

Visualizing and Presenting in Research and Teaching

How to prepare a presentation

Jan-Philipp Söhn

jp.soehn@uni-tuebingen.de

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Course Goals

- How to prepare scientific content for a presentation
- **How to prepare a presentation**
- What are the tools for visualization and how to use them
- How to layout slides
- How to prepare slides with PowerPoint and L^AT_EX



Plan your route...

- What do I want?

- What are the needs of the audience?
- Which content is important for them?
- How can I optimize the presentation?
- Make a mind map...

<http://freemind.softonic.de/> OR <http://www.mindmeister.com/>

- ... or a concept map

<http://cmap.ihmc.us/>



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- A talk is a “social situation”
- You have to render a topic receptive
- You have to render the audience receptive



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- What is the take-home-message?
- Are there key-visuals? (see next slide)
- Intro – Identification – Fascination – Projection



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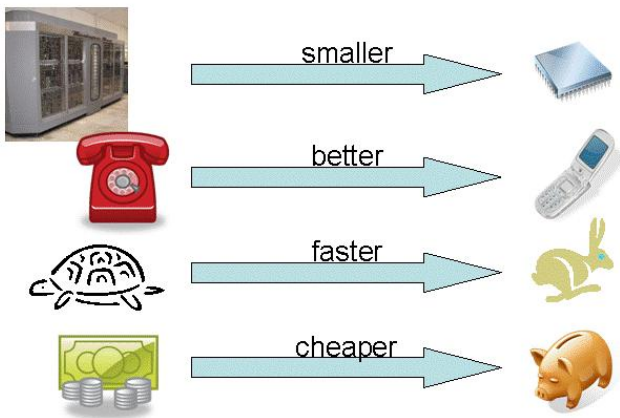


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How can we develop



technologies ?



- Choice of contents – don't say everything you know
- Realistic number of slides (reserves for details)
- What might help is a script:
 - Theme:...
 - Text:...
 - Picture:...
 - Key-words:...
 - Interaction:...
- Make an outline:



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Agenda

- 1 Introduction
- 2 Data and Definitions
 - Selection of Listemes
 - The Coll-Module
- 3 Analysis of the Data
- 4 Previous Approaches
- 5 Conclusion and Prospects



In the beginning... (Intro)

1 Arouse interest

- Citation or motto
- A provocative question or a contradictory statement
- Mental exercise
- Event from the news
- Strive for sympathy

2 Emphasize the benefit

- What is new?
- What are the advantages compared to previous approaches?

3 Give an overview

4 Show contiguity



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Main Part (Identification and Fascination)

- Do not say everything you know
- Adhere to a clear structure and make it transparent
- Formulate comprehensibly
 - Short sentences
 - Avoid pronouns
 - Avoid too many abbreviations, explain them
 - Do not boast with numbers/statistics
- Make your story vivid
 - Ask (the right) questions
 - Give examples, comparisons, analogies



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Happy End (Projection)

- The end is important – will be remembered best
- Give a short summary of the main points
- Prepare some questions (if applicable)



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Manuscript

- Written out or keyword – intermediate forms
- