Student Conference 2014

Scientific Presentations

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(based on slides by Christian Kästner)
Presentations at Student Conference

• 12 min Presentation
• 3 min Question & Answers

• Finish late: cut off
• Finish early: more questions

• 3 Presentations per session
  – Agree on one notebook or prepare/practice to switch
Preparation

• Prepare for a talk!
• Preparation takes time (20x time of actual presentation)
• Do not prepare slides the evening before!
Presenting Scientific Results

• Before writing a paper
  – Present ideas to colleagues for discussion
  – Put your ideas into order
  – Think about visualizations

• After writing a paper
  – Presenting an accepted paper at a workshop or conference
  – Give a rough overview: Problem, Solution, Evaluation
  – Convince audience to read the paper
  – Initiate a discussion (workshop)

• Paper and presentation often do not perfectly align
• (Lecture != Presentation)
Prepare for a very large room
Workshop Room
What makes a successful presentation?

• Facts
  – Content
  – Structure
  – Cohesion / line of thoughts

• Visuals
  – Design of slides
  – Visualizations

• Appearance
  – Body language
  – Language
  – Subjective impression
Goals

• Every presentation has a goal
• Every presentation has several tasks

• Answer these questions first:
  – What is my goal?
  – What is my main point?
  – Why should the audience listen?
  – Why is the topic interesting?
  – Who will benefit from this presentation?
Structure

• Beginning: Connect to audience
  – Introduce yourself
  – Motivate your topic (why should they listen?)
  – Executive summary (main points, main results)
  – (Calm down)

• Middle: Convey information
  – Facts, Arguments, Results, Discussion

• End: Take home message
  – Summarize main points
  – Emphasize consequences
  – Future work
Beginning

- What is the general problem?
- Why is this problem interesting?
- What is the specific problem?
- Why is this problem interesting?
- Which question(s) to answer?
- (State of the art)
- How to proceed and why?
- Goals and tasks?
Middle

- What background knowledge is necessary?
- Which problems need to be solved?
- Which decisions to make?
- Which assumptions/simplifications and why?
- Experiments
- Results
- Interpretation
- Does this answer my hypothesis?
End

• What was the main result?
• How general are these results? (threats to validity)
• What are the consequences?
• What remains open? Which new questions arose? Future work?
• Thank for attention
Typical problems

• Too quick introduction
• Problem remains unclear
• Consequences / results unclear
• Too much “what I did”
• Too little “why did I do this (each step)”
• Too little “what’s the point”
• No connection between thoughts / slides
• Missing cohesion
Technical Hints

• 20 min, about 7 to 15 slides
• Fontsize >= 18, sans-serif fonts (this is 22)
• Name, title and affiliation on every slide
• Slide numbers on every slide
• At most one topic per slide
• Visualization, colors where necessary
• Avoid overfull slides (> 7 objects or > 36 words)
• Avoid full sentences, instead summarize content using headwords.
Structure slide?

• Only if you have something to say
• Maybe only after motivation slides

Agenda

• Problems and Advantages of Preprocessors
• 4 Improvements
  • Views
  • Visual Representation
  • Disciplined Annotations
  • Product-Line-Aware Type System
• Summary and Perspective
Visualizations

- Assists memory
- Assists comprehension
- Emphasizes the content
- More accessible style

If
  - Meaning is clear
  - Visualized content is correct
  - Text is readable
Different kinds of visualizations

Diagrams
Photos
Clip-arts

Private Ausgaben

- Miete
- KFZ
- Versicherungen
- Sparen
- Strom, Energie
- Haushalt
- Urlaub
- Hobby, Freizeit

Preprocessor in Femto OS
Simplify visualizations

- A microprocessor consists of X, Y and Z...
Animation

• Use animation with care

• Use
  – to focus attention (~ laser pointer)
  – to visualize a process / several steps

• Do not use without specific purpose
Animation: Die Todsünde

• Punkt 1  Blah blah blah blah blah blah
  • Punkt 1–1  Blah blah blah blah blah blah
  • Punkt 1–2  Blah blah blah blah blah blah

• Punkt 2  Blah blah blah blah blah blah blah
  • Punkt 2–1  Blah blah blah blah blah blah blah
  • Punkt 2–2  Blah blah blah blah blah blah

• Punkt 3  Blah blah blah blah blah blah blah
Abläufe visualisieren

- Erklärung eines Warteschlangensystems:
Aufmerksamkeit lenken

Bachelor: Anfänger

Bachelor: Fortgeschrittene

Simulation Project

Simulationssysteme

Produktionssimulation

Umwelt- und Unternehmenssimulation

Maste: Anfänger

Diskrete Simulation

Kontinuierliche Simulation

Master: Fortgeschrittene

Advanced Discrete Sim.

Petri-netze

Introduction to Simulation

Simulation & Animation
Checklist for visualizations

• Can text be replaced by visualizations?
• Is the meaning clear?
• Are the facts correct?
• All texts and details readable?
• No unnecessary or misleading elements?
• Does it help comprehension?
You cannot not communicate

conscious level

unconscious level

Information
Body language
Appearance
Personality
Feelings
Where to stand

• Facing the audience
• Not too far away
• Don’t hide the projected image
• Don’t hide behind furniture
Posture

- Upright
- Open
- Relaxed
- Stable
Movement

• Don’t fidget
• Emphasize thoughts with gestures and facial expressions
• Calm, but not fixed
Eyes

• Look at the audience
• Try to look at everybody naturally
• Do not stare at screen/window/corner/floor
Voice / Language

- Slow enough
- Loud enough
- Clear pronunciation
- Enough pauses
- Avoid monotony

- Keep sentences simple
- Don’t read
Timing

• Practice timing
• If faster when nervous plan ahead
• Have a timer during presentation
• Check speed during presentation

• Practice fast and slow version of last 3 slides
Some Last Tips

- Always be prepared
  - Have a PDF version of your slides
  - On at least 2 USB sticks & internet
  - Prepare presentation before the session, usually only one laptop
- Laser pointer hard to see in large rooms -> animations instead
- No dress code in computer science conferences
- Practice timing and phrasing!
Feedback & Grading

• 5 Criteria
  – Motivation an goals clear?
  – Content (structure, cohesion, clarity, conclusion?)
  – Slides (amount, style, visualizations)
  – Presentation & body language
  – Clarity (understandable, slang, missing background inform.)

• Feedback sheet for everybody
Take-away slide

• Prepare for a presentation

• Make goals and motivation crystal clear
• Careful slide layout with visualizations where suitable
• Calm and focused presentation