CSE 222
Graduate Networking
Fall 2001

Lecture 1: Class Overview
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Administrivia

- Instructor: Me
  - Office hours: Tu 3:30-4:30, AP&M 5220
- TA: John-Paul Fryckman
  - Office hours: TBD
- Course Web
  - http://www-cse.ucsd.edu/classes/fa01/cse222/
- Mailing List
  - Please add your name and preferred e-mail address to the sheet being passed around
Course Goals

- Primary goal
  - Provide a basis for understanding, appreciating, and performing research in networking

- Secondary goals
  - Practice reading and evaluating research papers
  - Experience doing a mini research project
Course Mechanics

- Lecture and discussion
  - Textbook for fundamentals (Peterson and Davie, 2nd E)
  - Classic papers for origins
  - Recent papers for state of the art

- Class divided into topics
  - Begin each topic with a lecture on background material
  - From this, we will launch into the papers for the topic

- Papers
  - Paper list will be online
  - Should be able to download and print from the web page
Topics

- Topics I will try to cover
  - Internetworking
  - Reliable data transfer
  - Congestion control
  - Queue management
  - Scheduling
  - Unicast and multicast routing
  - Wireless & Mobile networking
  - Integrated and differentiated services
  - Router and switch architecture
  - Infrastructure services
  - Network security
  - Network applications

- Haven’t entirely settled on exact paper list yet
  - Problem: Too much to fit into one quarter
Your responsibilities

- **Reading** the textbook and papers
- **Writing** evaluations about the papers
- **Talking** about the papers in class
- **Solving** periodic homework problems (from textbook)
- **Doing** a mini-research project

- There are no exams…
Paper evaluations

- There will usually be two papers assigned per class
- For each paper, you will write an evaluation
  - ½ - 1 page
  - State the goal of the paper, and the approach the paper takes to achieve that goal
  - Critique the paper, stating whether you are convinced by the paper’s arguments, experiments, analyses, or not. State why.
  - What did you learn from the paper?
  - Evaluations will be due by 8am of the morning in which the paper is presented
- We will be setting up an automatic evaluation submission system shortly
  - Until it works, send copies of evaluations to me and John-Paul
Final Project

- Research oriented project

- The type of project and the subject are your choice:
  - Network trace analysis or measurement
  - Implement a network protocol, service, tool or application
  - Simulation of network behavior
  - Research topic survey

- I will provide potential project ideas on the Web page

- This will be a group project (and group grade)
  - Groups of 2-4
  - Writeup and class presentation
Grading

- Class discussion 15%
- Paper evaluations 15%
- Homework 25%
- Final project 45%
For Next Time...

- Read the course Web page
- Read the End-to-end paper by Saltzer et al and the Clark paper on Internet design philosophy
- Browse Chapter 1 of Peterson&Davies
- Read the Web page again (it’ll be different)