

**1999-00 Information Technology Funds Annual Summary Report and 2001-02
Vision Plan for Information Technology**

**College of Communication
November 30, 2000**

This report was written and prepared by Janice Daman, Assistant Dean and Charles Soto, Senior Systems Analyst with assistance from the College's Instructional Design Group staff and the College's accounting staff.

Contents:

Executive Summary

College Vision, Goals and Objectives, Recent Progress Toward Realizing Goals

Facilities and Staffing, Other infrastructure

Proposed Projects/Titles

College IT Funding Overview and Life Cycle Methodology

Appendices:

Total IT Summary Expenditures Report for 1999-2000

Networking Status and Technology Classroom Inventory

Executive Summary

The College of Communication continues to have the following technology goals for students, faculty and staff:

Use instructional technologies to improve the classroom environment and optimize faculty time.

Give students experiences with state of the art technologies and practices.

Define the requirements for new communication technologies.

Help set the national research agenda for communication technologies.

To this end, the College seeks for fiscal year 2001-2002 its annual ITAC allocation, in addition to \$132,673 in special project ITAC allocations. These projects include: switched network infrastructure upgrades, additional joint use facility funding, digital library maintenance and wireless network infrastructure. This current fiscal year, the College will realize income of approximately \$1,997,803 in three fee accounts: the University's Technology Fee (ITAC), the College's Instructional Technology Fee and the College's Communication Learning Equipment Fee. Approximately 28% of these monies support staff needed to manage and assist with technology. Another 40% will be spent on equipment. The remainder of the funds will be used to support the general operation of the technology staff, the Help Desk, the Media Center, the Instructional Design Group, the Videoconferencing Facility, the Digital Video Lab and the College's servers, network and infrastructure, in addition to debt service for a UT System loan. (See appendix: 2001-2002 IT Projected Summary.)

Last year (1999-2000), the College received \$219,379 in ITAC funding, had a balance forward of negative \$4,860.46, cancelled old purchase orders for \$1,106.16 and expended \$215,624.70, for an ending balance of zero. The expenditures consisted of \$139,825.98 for the operation and management of the Joint Use Computer Facility, of which \$128,579 was paid to ACITS as a management fee. The remainder of the funds were allocated for the Digital Archive project of which \$29,764.15 was spent to hire a project manager (six month temporary position) and \$46,034.57 for equipment.

This year the College refocused the role and operation of the former faculty studio, now called the Instructional Design Group, from a self help resource for faculty, with one staff member to assist them, to a full service instructional technology lab with four technology staff to actually 'do' the project, not simply assist. Recently the IDG conducted an analysis of current College courses and found that 55% use web based technologies in some fashion. One of the goals of the IDG is to increase this percent each semester and already has begun to realize this goal by working on twenty-three proposals in just six months.

College Vision, Goals and Objectives, Recent Progress toward Realizing Goals

Three types of instructional computing support are provided to achieve our goals. First, we operate a Help Desk that provides many aspects of IT support, from the maintenance of computer labs to the support of faculty and staff computing equipment. Network and system administration tasks also ensure the continued availability of computing resources. Secondly, we provide access to a variety of instructional materials such as camcorders, tape recorders, projectors, lecterns, etc. through our Media Center. In addition, this unit provides support for classroom technology throughout the CMA building. Finally, in order to aid our faculty with the production and maintenance of instructional technologies they implement in support of their courses, we created the Instructional Design Group. This group is directly involved in the production of projects proposed by individual faculty members and approved by a committee on a semesterly basis. These three service units provide a comprehensive structure of support for our students, faculty and staff and result in increased access to and utilization of instructional technology.

Recent Progress:

During the 1999-2000 Academic Period, ITAC funds provided for the continued operation of our joint-use Communication Computer Center (<http://www.utexas.edu/computer/labs/ccc/>). It exists to support registered students exclusively, operating for 95 hours per week. Communication students have exclusive use between 8a.m. and 5 p.m. on weekdays. Any other University student can use the facilities any other time. Capabilities are closely matched to those found in College teaching labs. Students are able to continue their work in this lab, communicate electronically, or perform other computer-related operations. A small staff is maintained to provide general support and routine maintenance and service. There are 48 available workstations and additional equipment such as scanners and color printers.

ITAC funds also contributed to the beginnings of our Communication Digital Library. In the College, there are thousands of individual assets available within varied collections. These range from static images to audio tapes to film and videos. In order to make these assets more available for study or repurposing, it is necessary to make digital replicas of the assets and link these digital versions to information describing the asset. The retrieval of assets based on searches on this "metadata" calls for a Digital Asset Management System. A scalable, programmable system was required to facilitate both large numbers of assets and flexible adaptation of datamodels to describe the assets. We have implemented the first phase of the system using an SGI server and Studio Central Library software. We are currently working with five faculty members in the production of digital assets for use on the system. These projects involve the conversion of

high-quality still images and videos from previously difficult to search and review collections (cabinets full of slides, medical images in proprietary digital formats, videos on tape, etc.). In each case, instructors will use the new archive to generate instructional web sites both for in-class and supplemental review.

