Overview of Today’s Introduction

- Seminar organization
- Remarks on preparing your
  - Seminar paper
  - Seminar slides
  - Seminar talk
Goals of a Seminar

- Give insights on interesting problems
- Enable acquiring literacy on system architecture
- Practice
  - Presenting scientific topics
  - Discussing scientific topics
  - Writing technical reports
Goals of *this* Seminar

- Provide students with a deeper understanding of operating systems
- Explore operating system concepts and their implementation for various common operating systems
Our Expectations

- You have high motivation for the topic
- You are willing to explore your assigned topic (and to look for the necessary support literature)
- You will present your topic in a report and a talk
- You will attend each talk
Seminar Topics (by OS)

- **BSD UNIX**
  - Inter process communication (1)
  - BSD sockets (2)
  - BSD packet filter (3)
  - 4.3 BSD virtual memory management (4)
  - Volume management (GEOM, Linux dm) (5)

- **Linux**
  - ext2 file system (6)
  - Process, process control block (7)
  - Modules (8)
  - Completely fair scheduler (9)
  - Memory management (10)
Seminar Topics (by OS)

- **Solaris**
  - ZFS (file system) (11)
  - Sun OS virtual memory management (12)

- **Windows**
  - User account control (13)
  - Scheduling (14)
  - Windows driver model (15)

- **TinyOS**
  - NesC (16)
Seminar Topics

• Each topic is coupled to an advisor
  – Will appear on website

• Contact your advisor
  – Send in the slides before the presentation
  – Send in your report
Formalia

- One topic per student
  - Explore topic based on literature (books or internet articles)

- Presentation of the topic
  - 25-30 min.
  - German or English

- Report on the topic
  - ca. 10 pages

- Grading: 50% talk, 50% report
Organization

- Talks
  - Talk preparation time: >4 weeks
  - Prepare a vivid talk
  - Hand in slides at least a week before your talk
  - Schedule:
    - Weekly meetings
    - Starting on June 7th

- Technical reports / summary
  - Until the end of the term (end of July ‘10)
Talk Preparation

- How to prepare for a seminar talk?
  - Prepare in time
  - Study deeply
  - Consult related work if required
  - Explain your topic thoroughly and didactically
  - Restrict your talk to required aspects
  - Do not present every detail
  - Potentially build on previous talks' contents
Talk Preparation

General Approach to giving the talk

1. Understand the topic
2. Adapt it for presentation
3. Prepare the slides
4. Prepare the talk
Understanding the topic

- Read about your topic
  - Search the internet
  - Browse the KIT/CS library

- Understand the key points
  - What is the context of your topic?
  - What are the problems?
  - What are the proposed solutions?

- Take your audience into account
Adapting it for presentation

- Begin with an introduction to give the context
- Outline your talk in the beginning or after the introduction
- Summarize your topic in the end
- Give the hows and whys in between

The Audience
- Will forget most of the talk
- Should still take away the message
Adapting it for presentation

- Only present the key points
- Do not go into detail
- Details are confusing
- Motivate to read related literature instead
Adapting it for presentation

- Common pitfalls:
  - Presenting a paper from front to back
    - Paper is for the archives
    - Presentation is live
  - Making presentation time proportional to your learning
    - Stress key points in the talk
    - Skip over hairy details
Adapting it for presentation

- Your own opinion matters

- You will present someone else's work

- Get an opinion on your own
  - Do you agree?
  - Do you miss anything?

- Express your opinion in the talk

- But mark it as such!
Preparing the slides

- We ask for electronic slides
- We can provide a laptop if required

- Check up-front for compatibility
- Show us your slides before the talk
  - Prevents common mistakes
  - Helps to have an interesting talk

- Arrive early for the presentation
- Make sure the setup is working
Preparing the slides

- Do give slide numbers
  - Eases discussion afterwards
  - Helps audience to follow

- Use a large font sizes (> 20pt, sans-serif)
  - This one is obnoxious
  - This one is way too small
  - This one is still too small
  - This one may be ok sometimes

- Do not clutter your slides
- Only show important text
- Use keywords rather than sentences
- Long sentences in most cases distract the audience from the talk, since people stop listening while they read the text on your slide.
Preparing the slides

- Only one topic per slide
- Leave slide half-empty
- More than one slide per topic is fine
Preparing the slides

- Make slides visually appealing
- Colors for emphasis are fine
- But be careful
  - Avoid certain colors
  - Red on blue
  - Pink on yellow
- Be consistent
  - Same color for same purpose
  - Same font for same purpose
  - Same layout for same purpose
Preparing the slides

- Avoid long lists
- Use pictures
  - Make audience curious and awake
  - Also good for structures

- Use animations
  - Good for algorithms/protocols/sequences
  - but be careful !!!
  - and avoid distraction
  - And do **NOT** animate every Item !!!!!
Preparing the slides

- Example figure (really bad)

<table>
<thead>
<tr>
<th>time [%]</th>
<th>alertness [%]</th>
</tr>
</thead>
<tbody>
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<td>0</td>
<td>100</td>
</tr>
<tr>
<td>10</td>
<td>50</td>
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<tr>
<td>20</td>
<td>15</td>
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<tr>
<td>90</td>
<td>20</td>
</tr>
<tr>
<td>100</td>
<td>95</td>
</tr>
</tbody>
</table>
Preparing the slides

- Example figure (still bad)
Preparing the slides

Example figure (bad)
Preparing the slides

- Example figure (ok)
Preparing the talk

- Perform dry runs
- Make sure you time them
- About 2-3 minutes per slide
- Typically about 10-15 slides (< 20!)
- Better cut it short than going over time
- Ask friends to be the audience
- May find that all/most slides need modifications
Preparing the talk

- Do not memorize the talk
- Do memorize the introduction
  - You are nervous at the beginning
  - Enables a smoother start
- Complicated parts are hard to explain
  - Improvising is difficult
  - Know how you want to convey them
Preparing the talk

- Check your attitude
- Be excited about the subject
- Something will go wrong
- Don't panic
- Audience is forgiving
- Enjoy yourself
Preparing the talk

- Use a pointing device
  - Avoid hiding the slides while pointing
- Let the slides sink in
  - Do not remove them too quickly
  - Do not start talking too early
- Take pauses during complicated parts
Preparing the talk

- Maintain interaction with the Audience
  - Keep eye contact
- Encourage questions
  - Express the audience's interest
  - Help to follow your talk
- “I don't know” is perfectly fine
- Knowing is better, though
Preparing the talk

- Do NOT go over time
- Puts you and your work in bad light
- Be prepared to cut down your talk by several slides
Preparing the report

- About 10 pages
- 10 to 12 pt serif font
- Provide introduction and summary
- Submit as PDF