T-110.1100 Introduction to Data Communications and Multimedia Technology 5op

T-110.1100 Johdatus tietoliikenteeseen ja multimediatekniikkaan
kevät 2011

Agenda

- Taking the course in English
- Introductions (mostly in Finnish)
- Overview of the course (mostly in Finnish)
- Practical matters (mostly in Finnish)
- "How the Internet works" (in Finnish)

Taking this course in English

- It is possible to take this course in English
  - Read a book, do some special exercises
  - Only recommended if you can't understand Finnish

YOU, ME AND THE ASSISTANTS

Overview

- This course teaches the basics needed to understand how computer and networks based multimedia works
    - Internet and telecommunications networks connect users to the media and transport the data
    - Some media formats are designed with the network in mind
    - Most relevant applications require a basic understanding of security
    - Multimedia and human-computer interaction itself requires understanding a broad range of technical solutions and business, social and legal aspects
- This course has a background in the TML laboratory
    - Now provided by the Computer Science & Engineering and Media Technology departments
- Targeted at non-major students
    - Major students take T-110.2100 and T-111.2400
- Get a foundation for further studies:
    - T-110.4100, T-110.4200, T-111.2400, T-111.4300
    - Majors in Data Communications Software and Media Engineering
- Get a feel for what data communications and media engineering is

Prerequisites

- You need to know how to use
  - E-mail and news for communication
  - WWW and the library to find *valid* information
  - A simple text editor
  - Basic Unix commands
- Also you have to be able to
  - Read and understand Finnish / English
  - Express and justify your views in written text in Finnish / Swedish / English
    - By default Finnish or Swedish, contact staff for permission to use English

Related courses

- T-110.2100 Johdatus tietoliikenteeseen (5 cr)
  - Data and telecommunications for comp.sci students
  - Only in Finnish
- T-110.2105 Introduktion till datakommunikation (5 cr)
  - Same as T-110.2100, only in Swedish (not available every year)
- S-72.1130 Telecommunication Systems (5 cr)
  - Basic tele- and data communications, lectured in English
- T-111.2400 Multimedia Systems (4 cr)
  - Multimedia, only in Finnish
- T-110.4100 Computer Networks
  - If you want to continue with the network side
- T-110.250 Verkkomedian perusteet
  - Name of this course back when dinosaurs were freshmen

Staff

- Responsible teacher
  - Antti Ylä-Jääski
- Head assistant
  - Jyry Suvilehto
- Lecturers
  - Jyry Suvilehto
  - Sakari Luukkainen
  - Petri Vuorimaa
  - Timo Tossavainen
  - Lauri Savioja
  - N.N.

- Assistants
  - Eetu Jalonen
  - Teemu Kämäräinen
  - Antti Tolonen

Do not send mail to individual persons. Use the course email address t-110.1100@tkk.fi for all communication

Communications

- Noppa
  - Make sure you get the news to your e-mail/RSS
- Newsgroup (Otax news): opinnot.tik.media
  - For general discussion
  - Not actively used
- E-mail: t-110.1100@tkk.fi

  - For private questions
- IRC: #media @ IRCnet
  - Recommended for timely questions about homework etc.
  - We encourage assistants to hang there
- Make sure that <student_number>@students.hut.fi works

Email

From: Teemu Teekkari
<teemu@tkk.fi>
To: t-110.1100@tkk.fi
Subject: My round 4
submission

Hello,
When submitting my answers
for round 4 Rubyric acted
strangely [description of
problem].

Please make sure you grade
my *latest* submission.

Teemu Teekkari (12345s)

From: Veijo Tikkilä
<sexyhunk_91@hotmale.com
>
To: jyry@starwarsfans.com
Subject: Help!!!!!111

Hi, please help me! This is
very important and urgent!

Vessu

Passing the course

- To pass the course you have to pass the following
  - Homework assignments
  - An exam or two midterm exams
  - *Course feedback (new)*
- A completed entire part, homework or exam, is valid for two years

Lectures

- Lectures on Fridays 12.15-14.00 in T1
- If enough participants, an English language study group
- Sign up in Oodi!
  - This is essential as we need your student number for our homework system

Homework assignment - motivation

- The most requested trainable skills for graduating CS major students are
  - Team work skills
  - Verbal reporting skills
- Sister course T-110.2100 drew the lot to train the latter skill
- Most takers of T-110.1100 have little problems with the format of the excercises
- To some questions there *are no right answers*
  - Convincing the reader that your solution is sound is required
  - This is also necessary in questions where there is a right answer. Just a numerical result is not a good answer!