Last year's Wireless Laboratory project was developed to provide Communication Studies students and faculty an opportunity to explore interpersonal communication via electronic and traditional methods. Students meet both in traditional classroom settings, but also participate in "virtual" meetings via the Electronic Conference Center server (<http://collaborate.cocomm.utexas.edu>). Real-time chat, asynchronous discussions and real-time surveys and polls are examples of its capabilities. A fundamental requirement is portability, as the designated meeting place is one of the factors studied in these classes. As such, the "lab" consists of laptop computers, connected via a wireless LAN (IEEE 802.11b "wireless Ethernet") that can be deployed at any location with a single Ethernet connection.

The Communication Computer Center (Joint Use Facility) continues to function well. Usage statistics show thousands of logins per month. Its capabilities match those of instructional labs around the College. We plan major upgrades this summer, 2001, to provide current technology and updated hardware and software.

The Digital Library project is progressing nicely. Individual faculty proposals this year were heavily dependent on an asset management solution. We have already loaded several hundred assets and corresponding metadata. Programming continues to add functionality, while workflows for the conversion, ingestion and cataloging of the assets are being developed. Each of the added assets builds a library of resources with potential value to other instructors, researchers and the University community. As new materials are added, our labor and storage requirements will grow. As such, it is foreseeable that we will require either additional resources to meet this continued growth, or some other University entity to take on the task of providing this service. As other departments are likely to benefit from such a system, we envision a unit such as ACITS providing this as a commodity service to all departments and would look forward to developing such a model in the future.

Facilities and Staffing, Other Infrastructure

The major change in the College's staffing structure was an increase in staff assigned to the Instructional Design Group (IDG). This unit (formerly called the Faculty Studio) changed direction this year to become a full service instructional technology resource for faculty. Previously, efforts were tailored toward providing self-help assistance to faculty. This year we added three staff members (for a total of three staff and one manager with three student assistants) in order to provide a completed product for the faculty member. The faculty member proposes projects for the IDG team to work on, on a semesterly basis. A group of three faculty and two technology staff managers review the proposals and allocate staff and resources. Proposals must be instructional and classroom based, that is, research and administrative proposals are not accepted.

This fall the staff completed eight projects and will work on fifteen this spring. A sample of recent projects includes:

- course web site development
- production of audio files for course materials
- development of digital resources for course content
- development of an interactive video course
- digital archive of human brain waveforms

One additional staff member was added to the Technology Help Desk staff. Although this brings the number of staff in this area to four, the College clearly could double the number and still not be able to handle all of the requests for help, installations, troubleshooting and assistance that faculty and staff demand.

A organization chart of staff appears in the appendix.

Proposed Projects for ITAC Funding

Switched Network Infrastructure Upgrades TOTAL: \$33,000

In 1997, the College performed a major network systems upgrade. With help from Network Services, we designed and implemented what was then a state-of-the-art fully-switched network. Over time, we have upgraded this system to support additional high-speed (100Mbps) connections for servers and computer labs and multiple 1000Mbps uplinks to the UTnet Gigabit Backbone. Today, increasing bandwidth demands and the inclusion of high-speed Network Interface Cards in new computer systems call for the replacement of our older 10Mbps equipment with 100Mbps switches. Twenty-two new switches will be required. Sufficient capacity exists in our building route-switch modules to support this, and replaced switches can be recycled to replace aging repeaters used throughout our buildings.

Equipment List:

Cisco Catalyst 2924-XL Enterprise Edition Switch, \$1500 ea x 22 (\$33,000)

Communication Joint Use Facility Contract and Upgrade TOTAL: \$38,528

The College plans to upgrade the Communication Lab this summer as it has every third year since the lab was built in order to maintain the latest in computing technology. We anticipate the upgrade cost to be approximately \$255,000. We received an ITAC allocation of \$244,100 this year and request the additional funding to complete the upgrade.

In addition, because of increased costs to operate the facility in past years, an additional \$27,000 is requested to add to our annual allocation to operate this lab. This year's management contract with ACITS was \$126,539. This pays for a supervisor and proctors. We received an ITAC allocation of \$105,238. We anticipate a 5% increase in next year's contract for a total of \$132,866.

Itemization:

Annual joint use facility allocation request: \$132,866 (\$27,628 more than this year's allocation)

Additional funds to upgrade lab: \$27,000

Communication Digital Library Maintenance TOTAL: \$42,025

In order to maintain capacity and support, we require funding for software maintenance and support, as well as additional storage options for the inevitability of reaching our current capacity. In order to minimize costs, a

hierarchical storage management system (HSM) has been planned since the project's inception. Such a system will allow our library to grow beyond the physical capacity of the online storage and can be increased incrementally with low-cost storage media, such as digital tape or DVD-RAM discs. This system could be easily wrapped into a University-supplied resource, if that becomes a reality.

