How to give good seminar presentations - some hints

Friedemann Mattern, ETH Zurich

February 2014

Ubicomp Seminar Topics FS 2014 «Smart Environments»

0. How to give a talk
1. Smart heating: energy savings through occupancy sensing and prediction
   25.02.2014 Marc Hüppin
2. Office of the future: smart workspaces
   04.03.2014 Carlo Beltrame
3. The use of radio frequency signals for sensing, interaction and power transfer
   11.03.2014 Roland Meyer
4. Smart environments without cameras: electrical field sensing for human-computer interaction
   18.03.2014 Marcel Geppert
5. Smart glasses: technology and applications
   25.03.2014 Hermann Schweizer
6. Smart glasses: interaction, privacy and social implications
   01.04.2014 Marica Bertarini
7. Vision-based systems for autonomous driving and mobile robots navigation
   08.04.2014 Lukas Häfliger
8. Domestic robots: a case study on security in ubiquitous computing
   15.04.2014 Thomas Knell
9. Communication with smart objects
   29.04.2014 Dominik Kovacs
10. Smart energy: electricity usage and demand side management in households
    06.05.2014 Ganesh Ramanathan
11. Speech recognition in systems for human-computer interaction
    13.05.2014 Niklas Hofmann
12. Context-awareness and context modeling
    20.05.2014 Sandro Lombardi
    27.05.2014 Adrian Spurr
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Good seminar presentations - why should we care?

- Presentation skills are required in professional life
  - Present yourself, your research, your company, an idea, a product...
  - You are often (implicitly) evaluated based on a presentation

- In the context of this seminar, learn how to present scientific content

- Also learn
  - How to digest different knowledge sources and make a consistent picture out of it
  - To present the result in a structured way, adequate for the audience
  - To make and defend your point in front of a group
The 80-20 rule of presentations

- 80% presentation, 20% content?
  - No!

- Clearly, content is crucial

- But content does not get through if presentation is
  - Confusing
  - Boring
  - Too advanced (or too easy) for the audience
  - Too long (or too short)
  - ...

Outline of this talk

- Basics
- Preparing the slides
- Giving the presentation
Goal: Maximize benefit for the audience

- (For once, you are a teacher!)
- Consider structure, layout, design of the presentation
- What can be assumed the audience knows? What not?
- How can we arouse interest in the audience?
- Maximize knowledge transfer
- Think of your audience – assume you are part of it

When preparing a talk...

- For whom is the presentation?
  - Target audience, knowledge, expectations
- What is the message you want to convey?
- What is the purpose of your presentation?
  - Teach, inspire, sell, convince,...?
- What (technical) equipment do you have available?
  - Room, projector, blackboard, light, ...
- In the context of this seminar, the answers should be given!
Academic presentations

- **Limited time** (e.g., 20, 30, or 45 minutes)
  - Fix your milestones
  - Know when you should be where in your talk
  - Be prepared to questions from the audience delaying your talk
  - Be ready to shorten your talk dynamically

- **Message**
  - A novel scientific result, a report on your and/or others’ work
  - Make clear what is your contribution and what is general knowledge or results achieved by others

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Plagiarism

- Make a clear difference between your results and those of others

- Report all references and cite them properly
  - Briefly in the talk, but fully in the written report

- Plagiarism has many forms
  - Copy & paste without explicit citation
  - Paraphrase of text without reference
  - Unacknowledged adoption of ideas, structure, design, ...
**Keep your presentation prosaic, objective, factual**

- Convince with **arguments**, not with rhetoric
- You are **not a salesperson**

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**Academic presentations (II)**

- Try to **convince**, not to persuade
- Read and use the **literature** in a **critical** way
  - The authors are **almost** always right
- Read and use **different references**
  - Typically, scientific articles are more reliable than information on the Web
- You should **understand 100%** of what your are saying
**Intellectual challenge and clarity of thought**

- Information processing in your head

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**Information processing**

- Use your **own words**
  - Do not paraphrase or just translate from other languages

- Be careful with **foreign languages**
  - E.g., “Operating system” (EN) → Betriebssystem (DE)
  - not: Operationssystem

- Focus on **relevant aspects**
  - Identification of “the” relevant aspects is the most important point
  - But give additional information or go into details when appropriate

- **Avoid abbreviations** and acronyms whenever possible
Preparation

- **Observe** and evaluate other speakers
  - Do they do it well? Why? How?
- **Practice** your talk
  - Make a true “dress rehearsal”

- Test your presentation
  - Animations, colors, ...

