

College of Communication
Technology Vision Plan
for Academic Year 2006-07

SUMMARY OF REQUESTS

Network Expansion	\$75,000
Network Storage	\$150,00
Support for Mobile Users	\$69,000
High Definition Video Projection	\$80,000
Assessment Survey and Report	\$20,000
Joint Use Facility	\$175,000
Instructional Video Infrastructure Collaboration	See Joint Proposal
Total	\$569,000

OVERVIEW OF CURRENT IT PROGRAMS AND INFRASTRUCTURE

The mission of the College of Communication, according to Dean Roderick Hart, is four-fold:

As the most comprehensive academic unit of its kind in the United States, the College of Communication is too large and too complicated to have but one mission. Instead, its mission is four-fold:

An intellectual mission: (1) to ensure that the traditional arts and sciences remain central to the study of human communication, (2) to collaborate with faculty members in the arts, humanities, and social sciences across campus to address the most pressing issues of the day, and (3) to make communication training central to the educations of all University of Texas undergraduates regardless of major.

An entrepreneurial mission: The world is being made smaller by the Communication Revolution and the College must work to understand what that means by (1) building close ties to the communication professions, (2) vigorously pursuing interdisciplinary activities, (3) staying current with new interactive and aesthetic technologies, and (4) pursuing an increasingly international agenda.

A pedagogical mission: Here is our future: We live in an era of media convergence where once-separate industries - radio, television, advertising, newspapers - are being folded into vast media conglomerates. The College must prepare its students in multiple ways as a result, helping them reach across the various communication disciplines for new insights, new skills, new forms of expression, and new kinds of employment.

A social mission: The mass media are implicated in all that happens today. Political campaigns are heavily determined by media perquisites; enlightened health care depends on savvy information campaigns; the nation's youth are being inundated with popular culture; the world has become unknowable without a discerning press. This collection of facts makes communication training both a practical matter and a moral one as well.

The University of Texas is devoted to generating intellectual excitement in its students, transforming their lives, and turning them into leaders. That is the College of Communication's business as well.

IT Programs

The Dean's Office operates Business and Technology Services (BATS). The Technology Services group represents the bulk of technology support available in the College. We support every department, research unit and program in the College. Our web site is <http://communication.utexas.edu/technology/>. Along with other Dean's Office units, we receive administrative support from Business Services. Currently, Technology Services consists of twenty-one full-time employees and typically around half that many part-time student workers. Skills and duties revolve around three primary areas: Customer Support, Engineering and Instructional Design and Web Development. We also have a dedicated datacenter and network administrator.

Customer Support provides direct patron support. Our Help Desk solves technology problems for College owned computers, audiovisual systems in classrooms, and provides limited support for personally owned student or faculty systems (liability limits the extent to which we can help). Media Services manages the Media Center and related facilities to provide checkout equipment, media duplication, a media library and playback facilities. Finally, Lab Operations maintains College and departmental computer labs and provides assistance for faculty, staff and students using our labs.

The Instructional Design and Web Group helps faculty and staff to develop and implement instructional technologies, and supports the development of both our academic and administrative web presence.

The Engineering team is responsible for long-term projects, large-scale "roll-outs" of technology equipment, providing purchasing specifications, and maintaining our inventory of computers for rapid deployment. Engineering's primary focus is to free up time-consuming and complex logistical tasks from the other units, so that they may provide more efficient and effective service to our patrons.

Technology Infrastructure

We maintain technology equipment in five buildings (CMA, CMB, LAC, UA9 and WHH). We have over 900 College-owned computer systems, 300 printers and over 30 servers. All of these are connected by one of the more advanced networks on campus.

We employ multiple Gigabit and 10-Gigabit connections to the campus network, and now provide Gigabit connections to our computer lab desktops.

Our Help Desk maintains the standard security practices on campus, ranging from the deployment of anti-virus and firewall software provided by University site license, to advanced software deployment and desktop management systems (see Best Practices below).

Today, twenty-four classrooms (College, departmental and General Purpose) are outfitted with instructional media systems. These consist of a digital projector, an audio system, audio and video sources (VCRs, DVDs, etc.) and laptop connections. Many of these rooms include built-in computers, connected to the network. We have deployed over sixty wireless access points throughout our buildings, in order to provide Internet access for our increasingly mobile computer population.

Individual departments within the College also maintain technology support infrastructures. For example, Communication Sciences and Disorders and Journalism each employ technical support staff to maintain their clinical and broadcast television equipment, respectively. Radio-TV-Film employs a staff who work closely with students during the various production and postproduction phases, and are called upon to match hardware and software capabilities to aesthetic vision. Advertising and Communication Studies employ Graduate Assistants to support their labs. Departments are primarily responsible for determining the nature and scope of activities within their facilities. College Technology Services works with the departmental staff to help facilitate their needs.

Because many Communication courses are not taught within the Jesse H. Jones Communication Complex, our faculty cannot always depend upon their classes being scheduled in University classrooms that meet their technological requirements. It is critical that the colleges continue to improve the University's classroom technology capabilities, through the combined efforts of the Tech Deans Group and Technology Classroom Committee.

