Assignment 8: April 9 through April 17

For Recitation, Thursday, April 9 (R17: More Fault-Tolerance)

The reading for today is "High-availability computer systems" by Gray and Siewiorek, reading #28. This paper is a heavy duty paper; read it with care. It introduces some terminology and tries to build an appreciation of the difficulty in attaining continually available systems.

In addition, read "The space shuttle primary computer system" by Spector and Gifford, reading #30. This paper is quite long; you can skim much of the paper, but as you do so slow down enough to figure out the following things: How are they using redundancy? What is force-fight voting? What are alibis?

The second **Design Project** will be available today on the Web. Form a 3-person team with two other students as soon as possible, and send an e-mail message to your recitation instructor some time before next Thursday listing the members of your team. All students in a team should have the same recitation instructor, since he will be grading your Design Project 2 paper. Note that the student page of the 6.033 Web site contains an up-to-date list of potential team members.

We will hand out example questions for Quiz 2 today. Quiz 2 is next Friday (April 17).

For Lecture, Monday, April 13 (L18: Transactions)

Second lecture on fault-tolerant computing. No specific reading assignment for today. Take some time to think about Design Project 2.

For Recitation, Tuesday, April 14 (R18: RAID)

Today's reading is "Disk system architectures for high performance computing" by Katz et al., reading #29. This paper describes how to build high-availability storage systems using disk arrays; its terminology is used by industry today. Sections I through IV can be skimmed; the key section to focus on is Section V. (If you aren't familiar with how disks work, it is worth reading the first four paragraphs of section II carefully and also paying a little, but not much, more attention to section IV.)

No reading report due this week. Study for the quiz.

Also, you might want to spend some time thinking about Design Project 2.

For Lecture, Wednesday, April 15 (L19: Implementing Transactions)

Second lecture on transactions (third on fault-tolerant computing). No assigned reading today. Even more time for you to work on Design Project 2, and to study for the quiz.

For Recitation, Thursday, April 16 (R19: Cirrus Banking Network)

Read the Cirrus banking paper, reading #32, "The Cirrus banking network" by Gifford and Spector. This paper talks about the other kind of ATMs--Automated Teller Machines. It describes one ATM network and how it achieves security and high-availibility so you can get your money from an ATM anytime and anywhere.

You should have sent your recitation instructor e-mail listing your three-person Design Project 2 team by today.

For Quiz 2, Friday, April 17

For latest Quiz 2 information, see the News page on the 6.033 web site.

System aphorism of the week

KISS: Keep It Simple, Stupid.
