M.I.T. DEPARTMENT OF EECS

6.033 - Computer System Engineering **Handout 25 - Issued April 23, 1998**

Last Assignment: April 30 - May 14

Recitation, Thursday, April 30 (LFS)

Today we will discuss reading #34, "The design and implementation of a log-structured file system", by Mendel Rosenblum and John K. Ousterhout. In view of the discussion in recitation, think about what the major differences are between LFS and a standard UNIX file system. What hardware advances does LFS take advantage of? Which components of the UNIX file system does LFS re-use and why?

Design Project 2 is due today. Remember to turn in two copies of your report (one with the names of the group members and another with a 6-digit code instead; put the code on your signed copy). This time the late policy is simple: there are **absolutely no extensions**.

Lecture, Monday, May 4 (Performance analysis)

For lecture read chapters 12 and 14 of Brooks' "The Mythical Man-Month". This book is a classic that all systems people should have on their bookshelf. Although slightly old, it contains a unique perspective and advice on building complex systems. You will probably re-read this book several times during the next couple of decades. We all do.

Recitation, Tuesday, May 5 (Team presentations)

Today is "blind peer review" day for Design Project 2! You will give the 5-minute presentations you have prepared on the DP2 paper you received on Thursday. In addition to the presentation, your team should hand in a single one-page reading report on the paper that you reviewed as a group. This one-page report should include the names of all the team members/evaluators as well as the 6-digit "secret" code. The one-page reports should be attached to the anonymous copy of the paper you were evaluating.

We will also hand out sample questions for Quiz 3.

Lecture, Wednesday, May 6 (Complexity)

Please read chapters 5, 8, and 11 of Brooks. Now that we have completed studying many different systems, we will take a step back and look again at complexity in this lecture.

Recitation, Thursday, May 7 (CONFIRM)

Read #36, "When professional standards are lax: the CONFIRM failure and its lessons" by Effy Oz. Try to relate the ideas in this case report to what you have read about complexity in Brooks. What was the main problem with CONFIRM?

Lecture, Monday, May 11 (Dertouzos Day)

If everything goes according to plan, Michael Dertouzos, the director of MIT's LCS (Lab for Computer Science), will talk about cool stuff. He charges in general a lot of money for this talk, but it wil be free for the 6.033 students. You just can't miss this one!

Recitation, Tuesday, May 12 (Principles of System Design)

For this last recitation, read Larry Press' "Before the Altair: The history of personal computing" and re-read Lampson's "Hints for computer system design". Try to think about good examples (from 6.033 or elsewhere) for some of the slogans in Lampson's paper. Try to establish connections between this paper and what we have discussed so far in 6.033. Think about the failed systems that we studied in the class and identify the main reason they failed. Did they violate any of Lampson's hints?

We will also hand out solutions to the Quiz 3 sample questions.

Quiz 3, Wednesday, May 13 (Quiz, sweet Quiz!)

For latest Quiz 3 information, see the News page on the 6.033 web site.

Quiz 3 is during regular class hours, 2-3pm. Rooms will be announced. The quiz is *open everything* (except for a TCP connection) and covers all material from lecture L17 (Fault tolerance) through R24 (CONFIRM). Of course there may be also some synthesis/integration questions, give that this material builds in various ways on things studied earlier.

Recitation, Thursday, May 14 (Last day of classes)

We will attempt to hand back Quiz 3 with solutions in recitation. If we can't get the solutions done on time, we will post them on the 6.033 home page when they become available. We will also give each of you a sheet of paper with all your grades we know of, so you can do an end-to-end check on our records.

Finals Week

6.033 does not have a final. That's cool! Take time and study for other finals, or just go out and enjoy the sun :-)

System aphorism of the week
Il semble que la perfection sont atteinte non quand il n'y a plus rien à ajouter, mais quand il n'y a plus rien à retrancher.

(It seems that perfection is attained not when there is nothing more to add, but when there is nothing more to take away.)
-- Antoine de Saint-Exupery, *Terre des Hommes* (Wind, Sand and Stars), 1939, Chapter 3 "The Tool"