500,000
UTnet (operations)	\$ 166,081	\$ 0	\$ 100,000	\$ 100,000
Information Security Office	\$ 187,292	\$ 0	\$ 175,000	\$ 175,000
Sub Total	\$1,320,829	\$ 0	\$1,022,000	\$ 1,025,000

Total Recurring	\$3,248,316	\$2,148,764	\$3,171,220	\$3,247,297
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Contractual Licenses:

Bevoware/Student Bundle Licenses	\$ 172,423	\$ 125,229	\$ 185,000	\$ 185,000
Student Microsoft Licenses	\$ 591,861	\$ 743,495	\$ 743,495	\$ 750,000
Total Contractual Licenses	\$ 764,284	\$ 868,724	\$ 928,495	\$ 935,000

One-time Projects:

FAC Renovation	\$ 181,263	\$ 0	\$ 0	\$ 0
Enterprise Directory Service	\$ 58,525	\$ 0	\$ 0	\$ 0
Blackboard (capital upgrade)	\$ 109,667	\$ 0	\$ 0	\$ 0
Mobile Device Pilot	\$ 0	\$ 45,000	\$ 45,000	\$ 0
mail.utexas.edu (capital upgrade)	\$ 99,800	\$ 60,000	\$ 60,000	\$ 150,000
Student Community weblog	\$ 0	\$ 0	\$ 0	\$ 45,000
Campus-wide XML-driven Events calendar w/RSS	\$ 0	\$ 0	\$ 0	\$ 70,000
Total One-time Projects	\$ 449,255	\$ 105,000	\$ 105,000	\$ 265,000

Total Funding	\$4,461,855	\$3,122,488	\$4,204,715	\$4,424,297
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VI. Appendix to ITS Vision Plan

“Swap” Funding Pass-through Payroll Account:

ITS Payroll “Swap” funding **\$ 3,392,057**

On two occasions over the past ten years, funds from State sources were moved by authority of the Provost’s Office from the ITS budget into academic budgets and replaced with ITAC funding. This unusual arrangement, earmarked for ITS payroll expenses, has been referred to as “swap” funding, since the net result did not change ITS’s overall budget. The FY 2006 - 2007 amount includes fringe benefits and a 3% increase to cover increases in salaries.

	<u>2004-05</u> <u>Allocation</u>	<u>2005-06</u> <u>Allocation</u>	<u>2006-07</u> <u>Allocation</u>
ITS Payroll “swap” funding	\$ 2,282,681	\$ 2,428,657	\$ 2,501,517
Fringe “swap” funding	\$ 813,694	\$ 864,602	\$ 890,540
Total Swap	\$ 3,096,375	\$ 3,293,259	\$ 3,392,057