

The University of Texas at Austin School of Architecture
Information Technology Vision Plan AY 2009-2010

Summary of Requests:

Cyclical Replacement of Computer Lab Equipment (recurring)	\$45,000
Four year cyclic replacement cost for workstations and peripherals.	
Software Acquisition & Licensing (recurring)	\$25,000
Cost of annual site/floating license purchases, renewals, and upgrades.	
Network Infrastructure (recurring)	\$10,000
Cyclic replacement and upgrade of network hardware.	
IO Staff (recurring)	\$30,000
A portion of the cost of Graduate Assistants to operate the Computer Lab and IO Central.	
Equipment Maintenance (recurring)	\$10,000
Cost of maintenance & service contracts on key equipment.	
Digital Fabrication – Phase IV (project)	\$40,000
Purchase 5-axis CNC router. Acquire ZCorp 3D printer for our digital fabrication lab.	
Computer Lab Furniture – Phase II (project)	\$4,000
Complete the acquisition of new ergonomic seating for the computer lab.	
Classroom Presentation Systems – Phase II (project)	\$140,000
Upgrade Jessen Auditorium to the standard UT console system. Complete installation of small LAITS consoles in all teaching spaces.	
Review Visualization and Presentation Systems (project)	\$15,000
Purchase large screen LCD HCTV's for displaying computer generated output in review spaces.	
Studio Visualization, Presentation, and Instruction Systems (project)	\$15,000
Purchase large screen LCD HCTV's and mobile carts for displaying computer generated visualizations, software, and content in studio instructional and working spaces.	
Image Content to Support Sustainability Curriculum	\$9,000
Purchase access to database of aerial photography images relevant to sustainability.	
Project to Enhance Student and Property Safety – Phase 1	\$20,000
Install proximity card access control systems for exterior doors in Sutton and Goldsmith Halls.	
Recurring Subtotal	\$120,000
Project Subtotal	\$243,000
Total ITAC Funding Request:	\$363,000

Needs and Proposed Use of Funds

Recurring

Cyclical Replacement of Computer Lab Equipment

- Windows Workstations – Our pool of instructional PC’s is roughly 80 computers; the current system replacement cost is \$2000 per workstation. Estimated replacement cost for this pool is \$40,000 per annum, on a four-year-cycle.
- Macintosh Workstations – Our pool of instructional Mac’s is roughly 16 computers; the current system replacement cost is \$2500 per workstation. Estimated replacement cost for this pool is \$10,000 per annum, on a four-year-cycle.
- Computer Lab Peripherals – We have three tabloid flatbed scanners, a document scanner, and a 42” large format scanner. Estimated replacement cost for this pool is \$5,000 per annum.
- Checkout Equipment – Our current pool includes 5 digital projectors, 3 laptops, 6 digital cameras, 2 digital video recorders, and 10 handheld GPS computers, to list a few. Estimated replacement cost for this pool is \$8,000 per annum.

Total Estimated Cost	\$63,000
Amount Requested from ITAC	\$45,000

Software Acquisition and Licensing

- Autodesk Design Institute, annual site license – SOA portion, \$12,500
- ESRI ArcGIS annual site license – SOA portion, \$6,000
- Bentley Microstation – annual departmental license, \$2,000
- Adobe – annual maintenance, new products, & renewals, \$10,000
- Misc. Software – energy analysis, Vectorworks, TransCAD, CES, etc. - \$8,000

Total Estimated Cost	\$38,500
Amount Requested from ITAC	\$25,000

Network Infrastructure

- New Cisco Switches & Wireless Access Points, \$15,000
- Network Installation Services, \$4,000

Total Estimated Cost	\$19,000
Amount Requested from ITAC	\$10,000

IO Staff

- 6 Teaching Assistants per long semester funded by the teaching budgets for \$92,000 annually.
- 6 Graduate Assistants per long semester funded by IT accounts for \$92,000* annually.
- 2 Teaching or Graduate Assistants per summer session for \$9,000.

Total Estimated Cost	\$154,000
Amount Requested from ITAC	\$30,000

Equipment Maintenance

- Service contract on Cisco Router, \$4,000
- Service contract on 11 HP Plotters, \$5,000
- Service contract on InVision si2 3D Printer, \$4,000
- Service contract on new ZCorp 310 3D Printer, \$2500

Total Estimated Cost	\$15,500
Amount Requested from ITAC	\$10,000

Projects

Digital Fabrication – Phase IV

The positive impact of obtaining and utilizing these tools upon recruiting, teaching, learning, innovation, and leadership would be difficult to overstate. We need these technologies to move fully into the information age in our teaching and research.

