

2007 ISAT ETF Request—IKM Team

The computers in the labs used by the IKM faculty are **very old**. Upgrading them is our major priority for this year's ETF Request.

- **Priority #1: Upgrade and Increase the number of machines in ISAT 337**
Purchase 19 high-power multimedia workstations at \$1500-1800: \$28,500-34,200
- **Priority #2: Upgrade the machines in ISAT 343**
Purchase 31 low-end workstations at \$750 each: \$23,250
- **Priority #3: Upgrade the machines in ISAT 336**
Purchase 31 low-end workstations at \$750 each: \$23,250

Current Status of the Labs

ISAT 337

ISAT 337 currently has 13 machines including the teacher's workstation. Four of the machines were purchased in 2004, and 9 of the machines were purchased in 2002.

Current hard drives are only 20GB on most machines, and are not big enough to hold all of the software that we would like to have installed on them. By summer 2008, when the time computers purchased with this ETF allocation are installed, the current machines will be **6 years old!**

ISAT 336 and 343

Both of these labs have 31 machines including the instructor's station. All the machines have 20G hard drives and insufficient power to run Vista in addition to needed apps.

- 336 machines were purchased in **2003** and will be **5 years old** by summer 2008
- 343 machines were purchased in **2001** and will be **7 years old** by summer 2008

Anticipated Uses and Justifications for Upgrades

Increase the Number of Machines

ISAT 337 is a unique teaching space. It is a lab with the machines around the periphery, which facilitates a cleaner separation between group and individual work in the room. The horseshoe-shaped table layout is conducive to highly participatory group discussions, and in addition, the free space in the center of the room makes it easier for instructors to float around to machines when students are doing individual or pair work. Currently there are only 12 student machines in the room which limits the size of the classes that can be conducted there. **We would therefore like to increase the number of machines in the lab from 13 to 19.** We believe this is would be an optimal number given the size of the room, space constraints, and target class sizes.

Expand the Multimedia Applications Curriculum

With the increased prevalence of broadband Internet connectivity it is now practical, and indeed highly desirable, for our students to become proficient in the creation and delivery of web-based video content. Screencasting and video editing are very memory and processor-intensive applications and require high computing power. We also wish to expand in the area of location based services delivered via mobile and hand-held devices including cell phones, PDAs, and RFID enabled devices. **Hence, for 337 we want to have high power multimedia workstations.**

Keep Pace with Software and OS Updates

Windows Vista requires about 6GB of disk space. Visual Studio 2005 requires more than 2GB. The newest version of Adobe Creative Suite requires over 4GB. This is more than treble the amount of disk space that was required for these applications when the current machines in 337 were purchased. Not to mention that any attempt to work with video or audio will require great deals of hard drive space for the files that are created. **The current hardware is insufficient to keep pace with the latest software.** Therefore we need machines with adequate storage capacity to handle upgrades to the software whenever necessary.

Anticipate Needs of the Information Analyst Degree Program

Among the technological skills that we anticipate will be a part of the coming IA program are:

- Facility with **Intelligent Systems** programming
- Ability to plan and execute **Data Mining** operations on large databases
- Competence at doing statistical analyses using **Data Visualization** techniques

The software and information processing needs of these applications needs to be considered, and increases the urgency for upgrading these systems now. We anticipate that one IKM's core members, **Joe Marchal, will be a key player** in the development of the IA curriculum.

Summary

To maintain our reputation as a program on the cutting edge of technology, it is necessary to have the hardware necessary to stay there. Recently we've had a renewed focus on integrating the latest in RFID, web development, and intelligent systems programming into our curriculum, but it is getting increasingly frustrating to do so on our current hardware. Our students remind us of this on a regular basis and would be very grateful if upgrading our labs was made a priority this year.