

CSE 3214: Computer Network Protocols and Applications

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Course page: <http://www.cse.yorku.ca/course/3214>

These slides are adapted from Jim Kurose's slides.

Administrivia

Course webpage:

<http://www.cse.yorku.ca/course/3214>

Lectures: Tue-Thu 10:00-11:30 pm
(BC 215)

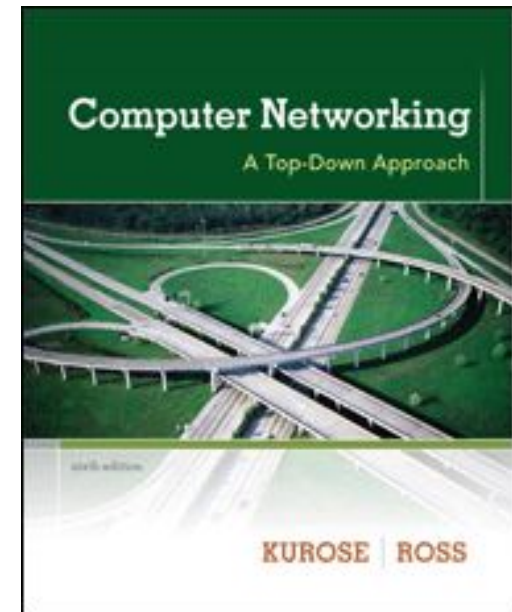
Exams: midterm (30%), final
(40%)

Homework (30%): Assignments.

Slides: should be available the
morning of the class

Office hours: Tuesday, Thu: 1:30-
3:30 pm or by appointment at
LAS 3043

Textbook:



***Computer Networking: A Top Down
Approach Featuring the Internet, 6th
edition.***
Jim Kurose, Keith Ross; Pearson.

Administrivia – contd.

- Cheating will not be tolerated. Visit the webpage for more details on policies etc.
- Be careful not to misuse packet sniffing software.
- I would like to have a 2-hour midterm. Your cooperation is greatly appreciated.
- TA: TBA

Course objectives

- Understand the full TCP/IP architecture.
- Become familiar with “advanced topics”
 - P2P systems, multimedia communication (including VoIP), network security, wireless sensor networks.
- Learn about active research areas.

Major differences with 3213

- Top-down approach.
- More algorithmic (less math!)
- More hands-on - TCP/IP programming.

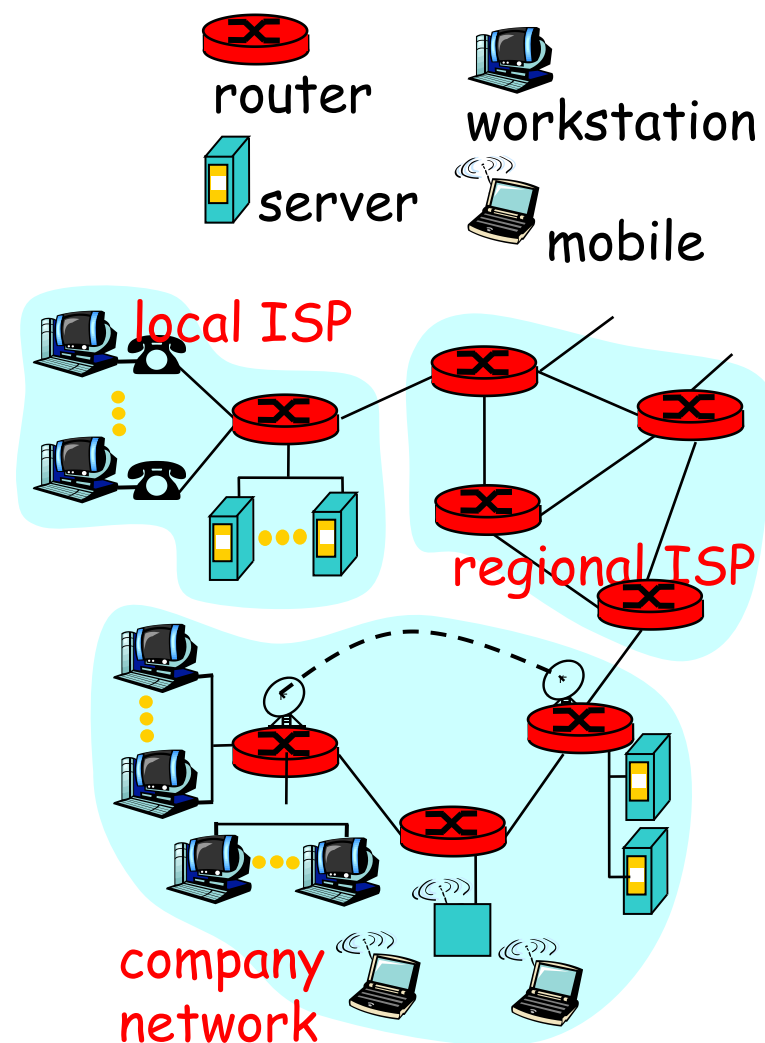
Chapter 1: Introduction

What *is* the Internet?

