

# **College of Pharmacy Information Technology Vision Plan 2003-2004**

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## **Submitted by:**

**David Fudell**

**Manager, College of Pharmacy Learning Resource Center**

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## **Introduction**

The College of Pharmacy, like most colleges and schools, devotes the bulk of its ITAC funding to maintaining an IT infrastructure that not only satisfies the needs of its faculty, staff, and students, but also encourages continued growth and reliance upon this infrastructure. However, in addition to typical IT demands, the College must also support an infrastructure that enables the continued utilization and enhancement of two-way and multipoint videoconferencing in our Cooperative Pharmacy Programs with sister System Institutions (UT-El Paso, UT-Pan Am, and the University of Texas Health Science Center in San Antonio).

Thanks to TIF and College funds, the College has completed installation of a third videoconferencing facility, upgraded cameras in its large room, and undertaken a major re-write of the complex amx control system that is the heart of the large room. ITAC funds are routinely used to support the distance education program as well as other IT infrastructure.

The ITAC fee is used each year to accomplish life-cycle replacement of laboratory computers. The College has chosen to accelerate its replacement of computers in its principal lab, PHR 3.116, in order to maintain hardware consistency. A detailed discussion of the issues surrounding its ancillary lab, PHR 2.116, is presented below along with a request for funds to revamp this atypical laboratory facility.

The Ethernet network in the College is in good shape thanks to ITAC funds. All human clients' desktops will be connected to 100baseT circuits once ITS network staff install a new switch (originally scheduled for December 2002). Only laserprinters, typically, will remain on 10baseT circuits and because of the speed of these devices this does not present a limitation to the quality of service.

Wireless computing came to the College during the 2002-2003 academic year, and it was warmly embraced. Not only does the wireless network facilitate greater access to University resources with wireless computing, it also enables a much safer environment, by way of less exposed wiring, in the many wet laboratories that researchers occupy in both the old and new Pharmacy buildings. These labs now have much greater flexibility in their configuration, and fewer Ethernet cables draped from computers to Ethernet outlets. While power is plentiful in most of these labs, Ethernet circuits were not.

During the summer of 2003, the Learning Resource Center Library, a non-print resource for students, will move from its current quarters in the old Pharmacy building to a remodeled facility in the new Pharmacy building. This will require a large build-out of Ethernet circuits for the computers that are used to view streaming video and to accommodate student laptops at several wired stations. If a new switch is required, we hope to add 1000baseT circuits for a few critical functions such as video streaming.

## **Current Status**

The College of Pharmacy operates a full-time computer lab, a computer classroom (available until 3:00 as a General Purpose Classroom), and an audiovisual library that houses computers used for streaming video and general use as well as VCRs and DVD players:

| <u>Room</u> | <u>OS</u> | <u>No. of Stations</u> |
|-------------|-----------|------------------------|
| PHR 3.116   | Win XP    | 19                     |
| PHR 2.116   | Win XP    | 23                     |
| PHR 3.220   | Mac OS X  | 8                      |

A third of the PCs are replaced each year. At the time of this writing the standard complement of software included the Microsoft Office suite, web browsers (including specialized plug-ins for media types requested by faculty), A.D.A.M. software for studying anatomy, and a few other helpful utilities such as QuickTime. LabMan is used to manage the labs. Students also access Adobe Photoshop and Acrobat via a keyserver. Keyserving has brought a very cost-effective way to supply occasionally needed software to the College.

## **Technology Auditoriums and Classrooms**

The College of Pharmacy had one of the first Technology Classrooms on the UT Austin Campus. At the time it was built, in 1997, it represented the state of the art in distance education and computer-based teaching facilities on campus. While hardware has been periodically updated, the hardware and software that controls all major functions has been essentially unchanged.

During Spring Break 2003, this room will receive its first major revision and update since its creation. Thanks to a TIF grant and ITAC funds, the cameras will be upgraded. Cameras with both analog and digital outputs were selected (at some expense) that will allow the complex video routing and switching to be upgrade to Serial Digital Interface (SDI), the next-generation video standard, in the future. Perhaps most importantly, the user- and operator-interfaces will be updated and enhanced. Teachers will have more control over the key aspects of their presentation, and video operators will for the first time have accurate, ergonomically effective, control of cameras.

A second room, PHR 4.114, is a fully functional videoconferencing and computer-instruction space. The relocation of the existing cameras from 3.106 to 4.114 is being considered as a future project.

A third room, PHR 2.208, has been added to the inventory of videoconferencing spaces. This completes the College's complement of video facilities: One auditorium-style large room, one auditorium-style medium room, and a compact boardroom-style facility.

Other rooms have received and will continue to receive audiovisual upgrades in an effort to increase utilization while decreasing demands on staff time. The College placed campus-standard Technology Classroom Consoles in three PHR-located General Purpose Classrooms and has installed projectors and ancillary equipment, described below as PHR standard, in nearly all other instructional spaces.