Technology Funding

For FY2005-06, the College of Communication received \$430,969 from the University-wide Information Technology Advisory Committee fee. We also generate approximately \$1 million from the College's Information Technology Fee (ITF). Other instruction-related projects, many of which involve a great deal of IT resources, are funded through a \$1 million Communication Learning Equipment Fee (CLEF).

A large portion of the ITAC Fee allocation is spent to operate the Communication Computer Center (<http://www.utexas.edu/computer/labs/cc/>), a joint-use facility open to Communication majors during traditional business hours, and to all registered University students after hours. Management and upkeep of the facility is provided by Instructional

Technology Services, at an annual cost of \$163,000. Routine repairs and upgrades are also funded via ITAC. ITAC funding support for this facility remains a primary concern.

The principal use of the ITF was to support professional and temporary staff, as outlined above. Additional projects are funded to support Technology Services initiatives, as described in the next section.

CLEF provided for much of our instructional equipment, software and services. The process of allocating these funds represents department-specific needs and is distributed based on project proposals. Technology Services uses these proposals to anticipate and plan infrastructure upgrades. Note that only a portion of this fee represents IT expenditures.

The College has requested a \$252,000 increase in flat-rate tuition in order to fund additional technology staff, to provide support for the Student Learning and Collaboration Center, described later. We expect notification regarding approval of this fee sometime in early Spring, 2006.

Best Practices

The College has invested heavily towards improving our support of College technology. Investments include help request tracking software, desktop and security management systems, server and storage virtualization infrastructure, resource management and scheduling software and advanced video recording and playback systems. We have also upgraded classrooms to include control systems common to much of the campus, and we are leveraging the University's purchase of a Web Content Management System (<http://www.utexas.edu/web/cms/>) to improve our overall web capabilities.

We use the Web Help Desk (<http://www.webhelpdesk.com/>) request tracking system to keep track of patron requests for support, and to provide a two-way communication link to keep all parties abreast of any activity related to their request. Similarly, we use an online system (<http://www.onshored.com/>) to keep track of equipment checkout and media library requests. These systems improve efficiency and improve patron experiences.

We deploy a suite of software solutions to help protect University computing resources. Among these are antivirus suites, firewall management systems and Virtual Private Network (VPN) solutions provided through University site licenses (<http://www.utexas.edu/its/sds/products/antivirus.html>). We also utilize systems to improve the deployment of new, repaired or repurposed computers (Ghost, NetRestore, etc.). We have also led the charge to deploy the LANDesk desktop management solution (<http://landesk.com/Products/LDMS/>), which provides us with the ability to remotely deploy complete operating systems, individual software packages and security patches. It also provides excellent asset reporting capabilities, so we can determine just exactly what is out there and target the oldest or least capable systems for replacement. Finally, it provides remote control capabilities that let us provide over-the-phone support for our users, saving valuable time and effort. As an example, we can now deploy a lab of

twenty computers in under fifteen minutes, down from 3 hours using the previous methods.

We continue our deployment of always-ready video recording and streaming systems in classrooms. Currently, we have seven rooms with a video camera trained on the instructor or student presenter, microphones covering the entire room and audio and video connections to the media presentation system in the room. With this, we can record both the interactions of presenters and audiences and whatever they are presenting via the projector and audio system in the room. This is meant to facilitate both the regular and ad hoc capture of classroom activities, from lectures to guest presentations to student presentations.

We are now using the University's Web Content Management System (WebCMS). This system allows us to implement modern web design and development practices, but keep content providers in control of their content. The WebCMS allows those who care most about what is found on our web sites to directly contribute, edit and update content, without the need for technical staff involvement. This vastly improves the time-to-publish, which should result in more timely and professional updates to web content.

Finally, we have incorporated touch-screen control systems in every College and General Purpose classroom that includes a classroom console (<http://communication.utexas.edu/technology/facilities/classrooms/consoles/>). This brings them into very close alignment with the standard classroom consoles found throughout the campus. We will be adding these touchscreens to all twenty-four classrooms under our control as of the end of the 2005 calendar year. Several rooms will have also received furniture with built-in network and power connections, to further improve the mobile computing experience.

USE OF PREVIOUS ACADEMIC YEAR ALLOCATIONS

ITAC allocations for FY2005-06 were \$132,695 for infrastructure, much of which was used to supplement the \$78,274 received to maintain the Communication Computer Center. We also received a \$220,000 as a one-time project allocation.

Among the projects funded this year include improvements to the Classroom Archive System, which allow instructors to automatically record and archive classroom lectures, presentations and performances in seven CMA classrooms and make the content available on our video on demand system (see related presentations at <http://communication.utexas.edu/technology/presentations/>).

We will finish a Kiosks and Electronic Signs project in Summer 2006. This project will replace the antiquated closed-circuit TV system throughout our buildings with a series of touch-screen kiosks aimed at assisting patrons and visitors in locating resources, checking resource availability and performing limited but routine online functions.