- Network of networks
- Heterogeneous
- Distributed
- Owned by many different entities
- Allows easy additions and removal from the network

The Internet: “nuts and bolts” view

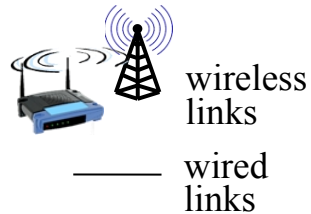
- millions of connected computing devices: *hosts = end systems*
- running *network apps*
- *communication links*
 - fiber, copper, radio, satellite
 - transmission rate = *bandwidth*
- *routers*: forward packets (chunks of data)



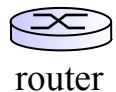
The Internet: “nuts and bolts” view



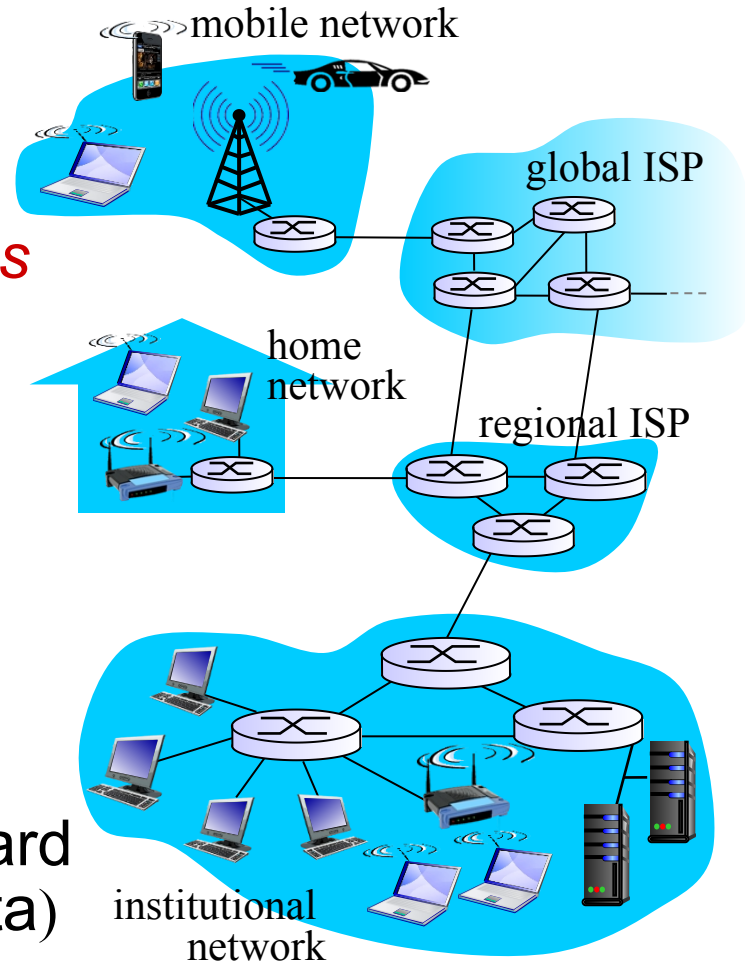
- ❖ millions of connected computing devices:
 - *hosts = end systems*
 - running *network apps*



- ❖ *communication links*
 - fiber, copper, radio, satellite
 - transmission rate: *bandwidth*



- ❖ *Packet switches*: forward packets (chunks of data)
 - *routers* and *switches*



The Internet: “nuts and bolts” view

- *protocols* control sending, receiving of msgs
 - e.g., TCP, IP, HTTP, FTP, PPP
- *Internet: “network of networks”*
 - loosely hierarchical
 - public Internet versus private intranet
- Internet standards
 - RFC: Request for comments
 - IETF: Internet Engineering Task Force

protocols define format, order of msgs sent and received among network entities, and actions taken on msg transmission, receipt

