

**The University of Texas at Austin  
School of Architecture**

**Vision Plan 2000**

**Computing Plan for Fiscal Year 2000-2001**

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School of Architecture Vision Plan 2000

## **Executive Summary**

### *School Overall Goals:*

Our continuing goal is to provide our students with practical and challenging training in the use of information technology that reflects the state-of-the-art architecture and planning practice and establishes a foundation for their practice in the future. This goal is being achieved. Our challenge has become the maintenance of high standard and quality in the effort.

### *Academic Instructional Goals:*

The current ethernet network is based on old technology that is increasingly insufficient. A network upgrade is proposed that will carry the School into the next decade.

The Digital Image Collection project is continuing. The goal of the project is to complete the cataloging and creation of a digital archive containing a sizable portion of the 200,000 images in the School's 35mm slide library in the Audio Visual Resource Collection by the year 2002.

### *ITAC funding requests:*

Network Upgrade		
	Cabling, Switches, Converters, Installation	\$200,000
Digital Archive Project		
	Cataloging and Scanning Labor	\$20,000
Cyclical Upgrade of Equipment		
	Computer-Aided Design Studios	\$30,000
	Computer-Aided Teaching Facility	50,000

## **Vision, Goals and Objectives**

Our continuing goal is to provide our students with practical and challenging training in the use of information technology that reflects the state-of-the-art architecture and planning practice and establishes a foundation for their practice in the future. This goal is being achieved. A recent study by the American Institute of Architects supports this statement. The opinion of our graduates as to their overall preparedness for the use of technology in the architecture workplace was the highest among graduates from the twelve peer institutions included in the survey.

The ongoing support of funds and equipment from the University's Information Technology Fee and Faculty Computer Initiative, along with the implementation of the School's Instructional Technologies Fee, has enabled the widespread use of computer resources in our curriculum. Our challenge has become the maintenance of high standard and quality in the effort.

The time for a much-needed upgrade to our network infrastructure has arrived. A recent request to Telephone Services for additional cabling revealed that they were no longer stocking AUI (thick) ethernet cable. The entire network in Goldsmith and Sutton Halls is based on AUI cabling installed in 1987. This old network has served remarkably well for more than a decade. With the upcoming inclusion of space in the West Mall Office Building into the SOA network domain, the need to upgrade is more important.

An additional computer-based design studio will be operational for the Spring 2000 semester. This facility will address the computational needs of Interior Design and Urban Design studios in alternate semesters. Maintaining the quality of the equipment in our studios and laboratories through cyclical upgrades will continue to be a major objective.

The World Wide Web continues to be an important avenue for connecting to prospective, current, and former students. Our Digital Imaging project is steadily growing. Web-based access to the catalog containing entries for 100,000 slides--about half of the collection--is now available. Thumbnail and web-quality resolution copies of 28,000 images are on-line. Internet broadcast of Lunch Forum discussions from the Center for American Architecture and Design is continuing with a full schedule this year.

## **Infrastructure**

### **Facilities**

#### *Computer-Aided Design Studios*

Design studios are the fundamental arenas for education in the School of Architecture. There are seventeen studio spaces in the School that house between twenty and thirty design studio sections each semester. Each of these studio spaces now contains a minimal set of equipment--between one and four workstations with various local output peripherals. These studio workstations are also networked to centralized output devices and file servers. Two of the studios emphasize computer-aided design and therefore have higher concentrations of workstations: the Technical Communication studio has fifteen workstations and the Advanced Visualization studio has eight. An additional "computerized" studio for sixteen students with eight workstations will be operational in the Spring of 2000. This studio will have the flexibility to handle classes for Urban Design and Interior Design students in alternate semesters.

The goals from previous plans of introducing computational resources as tools into the design studio arena are being met. Cyclical upgrades and maintenance of equipment will assure continued success.