- Know your audience
  - Competences, expectations

- Dress properly

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Preparation (II)

- Complete your preparation on time
  - Not just the night before...

- Be on time the day of the presentation
  - Take some time to check projector and laptop configuration
  - What if something does not work?

- Be prepared for spontaneous drawings
  - Clean the blackboard
  - Make sure chalks / markers are available
Be prepared to questions and discussion

- Allow time for it
- Your answers should show that you are competent
  - How you reply to questions could be an important issue when your talk is used to evaluate you (e.g., as part of a job interview)

Outline

- Basics
- Preparing the slides
- Giving the presentation
Slide layout

- Rule of thumb: only one train of thoughts per slide
  - Bullet points / key phrases better than complete sentences

- Slide title should summarize the content of the slide
  - In a meaningful and self-contained way
  - Sometimes people only read the title of a slide
    (→ newspaper headlines)

- For academic presentations avoid logo, name, date, etc. on every slide
  - This is not a sales pitch
  - Adds background noise
  - Risk of drawing off attention from content
  - But: Corporate design?

Slide layout (II)

- Font
  - Sans serif (e.g., “Arial” or “Tahoma”), not such a font
  - Do not mix (too many) different fonts (size / style) on a slide

- Font size
  - Must be “big enough” (rule of thumb?)
    - 12pt, 16pt, 18pt, 20pt, 24pt, 28pt

- Bullet points
  - Do not “exaggerate” (no more than ~7 main items per slide)
Slide layout (III)

- **Avoid overloading** your slides
  - Not meant to provide full content

- Be careful (and frugal) with animations

- No point in quickly browsing through slides
  one has not enough time for presenting

Images, plots, and diagrams instead of text

- *“A picture is worth a thousand words.”*
  - But avoid too striking pictures (unless you want to shock / provoke your audience)

- **Plots / diagrams** must help you in making your point
  - They must be **easy** to explain / understand

- **Photographs** convey **emotions,**
  graphics and **drawings** convey **exactness**
Schemes and graphics, an example

A cluster has the following form:

ident = CLUSTER [parms] IS ident
cluster_body
END ident
cluster_body = REP = type_spec
routine {routine}
routine = procedure

Much better:
- Striking
- Less text
- Less forward references

The power of colors
Outline

- Basics
- Preparing the slides
- Giving the presentation

Start with an outline of the talk?

- A matter of taste
- Do not spend too much time explaining the outline
  - High risk of boring your audience
  - List few, self-explaining items
- A (negative) example:
  - Introduction [Necessary?]
  - Topic 1
    - Subtopic 1 bla bla [Avoid nested bullet points in the outline!]
  - Topic 2
  - ...
  - Topic 7 [too many items!]
  - Summary [Necessary?]
Make a good start

- Be happy!
- Look at your audience
  - Not at slides, laptop, window, ...
  - Not at one single person (e.g., professor)
- Friendly start of the talk
  - Welcome
  - Present yourself
  - Present your topic
  - If applicable, put your presentation in context
    (e.g., relation to previous presentations in the seminar)

Beware of yourself!

- Look
  - At your audience
- Speak
  - Slowly (enough)
  - Loud (enough)
  - Fluently
  - Free (do not memorize your talk!)
  - Pause if necessary or appropriate
- Move
  - Slowly (avoid hopping around)
  - Use your mimic (hands / body)
  - Do not stand between the projector and the projected area
During the presentation

- **Engage** with your audience
  - Eye contact
  - Questions
  - Provocations, contradictions, surprises? (risky, but effective)

- **Motivate** your audience
  - Why is your presentation worth listening to?
  - Why are you worth listening to?

- **Remain authentic**, stay calm, be flexible
  - Be ready to react to questions, interruptions

Almost done

- Do not leave important questions unanswered at the end of the presentation
  - Open issues should be explicitly addressed (e.g., future work)

- Provide a summary of the main message of your presentation
  - Try to close the circle: link the results at the end to the motivating questions at the beginning

- Make clear that the end of the talk has come
  - Keep on looking at the audience
  - Thank and the audience
  - Ask for questions
Summary

- Understand your topic
- Be well prepared
- Structure and balance your talk well
- Think of your audience
- Keep the time
- Stay calm, be flexible
- ... and it will be a great success!!

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Pictures from: www.leander.lib.tx.us/LILT/oting and www1.ku-eichstaett.de/PPF/PDMueller/erntechvener/