College of Engineering
EECS Instructional Systems Support Group

EECS Instructional Computing - Review and Plans
1999-2000

References about Common IESG Services:

http://iesg.eecs.berkeley.edu/	=	EE labs, AV services, NT services
http://inst.eecs.berkeley.edu/	=	home pages, accounts, labs, software

Improvements We've Made in 1998-1999:

+ **new NT fileserver** (NTSWW, Fileservice) (grant from Intel)
+ **new UNIX fileserver** (Mamba) (grant from Intel)
+ **349 Soda** - new lab for for CS184 (grant from Intel)
+ **105 Cory** - new lab for EE20 (grant from Intel)
+ **353 Cory** - new lab for EE141 (grants from Rockwell and Intel)
+ **119 Cory** - new lab for EE290G, CS152 (grant from HP)
+ **199 Cory** - new general access lab (grant from DEC)
+ **scanners and OCR** available in 111 & 119 Cory, 333 Soda

Pending Grants/Purchases:

+ **(20) Intel PCs** for EE141 lab (353 Cory) (grant from Intel)
+ **new HP-UX 11.0 login server** (grant from Hewlett Packard)
+ **100-MB ethernet cards** for 20 DEC Alphas in 199 Cory (purchase)
+ **RAM for PCs** in 2xx and 330 Soda (up them to 128MB) (purchase)
+ **100MB network hubs** for Soda Hall labs (purchase)
+ **workstations** to replace old HPS in Soda and Cory Hall (grants)

Feedback from 1999 Faculty Retreat:

Feedback from students and faculty after the 1999 Retreat has helped to guide the plans for the upcoming ficsal year. Here are some problem areas and plans for improvement:

1) **Instructional networks are perceived as slow.**

The NT and SolarisX86 PCs in Soda Hall have 100 MB cards, so we can upgrade the 42 and 43 subnets in Soda Hall to 10/100 MB hubs. We
will purchase 100 MB cards for the DEC Alphas in 199 Cory if possible.

2) **Instructional needs more power in its UNIX login servers.**

We have received a new dual-Pentium server and RAID array from Inte that we'll install in June. It'll have about 40GB of home dir space for CS classes, allow network logins, run SolarisX86 and Samba.

We submitted a grant request in April to HP for a 4-processor, 4-GB HP-UX server to replace Parker/Franklin/Cochise/Snake. It'll be for general logins, software debugging and CAD applications.

3) **Older Instructional UNIX workstatations need to be upgraded.**

We intend to purchase more memory for the PCs in Soda Hall and to make grant requests to Digital, HP and Intel for new workstations to replace the old HPs in Cory and Soda Halls.

Lab Space:

Previous plans to move several Instuctional labs from Soda Hall have been postponed indefinitely.

Some conclusions about the current computer usage:

1) **We should aid and enhance network access to our computers for home computing.**

About 31% of all our UNIX logins occur from over the net from non-UCB ISPs, the Res Halls and UCB modems. To improve network login security, we now a free version of SSH for home use. We have set up a password-protected WEB site for viewing course materials, downloading and executing course software.

(continued)

Instruction maintains several DEC UNIX, HP-UX and SolarisX86 "login servers" (cory.eecs, po.eecs, parker.eecs, torus.cs, franklin.cs). We have submitted a grant request to replace the aging HP-UX login servers with a powerful SMP HP server.

Several important campus computer services (such as the **Agate** USENET server) are restricted to .berkeley.edu addresses only, which blocks the ISP users. This method of access restriction will eventually be removed; both EECS and IS&T are developing Certificate services that can be used to authenticate our users instead.

2) **310 Davis must be improved, for better utilization.**

CS61A is assigned 310 Davis (38 HPs) for lab and drop-in. 310 Davis is underused for drop-in, perhaps because it lacks a bathroom. We'll work on a renovation project this summer to install a single lavatory there or to arrange cardkey access to existing bathrooms in Davis Hall. 310 Davis needs other work (better air conditioning, a new rug, paint, etc) and maybe a campus Cap improvement funds can be found to do that this summer.

3) **The old HP UNIX workstations in Cory should be replaced.**

They are underutilized because they are old and slow. Nevertheless, they are available for overflow from any other UNIX lab, as they can be used as Xterminals to other systems.

4) **NT drop-in labs are well used.**

The drop-in NT lab in 330 Soda was heavily used by CS169 and CS184 this Spring. We added 12 new NT systems for CS184 in 349 Soda in March, which relieved the crunch in 330 Soda.

The NT drop-in lab in 119 Cory was heavily used by CS152. 111 Cory was overflow for CS152, as well as for several EE classes that use NT but have no dedicated lab in Cory Hall.

Software Changes this Summer:

+ Upgrade UNIX workstations to DEC UNIX 4.0e and SolarisX86 2.7.

+ Revise the ´grading´ suite of programs used on the UNIX systems.

+ Establish password protected (SSL) WEB server for utilities such as:

      - class lists and email lists for instructors
      - download sites for class software
      - a new "due-dates" utility for posting assigment due-dates

Lab Changes this Summer:

UNIX file server: We will install a new SolarisX86 server in Soda this summer, to replace the old Franklin and Cochise file servers. This will increase the disk space for CS home directories and applications from about 28GB to over 50GB.

NT file server: The Fileservice NT server was brought into service in Spring 1999, and will provide additional disk space for Instructional use.

UNIX login server: We have made a grant request to HP for a large N-class 64-bit login server, to replace Franklin, Cochise and Parker.

353 Cory, 204 Cory: We have made a grant request to INTEL for PCs to fill in and upgrade the systems in these labs. The grant has not been approved yet (May 1999).

New Cardkey System In Cory:

New cardkey readers have been installed in Cory Hall. They require a different type of cardkey than is used in Soda Hall. Soda Hall is expected to convert to the new system by Jan 1, 2000. Alex Para is the project manager.

For additional information, please feel free to contact us:

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