DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

6.033—Computer System Engineering Handout 14—March 12, 1996

ASSIGNMENT 6: March 14 through March 20

For Recitation, Thursday, March 14

Carefully read T. Berners-Lee et al., "The World-Wide Web", reading #22. Prepare for a detailed discussion on the Web's architecture and naming scheme in recitation. Note that the paper uses the term Universal Resource Identifier (URI), but the term Uniform Resource Locator (URL) is used by most browsers today instead. URIs still exist as the union of URLs and Uniform Resource Names (URNs). The difference between those is that URLs are location-dependent, while URNs are not.

If you'd like to read more, the February issue of DLIB magazine (available only online) has an update on the status of URN proposals and plans, including pointers to each URN scheme currently under active development. See http://www.dlib.org/dlib/february96/02contents.html.

Reading #22 is *essential* to your design project. Think of it as an opportunity to get a double benefit: if you do your reading carefully, you can fully participate in section (making a good impression on your instructor) *and* you'll make progress on your design project!

NO Special Lecture for Friday, March 15

The writing program lecture has been moved to April 5. Use this additional time to work on design project 1, which is due next Thursday. The lab recitation scheduled for April 5 will be moved; time and place will be announced later.

For Lecture, Monday, March 18

This is the second and last lecture on naming. Read Saltzer Chapter 5.C, reading #21.

For Recitation, Tuesday, March 19

Read "The Java Language Environment"; we will hand out hard copies before March 19. This document is high-level, fluffy, and easy to read. Just read Sections 1, 2, and 9. Java is the latest and hottest WWW technology and is hyped a lot. In 6.033, we will take a close look at it and try to understand what it is really doing. In today's section we will look at the language design and discover that many of the language issues can be framed as naming questions. (As a personal excercise while reading you might try to make a list of these naming issues.) In the next recitation, we will look at the security issues.

If you'd like to read more about Java see http://java.sun.com/. Most of the documentation there is fluffy, but there is a technical paper published in an obscure place that contains some hardcore technical information (see reading #23, "Java Intermediate Bytecodes" by Gosling).

To give you some more time for your design project, **there is no reading report due today.**

For Lecture, Wednesday, March 20

Today we start a new topic in 6.033: *security*. As an introduction to security, we will first discuss privacy and security in society. To get prepared, read "Teaching students about responsible use of computers" by Lerman et al., reading #25. (The paper lists Saltzer as the only author, but the official authors are Lerman and Saltzer.) This reading contains only 1 page, so you'll have plenty of time left to work on your design project (due tomorrow!).

The following question was assigned for a reading report last year. You do *not* have to write a reading report on this question this year, but you might want to think about it.

> As an April Fool's day prank, Joe L. User writes a program that takes advantage of a security hole he has discovered in the X window system at Project Athena. The program takes a user's name, finds out from Zephyr where that user is logged in, then opens a full-screen-sized window on that other user's Athena workstation and displays the message "This workstation has crashed. All user files have been lost." Thirty seconds later it displays the message "APRIL FOOL'S! Hah Hah Hah". Unfortunately, Joe stays up all night March 31 doing the reading for 6.033. Finally realizing that it is April 1, Joe races to an Athena workstation, checks and finds that his good friend Ben Bitdiddle is logged in and types the command to target Ben. In his haste (and tiredness!), he mistypes the arguments and the program targets ALL Zephyr-visible users who happen to be logged in at the time. Needless to say, this mistake causes a lot of confusion and floods the Athena consultants and help lines.
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> Information Systems traces the source of the messages to Joe's account. When confronted, he apologizes profusely and claims it was a mistake. He says that he and Ben have a long running tradition of playing practical jokes on one another. According to Project Athena's Statement of Ethics, what action, if any, should be taken against Joe?
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> *(Lest you think this question is unrealistic, things like this happened to me almost regularly while I was debugging xzewd—it'd accidentally send zephyrs to random places! —Eddie Kohler)*

System aphorism of the week

A system continues to do its thing, regardless of need.