M.I.T. DEPARTMENT OF EECS

6.033 - Computer System Engineering **Handout 34 - Issued April 23, 1999**

Assignment 10: April 29 - May 06

Recitation, Thursday, April 29 (R22: 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 as well). This time the late policy is simple: there are **absolutely no extensions**.

Special Lecture, Friday, April 30 (TBA)

Lecture, Monday, May 3 (L23: Replication and Consistency)

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 4 (R23: Coda)

Read "Disconnected operation in the Coda file system" by Kistler and Satyanarayanan, reading #33. This paper looks at issues related to mobile computers that disconnect and reconnect to a file server. By the way, everyone who's cool calls Satyanarayanan "Satya."

There is no one-pager for today. Work on your critique of another team's Design Project 2. However, think about this issue while reading the Coda paper:

A system running applications (on top of Coda) which are unaware that they may become disconnected from their file server(s) violates the end-to-end argument. Demonstrate that this is the case and then briefly discuss the main benefit that results from Coda not being end-to-end.

Lecture, Wednesday, May 5 (L24: 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 6 (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 last 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.

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")