

CECS Proposal No. 4

Beginning 2005-2006

Title: CECS Data Storage and Equipment Upgrade

Unit Submitting Proposal: College of Engineering & Computer Science

Summary of the Proposed Project

This proposed project will update and complement the current server hardware used for supporting student labs, faculty, and staff computing needs in CECS. Currently in CECS, CECS Technical Support Services (CTSS) manages several servers (11, not counting test bed servers) used for various services including web services, ftp services, future Share Point services for Senior and Junior design, file sharing, application serving etc. This need has direct impact on all classes/labs taught in Computer Science and Engineering Labs. To complete the current server infrastructure the proposed upgrades and equipment are needed for data integrity, uptime reliability, file storage demands and security. This project will help consolidate the amount of servers thereby reducing the cost and need of future hardware/software upgrades and maintenance.

This proposal would purchase a Network Attached Storage (NAS) system utilizing RAID technology from Dell. This cost effective, scalable, and easily deployed system would meet the needs of engineering and computer science programs because NAS is a cross platform solution.

This proposal would also purchase a centralized tape backup solution from Dell, which is designed to work with the NAS system. The backup of data is crucial in today's storage environment. Currently CECS faculty uses several forms of unreliable media to back up their research and instructional files. The secure storage and backup from within CECS will insure their research and instructional data is always available and protected.

This proposal will also fund RAM upgrades for three PowerEdge 4600 servers that are used for ghosting labs, faculty, and staff machines. One of these servers is a domain controller and maintains a copy of the Active Directory global catalog. This upgrade will enhance the performance of these servers and make them more robust to meet the future needs of CECS students and faculty.

Project Goals and Objectives

The goal of the proposed effort is to consolidate the amount of hardware required to meet the current needs of the student labs, faculty research labs, and faculty/staff computing file storage needs thereby cutting cost.

The objective is to provide shared file storage and backup recovery for faculty and students involved in course lab projects such as Senior Design, Junior Design, Material Science, Mechanical Materials, Biomechanics, DARPA, Senior Mechanical Experimental Design, CFDRC research, and others. To offer CECS faculty backup and secure storage of research files within the CECS environment. This upgrade will enhance the multimedia server currently in use for Senior and Jr. Design. These courses generally

have large data files that are too large to store on OneNet. This proposal also affects the CS110 Literacy Lab, which utilizes services from one of the proposed server upgrades.

The equipment purchased from the funds this proposal provides is beneficial to all students enrolled in engineering, computer science, and the general education students taking CS110. This is due to the services provided by CECS Technical Support Services through the equipment mentioned and the proposed equipment.

Using Microsoft 2003 server services, this solution will help users manage their data by providing shared file storage in the labs for projects too large to store on OneNet. This will help students keep a copy of their work reachable within any lab and eliminate the need for them to keep up with other forms of media.

Method for Achieving Goals

Implementation of the upgrades and proposed equipment would begin immediately upon arrival of the equipment.

Evaluation Method

1. Improved performance after setup and implementation of the proposed equipment.
2. Ask for student and faculty input on ease of use and the availability of their data. This will help determine success of the implementation and help define needs for future upgrades.

Previous grant(s): N/A

Proposed location:

The new equipment location will be EMCS 317.

Requested Budget:

The RAM upgrade and equipment purchase is a one-time expenditure without any recurring costs due to service contracts in place on all the equipment

Equipment (hardware and software)	\$ 28,241
Total project one-time costs	\$ 28,241
Estimated recurring costs per year	\$ 0

Identify the area(s) responsible for operating and maintaining the equipment.

CECS Technical Support

Approval by Dean or Vice Chancellor: _____

Individual responsible to complete proposal if funded: Michael R. Roeser IT Analyst

Priority established by Dean or Vice Chancellor: _____