Sirindhorn International Institute of Technology
Thammasat University

Final Exam: Semester 2, 2012

Course Title: ITS413 Internet Technologies and Applications

Instructor: Steven Gordon

Date/Time: Thursday 28 February 2013; 13:30–16:30

Instructions:

- This examination paper has 16 pages (including this page).

- Conditions of Examination: Closed book; No dictionary; Non-programmable calculator is allowed

- Students are not allowed to be out of the exam room during examination. Going to the restroom may result in score deduction.

- Turn off all communication devices (mobile phone, etc.) and leave them at the front of the examination room.

- Write your name, student ID, section, and seat number clearly on the front page of the exam, and on any separate sheets (if they exist).

- The examination paper is not allowed to be taken out of the examination room. A violation may result in score deduction.

- Reference material at the end of the exam may be used.

ITS413 Final Exam Hints 2012

- 8 questions, each with multiple parts
- 80 marks in total
- Covers topics after midterm:
    - TCP flow control, congestion control, fairness
    - Multicast: concepts
    - Multimedia apps: Voice, video, RTP, SIP, IPTV
    - P2P: Napster, Gnutella, Fasttrack, Bittorrent
- Does NOT cover topics skipped during lectures:
    - QoS (slides 16-27)
    - Details of multicast protocols (slides 14-15)
    - Streaming with RTSP and HTTP (slides 35-39)
    - DHT and Chord (slides 19-35)
- Maybe simple questions related to assignment
- Use past exams and quizzes for study material

Reference Material

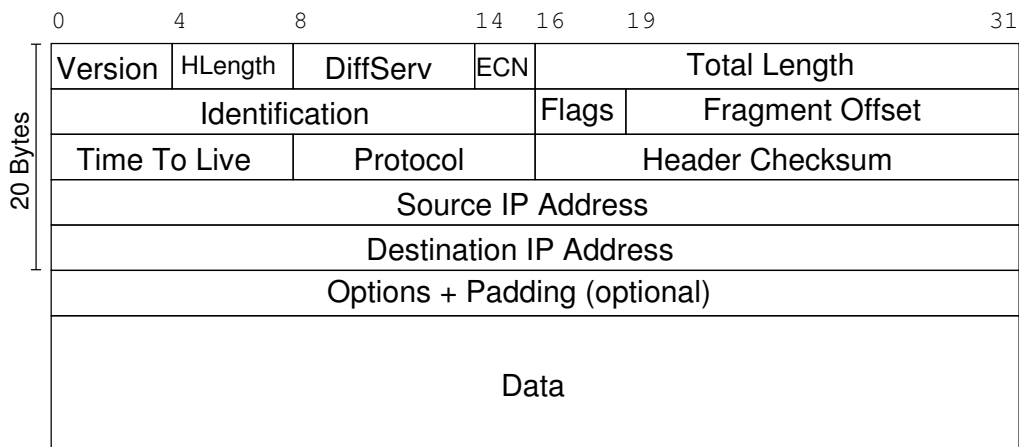|	0	4	8	14	16	19	31

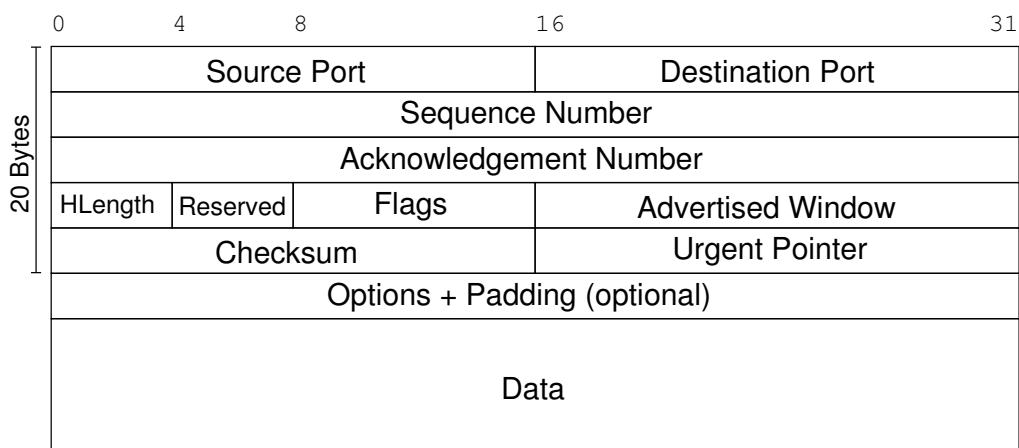Figure 1: IP Datagram Format. Flags: Reserved, Don't Fragment, More Fragments

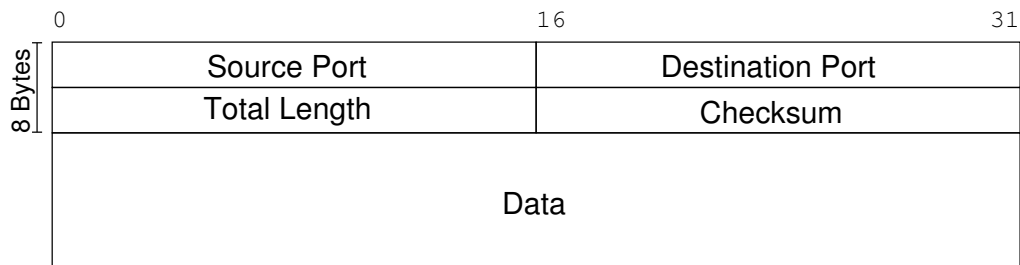Figure 2: TCP Segment Format. Flags: CWR, ECE, URG, ACK, PSH, RST, SYN, FIN
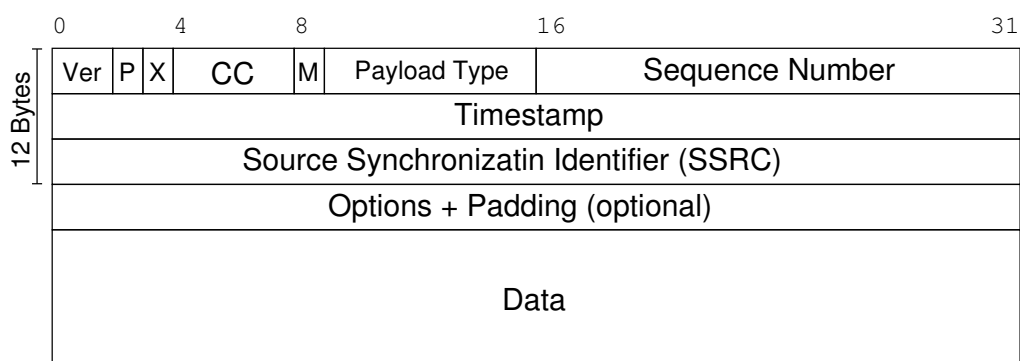
Figure 3: UDP Datagram Format

Figure 4: RTP Packet Format. P: Padding; X: Extension; CC: CSRC count; M: Marker