The Final Examination is scheduled for Sunday, May 20.

The time of the examination is 10:00am - 12:00 noon (room to be announced). Make sure that you are on-time!

The Final Examination primarily covers material assigned from the midterm on (lectures as well as homework). The Final Examination will cover Topics 5 through 9. (It will not cover Topic10). However, you must remember the detailed operation of TCP, IP, and RTP

The format of the exam is similar to the midterm examination.

There will be five problems on the exam covering the following areas:

1. Topic 5 and Topic 6: Application Layer Protocols - terminology, concepts, components, and operation:
   - Client - Server Model
   - DNS
   - TELNET
   - FTP
   - TFTP
   - SMTP
   - MIME
   - HTTP
   - SIP
   - SDP

2. Topic 6: Multimedia Protocols - SIP - terminology, concepts, and operation
   - SIP Protocol Procedures
   - SIP Messages
   - SIP Registration Process
   - SIP Call Establishment
   - SIP Data Transfer
   - SIP Call Termination
   - Making a VoIP Call using SIP

3. Topic 5a: Web Protocols - terminology, concepts, and operation:
   - Browser Architecture
   - Interrelationship and operation of a Browser, HTTP, FTP, HTML, DNS, TCP, IP
   - Fetching a Web Page or File over the Internet

4. Topic 8: ATM Networks - terminology, concepts, and operation:
   - ATM Protocol Architecture
   - Layer Functionality
   - ATM Cell Structure
   - ATM Virtual Channels
   - ATM Virtual Paths
   - ATM Cell Based Physical Layer
   - ATM SDH Based Physical Layer
   - ATM Message Transmission
   - AAL Classes (AAL 1, AAL 2, AAL 3/4, AAL 5)

5. Topic 9: Legacy LANs and Wireless LANs:
- IEEE 802 Protocol Standard
- IEEE 802,5 Medium Access Control
- Traditional Ethernet
- High Speed Ethernet
- Wireless LAN Technology
- IEEE 802.11 Protocol Architecture and Services
- IEEE 802.11 BSS, ESS, ,,,
- IEEE 802.11 Medium Access Control
- PCF and DCF Functions
- IEEE 802,11 MAC Timing
- Basic Access Method (SIFS, PIFS, DIFS, backoff window, etc.)
- PCF Superframe
- IEEE 802.11 MAC frame Format
- IEEE 802.11 Physical Layer Alternatives (802.11a,b,g,n)
- IEEE 802.11 Security Considerations (WEP, WPA)