- Z-Corporation ZPrinter 310+ 3D Printer, \$25,000
- 5-axis ShopBot CNC Router, \$30,000
- Estimated installation and facilities modification costs, \$5,000

Total Estimated Cost	\$60,000
Amount Requested from ITAC	\$40,000

Computer Lab Furniture

We have purchased new chairs for half of the computer lab and would like to complete the order.

- 80 ergonomic workstation chairs, \$110 each

Total Estimated Cost	\$8,800
Amount Requested from ITAC	\$4,000

Classroom Presentation Systems

Keeping our teaching facilities technologically up to date is critical to the success of our educational mission. Jessen is our largest auditorium, where our outreach courses are taught. Its renovation would impact the greatest number of students. New LAITS consoles are also needed in our smaller instructional spaces to provide faculty with superior reliability and usability.

- Upgrade Jessen Auditorium to the full UT classroom console setup, \$70,000
- Install new consoles in 5 additional teaching and review spaces, \$100,000.

Total Estimated Cost	\$170,000
Amount Requested from ITAC	\$140,000

Review Visualization and Presentation Systems

Install 50"+ LCD HDTV's in review spaces in Sutton and Goldsmith Halls. The broad availability of new LCD HDTV's (which can support high resolution computer displays, operate with normal room lighting, and have lower initial and operating costs than digital projectors) combined with our need for digital visualization in our review spaces provides an excellent opportunity for installing permanent visualization displays in these high-use facilities.

- 8 52" Samsung LN52A550 HDTV's with 4 year warranty and wall mounts at \$2,000 each.

Total Estimated Cost	\$15,000
Amount Requested from ITAC	\$15,000

Studio Visualization, Presentation, and Instruction Systems

Install 50"+ LCD HDTV's with or without CPU's on mobile carts that can be reserved and moved among the studio spaces in Sutton and Goldsmith Halls. The broad availability of new LCD HDTV's combined with our growing needs for digital visualization in our studio teaching spaces provides an excellent opportunity for creating mobile visualization displays in these core instructional facilities.

- 6 52" Samsung LN52A550 HDTV's with mobile carts and Dell workstation at \$5,000 each.

Total Estimated Cost	\$30,000
Amount Requested from ITAC	\$15,000

Image content to support sustainability curriculum

The proposed project’s goal is to provide access—in perpetuity—to a critical mass of high quality digital image content illustrating environmental sustainability issues, concepts and practice in support of the School of Architecture’s (SOA) curriculum. Image content will fall into the following descriptive categories: atmosphere, way of life, automobile dependency, electricity generation, threatened deserts, water consumption, sea level rise, waste and recycling and low density and urban renewal. Images will be licensed from Landslides Aerial Photography based in Cambridge, Massachusetts and will be available to the entire University of Texas faculty and student body for teaching and research through two online portals: the UT::SOA Visual Resources Collection’s Online Image Collection and ARTstor.

- 1200 images (25% discount): \$9,000

Total Estimated Cost	\$9,000
Amount Requested from ITAC	\$9,000

Project to Enhance Student and Property Safety – Phase 1

The School’s proximity to Guadalupe street causes us to face greater issues with theft of student and University property than is normal across campus, as you would expect, the vast majority of stolen property is technology: laptops, desktops, digital cameras, etc. These security issues are one of the reasons that we do not allow student access to the computer lab unless there is staff on duty. The School’s vision for managing this risk is to implement proximity card access for the School in a phased process: phase 1 would include the exterior doors of Sutton and Goldsmith Halls, later phases would include the computer lab and studio spaces as deemed necessary. In addition to providing improved security and accountability, this change would also streamline several administrative processes currently used for physical key distribution.

- 2 proximity card readers and 7 magnetic locks for Goldsmith Hall - \$12,250 + installation
- 2 proximity card readers and 4 magnetic locks for Sutton Hall - \$10,300 + installation

Total Estimated Cost	\$40,000
Amount Requested from ITAC	\$20,000

Overview of Current IT Programs & Infrastructure

Mission Statement

The Office of Information Technology is tasked with the provision and management of all information technology resources for the students, faculty, and staff of the School of Architecture. It is our mission to provide secure, reliable, and relevant technologies to support the educational, academic, and service missions of the School.

