

Chapter 7D: Information Technology Infrastructure Improvements

Starting Points

Highlighted in the University Strategic Plan as Goal 35, the College of Engineering must “create an IT environment required for student-focused learning [and] faculty research”. The IT infrastructure in the COE depends heavily on student technology funds, resulting in an imbalance between services provided to students and services provided to faculty and the research enterprise.

Objective: Build an IT infrastructure that supports academic and research programs in the College of Engineering.

Goal: Enhance the existing IT environment and create a strong foundation for all aspects of computing.

Strategies:

- ✘ Physical Network: Develop and budget for a network infrastructure replacement plan.

The physical network in the Engineering building is now 6 years old and, in the Glover Building, it is 4 years old. The equipment was state-of-the-art at installation and may still serve effectively for two more years. However without improvements, it will leave the college behind the curve in terms of gigabit networking. The college must begin to plan for replacement of the network switches as they are the limiting factor for future growth in both teaching and research. In addition the wireless network should be extended to all college buildings.

- ✘ Services in Support of Faculty & Staff: Develop and budget for networked services for faculty & staff.

Conditions at CSU have created an obvious disparity between student computing and computing for faculty and staff. The student Charges for Technology process infuses the COE with more than a half million dollars of funding for student technology, more than 65% of which is dedicated to student computer labs and the computing infrastructure that supports student computing. In contrast, the college has a budget of approximately \$20,000 to support the computing infrastructure for faculty and staff. While grants, gifts, and one-

Table 7D.1 Starting Points
<i>Engineering Networked Devices</i>
✘ 1,050 on main campus
✘ 900 at the Foothills campus
<i>College Employees</i>
✘ 93 Faculty
✘ 170 Research Staff
✘ 160 Administrative Staff
<i>Computer Labs (445 seats)</i>
✘ Allison Hall (5)
✘ Anderson Lab (81)
✘ CBE Computer Lab (8)
✘ Electronic Classroom (30)
✘ ERC Electronic Classroom (20)
✘ Engines and Energy Conversion Laboratory (8)
✘ GIS Classroom (24)
✘ Internet Café (26)
✘ Lockheed Martin Design Studio (42)
✘ Mechanical Engineering Research Center (MERC) Lab (5)
✘ Virtual Classroom (200)
✘ Wind Energy & Fluids Lab (10)

time funds have supported faculty computing, at a minimum, the college must face the lack of funding for critical services such as electronic mail, network file space, and compute power.

- ✘ Computer Replacement: Develop and budget for a computer replacement cycle for faculty and staff.

The College would truly set itself apart from peer institutions if a Computer Replacement Plan were implemented for all faculty and non-research staff. Faculty and staff simply cannot support the academic mission without a computer. Yet, requiring individuals and/or departments to purchase their own computers has led to a hodge-podge collection of systems that are not necessarily compatible or appropriate for a secure network. Establishing a college-funded replacement cycle not only provides faculty and staff with reliable computers, but also leads to tremendous cost-savings in terms of computer support.

- ✘ Computer Replacement: Develop and budget for a computer replacement cycle for all college computer labs.

At present, only equipment in computer labs supported by the Engineering Student Technology Committee is on a regular replacement cycle. All college laboratories with computers must be placed on a replacement cycle in order to provide a uniform computing environment for all students.

Metrics:

- ✘ Network infrastructure improvements,
- ✘ Quality of services for faculty and staff, and
- ✘ Implementation of a computer replacement plan.