Homework assignments

- Homework schedule will be on the web
- 5 rounds, each worth ~20 points
  - 25% mandatory minimum for each round
  - 50% of points to pass
  - 75% of points to get +1 to exam grade
  - Possible to make up one failed round by doing an extra assignment
- Homework is individual
  - Please do not copy!
    - Not from each other
    - Not from the Web or other sources
  - If you work on your homework with a friend, write your solutions yourself and mention this in your submission
- Homework is submitted to the Rubyric system https://rubyric.cs.hut.fi
  - We need you to sign up on this course.
  - Contact in advance if you know you have issues with a DL
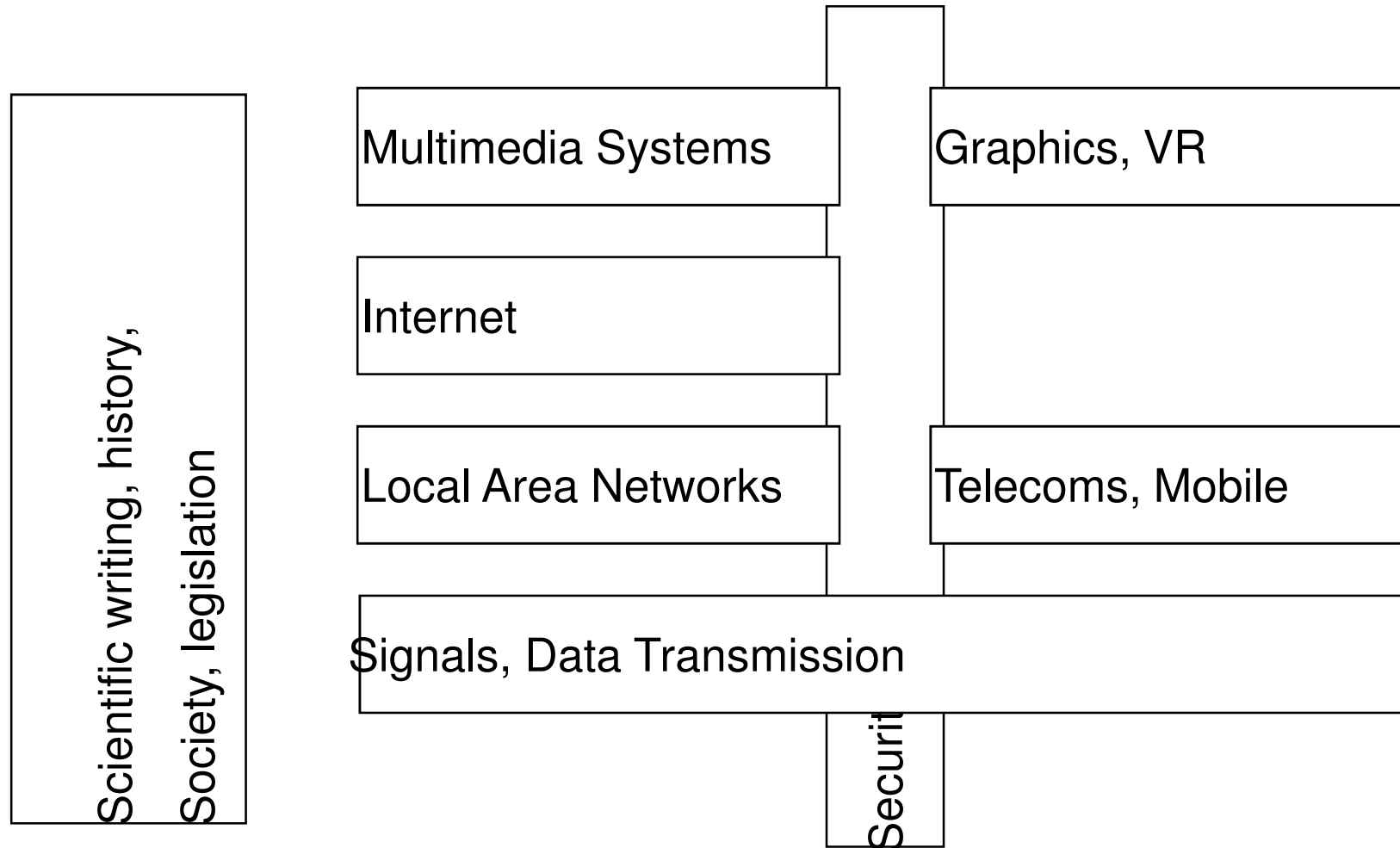
Material

- Lecture topics will be in Noppa
- Lecture slides will appear in Noppa
- Homework material
- Independent information finding is needed for the homework
- No set course book

Course Book

- No set course book, you are free to study the subject as you wish
- Recommended material: Preston Gralla: How the Internet Works, 8th Edition
  - Covers both data communications and multimedia
  - Has a very strong top-down approach, focuses on the big picture and gives an overview of things
- Alternatively recommended: Alberto Leon-Garcia, Indra Widjaja: Communication Networks - Fundamental Concepts and Key Architectures
  - Focuses on data communications
  - Bottom-up approach, has much detailed information on the networking technologies
  - Or any other popular entry level data communications course book (note, *data*, not *tele*communications)

Contents

Scientific writing, history, Society, legislation

Multimedia Systems

Graphics, VR

Internet

Local Area Networks

Telecoms, Mobile

Signals, Data Transmission

Securit

How to be mean to course staff

- Forget to sign up on the course or an exam on time
  - 5 minutes to add you to the system out of order
  - Slightly annoying
- Fail an assignment round and do the make-up assignment
  - 20 minutes to mark the make-up assignment (no time is budgeted for these, we do it pro arte)
  - Extra work for you
- Send an email and forget your student number
  - 3 minutes to ask for it and slightly annoying
  - Delayed handling of your matter
- Copy straight from a source or another student and get caught
  - Min 8 hrs of work on several bureaucracy levels
  - Possible repercussions for you
  - We take this **very** seriously

PLEASE REMEMBER TO SIGN UP IN OODI