Computer Lab

The School of Architecture Computer Lab, located in Sutton Hall 1.102, provides dedicated computational, input, and output resources to all students enrolled in classes within the School. There are over eighty workstations, flatbed scanners, a 42” wide large format scanner, and 3 teaching zones with digital projectors. The computer lab is open from 8am to 11pm Monday through Thursday, from 8am to 6pm on Fridays, from 10am to 8pm on Saturdays, and from 10am to 11pm on Sundays during long semesters.

IO Central

IO Central contains the centralized printing and plotting equipment for the School and equipment checkout (including digital cameras, LCD projectors, and laptops), and provides a central location for students needing IT assistance. The facility adjoins the Computer Lab and has the same hours of operation. It houses a central print server with queues for the various printers and plotters, including eleven plotters, two color laser printers, and two black and white laser printers.

IO Staff

The Computer Lab and IO Central are staffed by twelve half-time graduate students per long semester. Six of these positions are funded by Teaching Assistantships, while the other six are paid as salaried Graduate Assistants from ITAC and other funds.

Digital Fabrication

The School currently hosts four major pieces of technology for digital fabrication: a 3D printer that produces plastic models from digital input, three laser cutters that cut and etch sheet material through a printer-style interface, a CNC router that can cut shapes and route surfaces out of sheet material up to 3" thick using a digital control system, and a 3D non-contact laser scanner that can produce three-dimensional digital models by scanning physical objects.

Design Student Computer Policy

The School has implemented a student computer policy for all undergraduate and graduate students enrolled in our design degrees: architecture, interior design, and landscape architecture. The students are required to provide a laptop and specific design software. Support of this initiative is provided by requiring extended warranties for hardware issues, leveraging the ITS Helpdesk for general hardware and software issues, and providing application assistance through IO Central.

Technology Classrooms

The School has two auditoria, seven classrooms/seminar rooms, and two studios with installed projection systems. There are also three schedulable teaching spaces in the Computer Lab for direct technology instruction.

Review Spaces

The School has several dedicated review spaces all of which are slated to have digital visualization equipment, either digital projectors or HDTV's installed in the near future.

Network Infrastructure

Goldsmith Hall has up-to-date networking infrastructure, with a Gigabit backbone, Fast Ethernet to the desktop, and a Cat-5e SCS. The West Mall Building and Battle Hall are running Fast Ethernet over a CAT5 cable plant. Sutton Hall has had a partial network upgrade, including a Gigabit backbone, Gigabit service for servers, and Fast Ethernet to select portions of the building; however, it still requires completion of the SCS and additional network equipment to bring it up to standards.

Server Infrastructure

The School currently has three Windows 2003 Servers: two newer Dell PowerEdge Servers – one runs our intensive printer and plotter services and the other runs our local network file sharing and software licensing; the third server is running legacy web hosting and ftp services.

IT Staff**Director of Information Technology**

Responsible for IT vision, management of IT staff, administration of all IT related budgets, network administration, server administration, software licensing and distribution, Computer Lab workstation administration, and computer support.

Network Analyst

Faculty and staff computer administration, LAN administration, Computer Lab supply management, security implementation, inventory, and computer support.

Webmaster

Design, administration, and content management of the School of Architecture web site.

IT Office Manager

Inventory and supply change management, Bevo Bucks and print charging administration, IT and IO Staff outreach and training scheduling, web based content updating, and process documentation and improvement.

Current and Proposed Funding Sources

(portion of total IT budget)

ITAC (17%)

Our AY 2007-08 ITAC budget is \$126,904. Increased special project funding through ITAC has historically been an important method of funding for major instructional technology initiatives and projects. This account is the primary source of funding for student computing.

SOA Special Equipment Account (13%)

A portion of the School of Architecture’s annual operating budget is the Special Equipment Account. The annual Special Equipment budget is approximately \$97,500. This account is the primary source of money for faculty and staff computing; it incorporates the provost’s former CLC and FCI funds and is also used to support our visual resources, materials lab, and design lab facilities, and to fund technology programs and projects.