Equipment list:

SGI Studio Central software maintenance/support, 3-years, \$8,575

SGI Data Migration Facility HSM, w/maintenance, \$15,000

StorageTek 9730 Library, 20 media slots. \$8,100.00

StorageTek 9730 Style DLT 7000, mounting hardware, \$8,300

DLT 7000 media (FUJI COMPAC TAPE DLT IV 100PK), \$1,800

DLT cleaning cartridge, \$50.00 x 5 or \$250.00

Wireless Network Infrastructure TOTAL: \$19,120

In addition to the Wireless Collaboration Lab mentioned above, two other groups have adopted a mobile, wireless access model for their instructional needs. These consist of laptops equipped with IEEE 802.11b "wireless Ethernet" interfaces and portable "base stations" to provide the wireless-to-LAN bridge. We propose to deploy wireless access points throughout the CMA building to provide coverage for these labs and any additional wireless-equipped system in the College. Ideally, this will provide for wireless roaming, obviating the need to move base stations around, and will allow students with their own equipment to access the campus network from any classroom or study area. Finally, equipment checked out from our Media Center will be equipped for this network.

Equipment list:

Lucent Wavepoint II, Wireless Access Point, \$800 ea x 6 (\$4800)

Lucent Orinoco 11Mbps Gold PC Card, \$180 ea x 24 (\$4320)

Professional site survey (\$10,000)

Total Projects Cost: **\$132,673**

(in addition to our recurring ITAC annual allocation)

College Instructional Technology Funding Overview and Life Cycle Methodology

Investments totaling \$2,342,753 were spent in 1999-2000 for technology in the College of Communication. Roughly 9% of these funds were provided by ITAC (\$215,624), 31% (\$717,780) came from the College's Instructional Technology Fee and 60% (\$1,409,348) came from the College's Communication Learning Equipment Fee (CLEF) funds. (See appendix.)

The life cycle of computers in the College of Communication varies but the Technology Team Help Desk has a life cycle policy to hardware and software. Each computer is utilized for the longest possible time period, but not necessarily in the same place for which it was originally purchased. Generally, the College procures new computing equipment with an expectation that it will be replaced for its intended function at the end of 3 years. If the equipment is still useful after 3 years, it will be given "a new life" in another role and used until it is no longer useful. New equipment replaces the original and enters a new 3-year cycle. So, one computer may have several three-year life cycles. For example, computers purchased for the joint use lab have a three-year life cycle within the lab, and after three years, all computers are replaced. Those computers will then begin a new life cycle as they replace older computers in whatever area of the College the need is most intense. Generally, the trickledown computers replace the older machines of faculty and staff, but they are occasionally needed in labs.

Across the College, instructional computers tend to be newer and closer to industry standard. Those machines are rotated out with greater frequency in an effort to present students with the highest level of function possible. Research machines are generally purchased using research funds and are therefore newer or older depending upon the funds available to the researcher. The age of administrative computers, i.e., faculty and staff desktop machines, varies by department.

Appendix 2: Network Status and Technology Classroom Inventory

The College of Communication currently provides over 900 fully-switched Ethernet ports operating at 10-100 Mbps, spanning 4 buildings. This is segmented in 21 distinct subnets, for efficient traffic management. Backbone connectivity is via dual full-duplex switched Gigabit uplinks.

Labs: (detailed information available at http://communication.utexas.edu/techteam/labs_html/labmain.html)

CMA 2.222 CSD Child Language Analysis Lab
CMA 2.224 CSD Interactive Speech and Hearing Lab
CMA 3.124 Communication Computer Center - Joint Use Facility
CMA 4.300 Computer Assisted Journalism Labs (4 rooms)
CMA 4.206E Digital Nonlinear Editing Lab
CMA 4.206D Digital Video Editing Lab
CMB 4.132 Journalism Broadcast Newscenter
CMA 5.130 RTF Movie Magic Lab
CMB 4.110 RTF Advanced Communication Technology Lab
CMA 5.114B Speech Multimedia Lab
CMA 6.102 Advertising TexasMedia Lab
CMA 6.202 Advertising Creative Computer Studio
CMA 6.200 Photojournalism Computer Lab
CMA 4.206B/CMB 1.112 Digital Radio Studios (4 rooms)

In addition, the College maintains
CMA 5.158 Video Conferencing Facility
http://communication.utexas.edu/room_resv/distance_ed_room.html

CMA 5.154 Instructional Design Lab
<http://idg.cocomm.utexas.edu/netscape/index.html>