#### *Network Facilities*

Success of the School's distributed computing environment depends on network support facilities, allowing increasingly faster access to centralized output devices among the three (and soon to be four) buildings which house School of Architecture facilities, file servers, license servers, media servers and information archives. The existing network infrastructure is based on 1980's technology--AUI and 10Base-T ethernet cabling, fan-out hubs, routers, and controllers. This network is at the end of its sufficiency. For the last several years, upgrading the network has been projected for the year 2000. That time has now arrived. The integration of part of the West Mall Office Building into the School will coincide with the reorganization of all parts of the network with new routers, switches and cabling based on fiber optics technology

## *Computer-Aided Teaching Facility*

The computer laboratories located in the basement of Sutton Hall function as the School of Architecture's computer-aided Teaching Facility. The Teaching Facility provides equipment for instruction in the areas of computer-aided design, geographical information systems, image processing, numerical simulation, desktop publishing, multimedia production, statistical analysis and program development. The facility is available for open student use when class activities are not scheduled and is currently open one hundred hours a week. The facility now contains more than sixty Macintosh, Windows, and Unix workstations.

The Teaching Facility also functions as a focal point for centralized input and output devices. There are workstations for capturing 35mm slide images and a variety of flatbed reflective and transparency scanners. The array of printers and plotters that are available in this central location include letter-size and tabloid-size grayscale laser printers, letter-size and tabloid-size color ink jet printers, a tabloid-size color laser printer, a multi-size dye-sublimation printer and large-format (24" and 36" wide) color ink jet plotters.

## *Digital Media Collection*

The Digital Image Collection project is continuing. More than 28,000 of the slides from our Audiovisual Resource Collection that have been digitized are now available on-line. Architectural history and survey courses are utilizing support materials on the World Wide Web. The user interface is in place to allow access to the collection catalog currently containing 100,000 records.

## *Faculty and Administrative Computing*

The School of Architecture has more than eighty full time faculty and staff members that regularly use computer resources. This equipment must be maintained on a continuing basis.

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Infrastructure

## **Staffing**

### *Director of Computer Laboratories*

The School of Architecture has one full-time Senior Systems Analyst who serves as the director of all computer-related operations within the School. Bob Swaffar manages a staff of Teaching Assistants who conduct the daily operation of the Teaching Facility and maintain the open-use computer laboratories.

### *Assistant LAN Administrator*

One full-time Assistant LAN Administrator works with the Director of Computer Laboratories in maintaining the computer resources in the School. This position has recently been upgraded to full-time and is currently vacant.

### *Digital Image Project Coordinator*

One half-time Digital Image Project Coordinator is in charge of supervising the Digital Image Project and developing access to the on-line images. This position is currently vacant.

### *Photographic Services Director*

One full-time Photography Supervisor, Charlotte Pickett, divides her time between traditional and digital photographic services, audiovisual technical support and course-work web page development.

### *SOA Web Team*

A group of faculty and staff meet on a regular basis to guide the direction and implementation of the School of Architecture pages on the World Wide Web. The various web team members are responsible for maintaining selected pages. The need for a dedicated webmaster is becoming apparent.

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## **Proposed Projects**

## **Academic Instructional Projects**

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School of Architecture Vision Plan 2000  
Academic Instructional Projects

**Project Title:** Network Upgrade

### **Abstract:**

The ethernet network established in the 1980's will be replaced with state-of-the-art equipment that will hopefully serve the networking needs of the School for another decade.

### **Space/Facilities Needs:**

Existing communications cabinets will house building switches. Existing communications conduits will route cabling.

### **Audience:**

Undergraduate and graduate students, faculty and staff, general public accessing network resources.

### **Equipment:**

Each of the four buildings comprising the School of Architecture will have a central router and switch with single-mode fiber cables extended to individual rooms. Virtual LAN programming will allow all of the buildings to function as one domain. Within individual rooms media converters and workgroup hubs will connect fiber cabling to existing equipment. Over time the media connections in individual rooms will be upgraded as the existing equipment is replaced.

**Budget:**

Routers, switches	ITAC funds	\$120,000
Cable materials	ITAC funds	30,000
Installation labor	ITAC funds	20,000
Media Converters	ITAC funds	20,000
Workgroup hubs	ITAC funds	10,000
		\$200,000

School of Architecture Vision Plan 2000  
Academic Instructional Projects

**Project Title:** Digital Archive Project

**Abstract:**

The Digital Image Collection project is continuing. The goal of the project is to complete the cataloging and creation of a digital archive containing a sizable portion of the 200,000 images in the School's 35mm slide library in the Audiovisual Resource Collection by the year 2002.

