Telematics WS0910
Lecture & Tutorial

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Outline

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Lecturers

- Prof. Mesut Güneş  Lecture
- Matthias Wählisch  Tutorial
- Bastian Blywis  Tutorial
Lecture Goals

- Telematics and computer networking
- Organization of computer networks
- Local, metropolitan, and wide area networks including the Internet
- The Internet as it is and what it could be in some years
- Wired and wireless networks
- Protocol stacks: ISO/OSI reference model vs. TCP/IP model
- Interaction of multiple protocols
- Why and how applications like email, www, and VoIP work
- Many acronyms: TCP, UDP, IP, SMTP, POP3, BGP, MTU, PPP, HTTP, ICMP, . . .
<table>
<thead>
<tr>
<th>Application</th>
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<td>Presentation</td>
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<td>Session</td>
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<td>Transport</td>
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<td>Network</td>
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<td>Data Link</td>
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<td>Physical</td>
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**Figure:** ISO/OSI Reference Model
### Slight overlap of topics with TI-3 lecture:
- E.g. Protocol stacks, media access, TCP/IP
- Introduction in TI-3, more details in Telematics
- Consider Telematics as part two of TI-3
- Overlap will (hopefully) be resolved next year
Requirements

Prior knowledge related requirements:
- lectures TI-1, TI-2, TI-3
- equivalent lectures

Formal requirements:
- Attendance at the first tutorial
- Finished “Grundstudium” for diploma students
Teaching Methods

- Lecture on Tuesday and Thursday (10:00 - 12:00), taught in english, room SR 005
- Tutorial on Thursday (16:00 - 18:00), taught in german, lecture hall
- Exam, questions in english, answers in english or german, lecture hall
- Mandatory attendance
  - Tutorial only
  - 85% required
  - Sign in list every tutorial
  - Fulfilled attendance in other semesters will be credited, specify on exam
- Assignments, no submission
- Mandatory reading, relevant for exam
- Maybe some demos during tutorials
**Tanenbaum** *Computer Networks, 4th edition*

**Kurose and Ross** *Computer Networking: A Top-Down Approach, 5th edition,*

**Stallings** *Data And Computer Communication, 8th edition*

**Krüger and Reschke** *Lehr- und Übungsbuch Telematik: Netze, Dienste, Protokolle, 3. Auflage*

**Günesç** *Telematics, Script*
FU-Berlin, 2009, 8€
- Bachelor students have to enroll for lecture in campus management and KVV
- Exam on 11.02.10, 11:00-13:00
- Re-Examination on 01.04.10, 10:00-12:00
- Required to pass only one exam
- Separate registration for each examination, procedure will be announced
- Visit official website for updates, information, and documentation: http://cst.mi.fu-berlin.de
- Organization managed by Bastian Blywis
- Resolve organizational problems as soon as possible
- Ask questions in lecture and/or tutorial
We are “overbooked” (Monday, 12.10.09):

- 159 students
  - 60 Bachelor
  - 62 Diplom
  - 34 Master
  - 3 miscellaneous
- Lecture in SR 005, seating for about 80
- Expect about 120 students after first couple of weeks
- Might get larger room for lecture
- Tutorial on 12.11.09 has to be shifted to Monday, 16.11.09 (14:00 - 16:00)
Research Areas

- Computer networking and protocols
- Wireless sensor networks
- Wireless mesh networks
- Personal area networks
- Modelling and analysis
- Simulation
- Projects
  - AVS-Extrem
  - MPOLIKS
  - DES-Testbed
  - FeuerWhere
  - G-Mesh-Lab
  - OPNEX
  - Vitalzeichen
  - WISEBED
- Involved in IETF work
- Lectures & Labs
  - Mobile Communications
  - Seminar
  - Telematik-Projekt
  - Mobilkommunikations Praktikum
  - Modeling and Performance Analysis with Simulation
  - Model Checking
  - Mikroprozessor-Praktikum

- Only one oral examination in CST group in "praktische" or "technische Informatik"

- Theses
  - CST website is (partially) outdated
  - Talk with research staff
  - Student research seminar
Thank you for your attendance
Questions?