

ETSF15

Communication system and networks

Lectures:

Stefan Höst, Jens A Andersson

Exercises:

Sha Hu

Course admin: Marianne Greif
Svensson, Anne Andersson



LUND
UNIVERSITY

Objectives of the course

- Understanding of data communication and networks
- Logical levels of communication
 - Physical: How can data be transmitted from A to B?
 - Network: How does data/packets find its way through the internet?
 - Application: How can we use it?

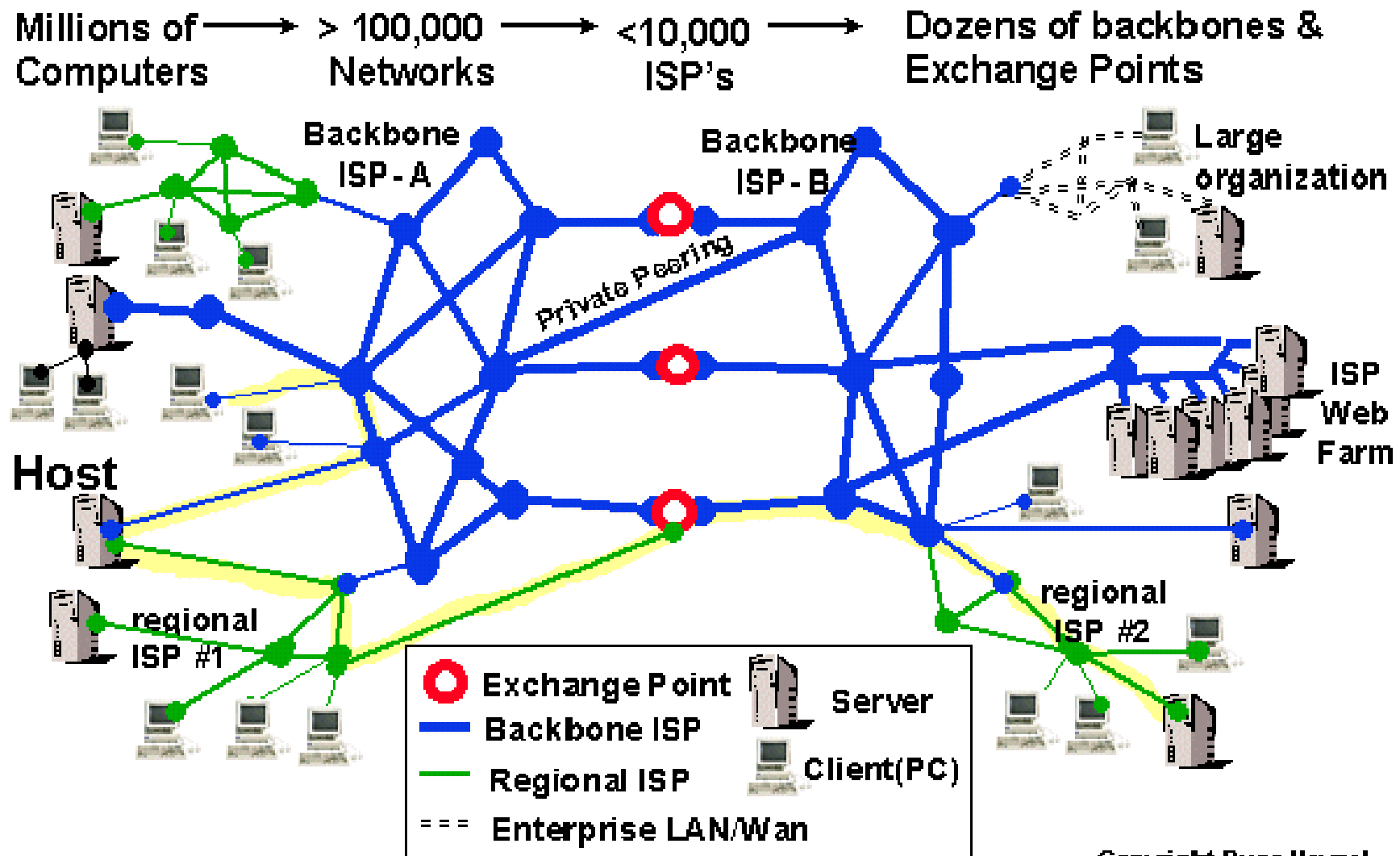
Internet from a user perspective



Your age 39 Your occupation college test proctor Average number of hours per day on the internet oh lord

5-10?

Internet from a technical perspective



Information Flows over MANY Paths

Copyright Russ Haynal
<http://navigators.com>

Course content

- 7 lectures
- 5 exercises
- 3 laboratory sessions
- Exam (16/3, 8-13, MA10)
- Home page: <http://www.eit.lth.se/course/etsf15>

Lectures Outline

L	Topic	
1	Introduction, digital-analog	JA,SH
2	Data transmission	SH
3	Network structures and framing	JA
4	Networking and addressing	JA
5	IP and routing	JA
6	End to end connection: TCP, UDP, etc	JA
7	Mobile networks and LTE	SH

See course web (or moodle) for details

Exercises

- Wednesdays 8-10, 10-12
- 5 occasions, 1 repetition each
- Starting calendar week 4

See course web (or moodle) for details

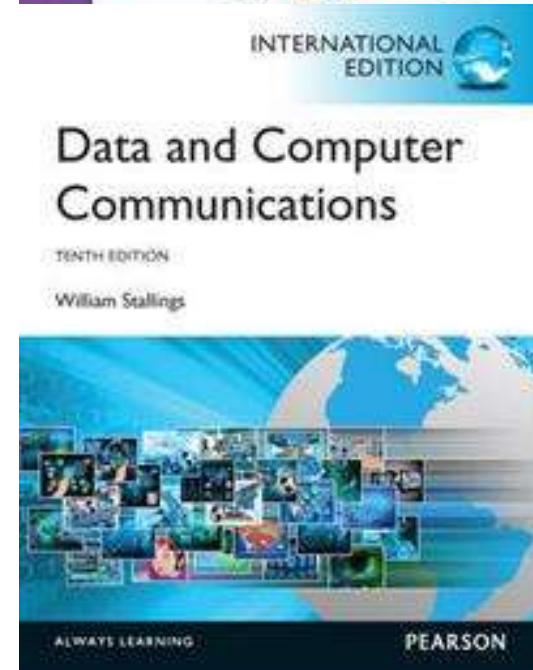
Laboratory exercises

Calender week	Topic
5	Data transmission P2P
7	Data transmission via AP, ARQ
8	Networking

- Four occasions per lab
- Sign up for occasion on the course web page
- Prepare before!!!

Course material

- Two alternative books
 - Internet, M. Kihl and J. A. Andersson
 - Data and Computer Communications (10th Ed), William Stallings
- Extra material on moodle (elearning.eit.lth.se)
- Slides published on web page/moodle
- Lab manuals on moodle
- Exercises on moodle



Access moodle

- <http://elearning.eit.lth.se>
- Login with your STiL account
- Enrollment key will be mailed out
- (Create profile)