SOA Instructional Technology Fee (flat rate fee allocation) (23%)

The AY 2007-08 budget is \$166,796. This account currently pays 48% of our IT staff salaries. The remainder is used to fund technology programs and projects. This allocation was increased by \$50,000 in AY 2008-09 and is planned to increase an additional \$30,000 in AY 2009-10. These increases are being funded through tuition increases and represent an increasing investment in information technology by the School.

SOA Classified Salaries Budget (17%)

Currently, \$126,400 (52%) of IT staff salaries comes from the School’s classified salaries budget; this represents a very significant investment by the School in information technology.

SOA Teaching Salaries Budget (8%)

Currently, \$59,200 of IO staff compensation comes from the School’s teaching budget.

Provost’s Tuition Assistance Budget (6%)

Currently, \$41,200 of IO staff compensation comes from the Provost’s tuition assistance budget.

SOA IT Revolving Account (15%)

All IO Central pay services are charged to students through the BevoBucks system. In addition, faculty and staff may use the input and output devices in this facility if they provide a UT account number. These funds go into the SOA IT Revolving Account and are used to pay for consumables, maintenance, and other cost of operating the Computer Lab, IO Central, and our digital fabrication facilities. Activity on this account is a good metric of the volume of services provided to our students; even with our minimal cost-recovery pricing AY 2007-08 revenues on this account were \$108,000.

Best Practices

The Boutique Model

We are a small School with specialized needs in many areas. Our IT strategy for adapting to this condition is to find ways to leverage the generalizable IT resources and services provided by ITS and others for our ‘vanilla’ computational support and service needs, while focusing the energy of our IT organization on the specialized and unique ‘boutique’ needs of our user community.

Working Groups Model for Community Participation

Our prior practice of having a standing IT committee was not working well and the committee was disbanded last year. We have replaced this with a multiplicity of working groups who are convened on the basis of interest in particular topics or areas. We are finding these working groups more focused and engaged and believe that they will have a positive influence on the effectiveness of our IT strategic and vision planning.

Graduate Student Support and Learning

By hiring qualified graduate students from our own programs we create a win-win situation. First, we are able to increase our overall funding offered to graduate students, including the use of these position to recruit highly sought applicants. Second, we are able to directly educate these graduate students with real-world knowledge and skills related both to information technology and to their fields of study. Finally, we are able to provide our student users with a high level of direct, knowledgeable hands-on service, training, and support for their academic computing needs.

Use of Previous Academic Year Allocations

Recurring Expenses

Cyclical Replacement of Computer Lab Equipment	\$40,000
Software Acquisition & Licensing	\$40,000
Network Infrastructure	\$10,000
IO Staff	\$190,000
IO Checkout Equipment	\$6,000
Equipment Maintenance	\$9,000

Project Expenses

Digital Fabrication – Phase III – 2 new laser cutters	\$42,000
Sutton Hall Classroom Technology Upgrade (2.102 & 2.114)	\$40,000
Review Presentation Systems	\$20,000
ITS Helpdesk Integration Project	\$10,000
Web application development (student portfolio and materials lab catalogue)	\$10,000

Funds listed above as expended for AY 2008-09 were expended (or are planned to be expended) in total across all IT budgets and do not represent only ITAC expenditures.

Innovation Highlights

Review Visualization and Presentation Systems

The broad availability and low price of consumer grade large LCD HDTV's has opened up some amazing opportunities. With these devices we can roll out digital visualization technologies in facilities and scenarios where they have been long needed, but where previous technologies were too problematic or expensive.

Studio Visualization, Presentation, and Instruction Systems

As the demand for in-studio digital visualization increases, as it has for the past several years, the need for us to provide high resolution display devices that work in the context of the ever changing and necessarily flexible studio environment has likewise increased. The wider availability of large LCD HDTV's provides the key to creating mobile visualization carts that can be located and relocated within our many studios to give faculty and students access to the visualization tools that they need.

Project to Enhance Student and Property Safety – Phase 1

Although this project is not directly instructional, we believe that its school-wide impact in terms of security, efficiency, and resource stewardship will be revolutionary.

Please direct requests for additional information or clarifications to Eric Hepburn, our Director of Information Technology. Thank you for your attention to these matters and for your devotion to improving the state of Information Technology at The University of Texas at Austin.

Sincerely,

SOA IT Vision Plan Working Group

The SOA IT Vision Plan Working Group is:

Kent Butler, Associate Dean for Operations
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