

ETSF15 2018

Communication system and networks

Lectures:

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Exercises:

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Course admin: Anne Andersson



LUND
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Objectives of the course

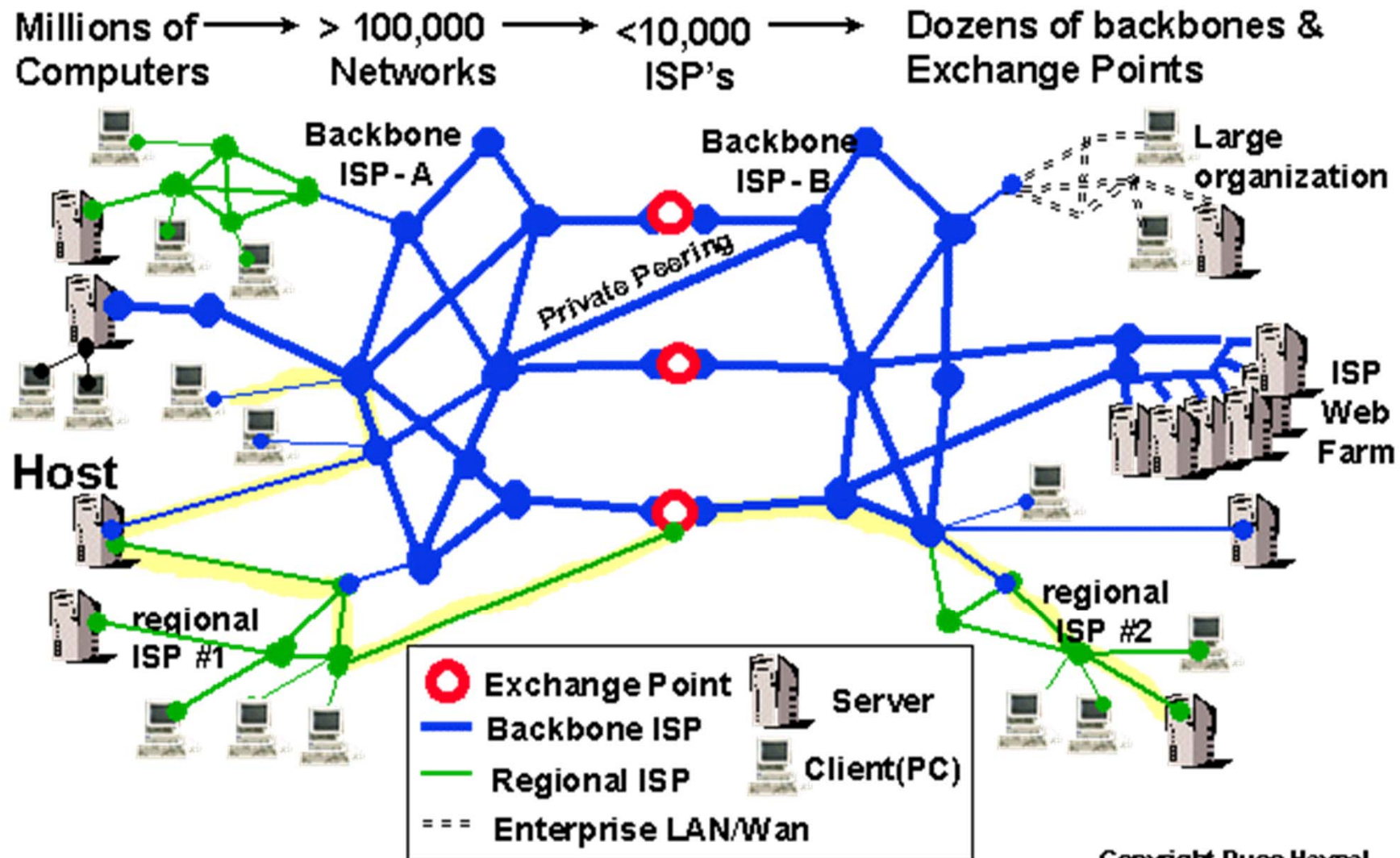
- Understanding of data communication and networks
- Logical levels of communication
 - Physical: How can data be transmitted from A to B?
 - Network: How does data/packets find its way through the internet?
 - Application: How can we use it?

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 (14/3, 14-19, Victoriastadion)

- Home page: <http://www.eit.lth.se/course/etsf15>
- Moodle: <http://elearning.eit.lth.se>

Access moodle

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

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 study week 2 (calender week 4)

See course web (or moodle) for details

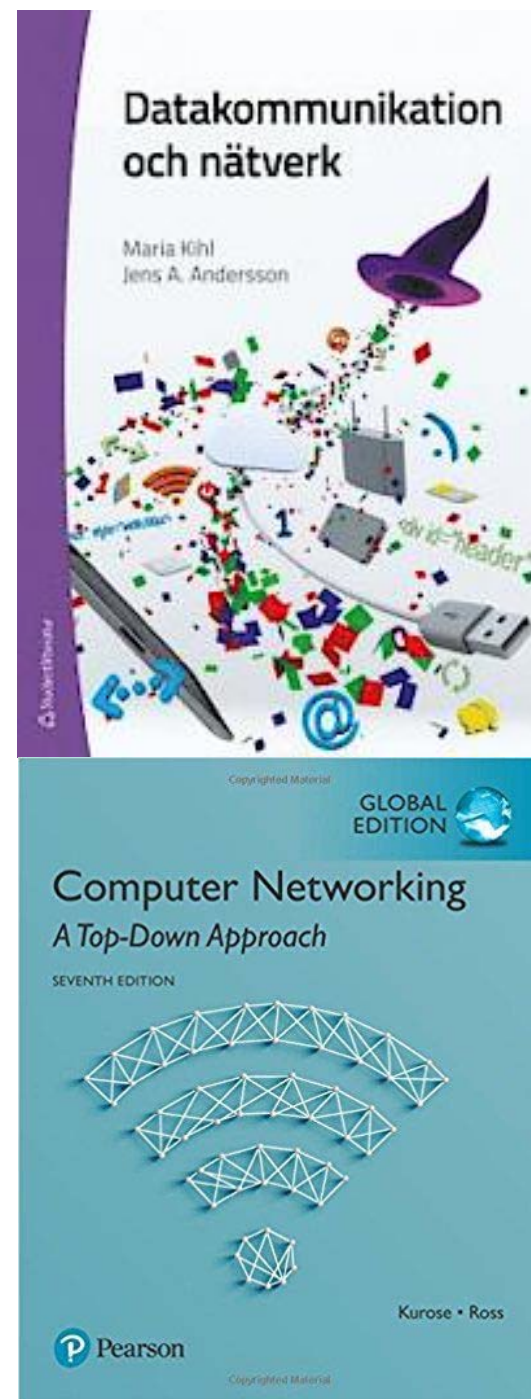
Laboratory exercises

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

- Four occasions per lab (can be revised)
- Sign up for occasion on the course web page
- **Prepare before!!!**
- **Yes, there will be some Arduino (C/C++) programming**

Course material

- Two alternative books
 - Internet, M. Kihl and J. A. Andersson
 - Computer Networking, Kurose and Ross
- Extra material on moodle (elearning.eit.lth.se)
- Slides published on web page/(moodle)
- Lab manuals on moodle
- Exercise compendiums on moodle



Reminder!!!!

Remember to register for the semester!

- ◆ We cannot register you on the course before that is done