**Space/Facilities Needs:**

The cataloging and scanning operations for this continuing project are now housed in the School's Audiovisual Resource Center in Sutton Hall. No additional space requirements are envisioned. The digital archive is currently stored on a variety of existing SOA media and file servers.

**Audience:**

Undergraduate and graduate design students in architecture, on-line general public.

**Equipment:**

The equipment used in the cataloging and scanning operations are taken from the available pool of computing resources within the School.

**Budget:**

Cataloging and Scanning Labor	ITAC funds	\$20,000
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School of Architecture Vision Plan 2000  
Academic Instructional Projects

**Project Title:** Cyclical Upgrades and Software Maintenance

**Abstract:**

Replacement costs have been included to reflect the need to anticipate equipment upgrades on an ongoing basis. In the projections for instructional equipment, a three-year life of hardware and a two-year life of software are used.

The general approach to the upgrade of equipment uses a “trickle-down” system where “top line” facilities such as the Technical Communications studio receive some new replacement equipment every year. The equipment displaced by these new acquisitions is then reused by relocating it in “lower line” facilities.

**Audience:**

Graduate and undergraduate students in architecture and planning.

**Budget:**

Cyclical Upgrade of Equipment:

Computer-Aided Design Studios	ITAC funds	\$30,000
Computer-Aided Teaching Facility	ITAC funds	50,000

Software Annual Maintenance:

Computer-Aided Design Studios	SOA IT funds	10,000
Computer-Aided Teaching Facility	SOA IT funds	10,000
		\$100,000

School of Architecture Vision Plan 2000  
Administrative Projects

**Project Title:** Cyclical Upgrade of Equipment

**Abstract:**

Replacement costs have been included to reflect the need to anticipate equipment upgrades

on an ongoing basis. In the projections for administrative equipment for faculty and staff, a five-year life of hardware is used.

**Audience:**

Faculty and staff in the School of Architecture.

**Budget:**

Cyclical Upgrade of Equipment	SOA funds	\$50,000
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**Funding**

*Information Technology Fee*

The School of Architecture depends heavily on Information Technology fee funding to accomplish our acquisition and maintenance of computer resources. During the past several years, the ITAC has been generous with funds to implement our various computing vision plans. The direct allocation has been set aside for repair and maintenance of existing equipment. The cyclical and special allocations have been used to acquire new equipment and setup new facilities. The following table presents the ITAC funding for the School of Architecture in the past three years..

Fiscal Year	Direct Allocation	Cyclical and Special Allocations
1997-98	25,000	120,000
1998-99	25,000	88,250
1999-2000	25,000	90,000

*SOA Instructional Technology Fee*

The School of Architecture implemented an Instructional Technology Fee for students in the 1995-96 academic year. This fee is allocated to funding the full-time computer support assistant salary, one-quarter of the Director of Computer Laboratories salary, and the acquisition of classroom hardware and software. The following table presents the funds made available through this fee during the past three years.

Fiscal Year	SOA ITF Funds
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1997-98	\$52,240
1998-99	52,240
1999-2000	86,700

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*SOA Special Equipment Fund*

A portion of the School of Architecture's annual operating budget has been a Special Equipment Account. Over the years, these funds have been used to acquire a variety of equipment for the school, including computer resources for students, faculty and staff. The Special Equipment budget amounts to \$100,000 per year. The following table presents the percentage of the Special Equipment budget devoted to various categories during the past three years.

Category	Percentage of Special Equipment Budget		
	1997-98	1998-99	1999-2000
Faculty Computers	21.6%	47.1%	41.1%
Staff Computers	16.5	26.4	20.5
Student Computers	37.8	23.0	36.7
Shop Equipment	10.0	3.2	0.5
Office Equipment	10.4	0.3	0.2
Photographic Equipment	3.8		1.0

*Corporate Grants*

Due to various factors, the School of Architecture has traditionally not had success with securing corporate grants. (We are a small school without extensive research activities.) No funds are scheduled to be received from Corporate Grants this year.