A few classrooms required the replacement of security systems, as the University required us to move to the Building Access and Control System (BACS), but did not fund the system upgrade.

We are also looking to either the Texas Advanced Computing Center (TACC) or Information Technology Services (ITS) to provide disaster recovery storage for our critical information systems. As these organizations have the resources to provide tremendous amounts of redundant storage, we will offset the need to provide an expensive data backup system locally.

We continue to require incremental upgrades to network infrastructure, particularly as student computer lab seats increase. We have outgrown the upgrades installed just two years ago.

We allocated ITAC funds to hire architectural consultants to plan two major remodeling operations. These consultants will determine the best way to consolidate technology staff into one location in CMA, as currently they are dispersed throughout multiple locations, some of which are not accessible to faculty, staff and students. Other consultants will work to design the Student Learning and Collaboration Center described below.

Finally, we are finishing the installation of control systems that will cause twenty-four classrooms to conform closely to the standard classroom consoles found throughout the campus. This includes touchpads to control the projection and playback systems, as well as desks with built-in network and power ports in a handful of rooms.

NEEDS AND PROPOSED USE OF FUNDS

Network Expansion (\$75,000)

The increased deployment of Gigabit-capable desktops in classrooms has resulted in a complete utilization of existing capacity. As such, we will need to invest in additional Gigabit Ethernet switching equipment. This will consist of at least one additional Cisco Catalyst 6500 series chassis and additional multiport switch cards. As our current switch closet in CMA lacks space to support additional circuits, we will need to add telecommunication racks, fiber connections and power to expand into the closet immediately below it.

Network Storage (\$150,000)

We provide nearly four terabytes (4000GB) of network storage to support College courses and various research and administrative units. Demand for storage continues to grow. Towards the end of a semester, class data utilization alone increases by over 300GB per week. We run out of space by the end of each semester. In order to meet this demand, we must be able to provide cost effective and flexible storage. We will invest in a scalable storage solution from a Tier 1 provider (Dell, HP, IBM, NetApp, StorageTek,

etc.) that provides multiple terabytes. This system must provide for data redundancy and high availability, so we can assure continued service. It must also incorporate automated data backup capability, as there is not enough time every night in which to back up this amount of data using traditional methods. We have been working with these vendors to develop a budget estimate for this project.

Support for Mobile Users (\$69,000)

As our patron base becomes increasingly mobile, the College is responding by increasing the number and quality of systems in place to support laptop computers. Our wireless and wired public network infrastructure has grown tremendously over the last four years, and over one third of our installed base of staff and faculty computers are laptops. Our students increasingly bring their laptops to campus. This presents both challenges and opportunities for support. On the one hand, mobile systems are less easy to manage autonomously and remotely than desktop systems always tied to our network. On the other hand, mobile systems are easier to “bring in for service.” Our Help Desk routinely works hands on with faculty, staff and even student laptops. In emergency situations, staffers have donated their own work computers in order to triage systems used in the classroom or for important conferences or other engagements. This is enabled by our widespread use of common, interchangeable laptop configurations. We propose that a pool of laptop computers be purchased in order to supplement the existing systems available for checkout in the College. These systems will be available for checkout, but will also serve as a “spares pool,” from which we can draw to get systems used for instruction back into the field.

Additionally, the College is restructuring the way in which public spaces in the main lobby are used. We will be converting existing spaces to support group and individual work. This “Student Web Center” will focus on student activities, and will be equipped with network and power circuits to support laptop users. The space will also include presentation capability, so that students can collaborate on group projects, practice their presentations with classmate, or display their work to the public. This project will also incorporate a help desk consisting of a group of resourceful student assistants who will provide advice on the use of computing resources at the University. These paid assistants will also act as a link to the professionally staffed Help Desk, and could serve to facilitate the checkout and maintenance of the above pool of laptop computers.

High Definition Video Projection (\$80,000)

Our Radio-TV-Film department (RTF) is interested in moving towards the production of High Definition (HD) video. This will likely supplant the existing film-based infrastructure, as direct HD acquisition increasingly replaces film in the professional landscape. While RTF will pursue their production needs through internal funds, there is also a growing need on campus for venues that support HD video reproduction with multi-channel audio. Our auditorium (CMA 2.320), a General Purpose Classroom, currently supports a wide range of high quality digital audio formats, but is only equipped to support traditional presentation quality video. We propose to add digital cinema video

projection equipment to support the viewing of HD content that matches the best theaters. We have already invested in high quality screens and upgrades to our projection booth in order to accommodate this.

Student Survey on Technology Utilization (\$20,000)

Among other things, the College's Technology Policy and Planning Committee (TPPC) is tasked with assessing the use of technology in the classroom by developing a mechanism to measure its impact on the educational experience. In order to facilitate this, we will work with ITS Research Consulting and our own Office of Survey Research to develop survey instruments and methods. The results of these surveys will be published by the TPPC.

Joint Use Facility (\$175,000)

As mentioned above, continued operation of the Communication Computer Center is important. We request funding to continue the contract with ITS and repair items as necessary.