Classroom Inventory :

| Room Number | Capacity | Installed Equipment effective Fall '02  | Gen'l Purpose |
|-------------|----------|-----------------------------------------|---------------|
| 2.108       | 127      | NS standard                             | Yes           |
| 2.110       | 133      | NS standard                             | Yes           |
| 2.114       | 60       | NS standard                             | Yes           |
| 2.116       | 45       | Data Projector                          | ~75%          |
| 2.208       | 20       | PHR standard*                           | No            |
| 2.214       | 23       | None (expected to be repurposed)        | No            |
| 3.106       | 136      | Full tech. classroom, not NS standard*  | No            |
| 3.108       | 30       | PHR standard (teaching lab)             | No            |
| 3.110       | 30       | PHR standard (multipurpose lab/classrm) | No            |
| 3.112       | 16       | None (expected to be repurposed)        | No            |
| 3.114A      | 10       | PHR standard                            | No            |
| 3.114BA     | 10       | PHR standard                            | No            |
| 3.114D      | 10       | PHR standard                            | No            |
| 4.114       | 52       | PHR standard*                           | No            |

\*equipped for two-way videoconference

## Networking and Associated Electronics

As discussed above, wireless Ethernet of the 802.11b standard has been provided throughout the old and new Pharmacy buildings. All users' Ethernet will be at 100baseT standard with some devices such as printers on 10baseT as soon as ITS networking staff install new equipment.

[new data coming from Joyce]

Total number of Ethernet ports maintained by the College: ----- 725

Number of static and dynamic IP addresses ----- 530

Number of 100baseT switched ports ----- 245

Number of 10baseT switched ports ----- 16

Number of 10baseT hubbed ports ----- 464

-Number of 10baseT hubbed ports used for printers ----- 33

-Number of 10baseT hubbed ports used for Technology Classroom student stations, lightly used----- 138

Number of 10baseT ports targeted for upgrade to 100baseT\* ----- 293

\*this number is derived from the total number of 10baseT ports less printer-occupied ports and less 140 dynamically addressed ports used in Technology Classroom

### **Departmental Servers**

The College operates three servers for administrative uses:

1. Now-Up-To-Date: Mac G4, OS X. Users and server migrated from older versions.
2. FileMaker Pro Instant Publishing. Mac G3, OS X
3. FileMaker Pro Dedicated (i.e., non-instant) Publishing, Mac G3, OS X

In addition, two video servers and a large RAID array are used to publish streaming video to our audiovisual library and feed the video caches installed in our San Antonio and El Paso sites:

1. QuickTime/MPEG1. Mac G4 Streaming Server, OS X
2. QuickTime/MPEG1. Mac G4 Streaming Server, OS X. Used to mirror #1.

### **Portable Projectors and Notebook Computers**

Although the College's long-term plan calls for the installation of permanently mounted projectors and computers, along with ancillary equipment such as VCRs, we still maintain a complement of portable equipment for checkout by faculty and use in classroom spaces not yet equipped with installed equipment.

We continue to provide laptops to students, faculty, and guests giving presentations. In an effort to facilitate the presentation process a pool of 'pen drives' has been purchased and made available to faculty and graduate students. Furthermore, we have (with Liberal Arts Media's blessing) modified the Technology Classroom consoles to accommodate the USB-based pen drives and Liberal Arts may use our USB installation as a model for modification of their consoles.

### **Specific ITAC Funding Requests**

1. Establish video cache in Edinburg----- \$20,000  
TIF funds provided a Network Appliance cache for our El Paso and San Antonio sites. This purchase will complete the installation to each of our remote sites.

2. Revamp PHR 2.116 to higher standard, enhanced usability----- \$40,000  
PHR 2.116 is an atypical space compared to other computer labs on campus. It is a General Purpose Classroom until 3:00 pm, after which time it functions as a secondary computer lab for Pharmacy students. While the College has paid for installing and maintaining the 23 PCs in that classroom since it was created in the 1980s, it only has scheduling authority for the room for roughly a quarter of the day. Furthermore, we

install upon request software for teachers from other colleges and non-academic units who often employ the room for software training.

Because the College gets such a low return for its investment in this room, it has been reluctant to channel funds to the room's improvement. For the benefit of all of the room's users, we would like to:

1. Install much smaller desktop PCs from Shuttle that will allow clear sight lines.
2. Install LCD monitors that can be folded down when not in use, also to allow clear sight lines.
3. Install a new projector in the projection booth in the rear of the room and a permanent sound system for audio from multimedia sources.

For the College's uses, the room's current hardware and configuration are adequate. Without additional ITAC funds the room will be maintained but cannot be improved.

3. Continue life-cycle replacement of lab PCs ----- \$20,000  
As long as upgrades accomplish appreciable gains in computing power we will continue three-year life-cycle upgrades.

4. Expand use of key-served software----- \$10,000  
Our early experience with key-serving software has been very positive. We would like to expand it and if funded will survey faculty and students for input on software choice.

5. Convert PHR 3.106 video to SDI (digital) video standard----- \$60,000  
TIF and College funds have paid for the cameras, but the entire signal chain must be converted as well, including routing amplifiers, switcher, scan converter, distribution amplifiers, etc.

Total requested----- \$150,000

**Appendix: Staffing**

A breakdown of College of Pharmacy staff who directly support IT at the College:

Senior Systems Analysts, 2 FTE-----College student fees  
Senior Systems Analyst, 1/2 FTE-----Administrative funds  
Systems Analyst, 1 FTE -----Administrative funds

Note that other staff within the College provide support for IT functions but not as a first priority. These include an FTE for audiovisual services, an FTE for video services, the LRC Manager, and an FTE who provides administrative support to all.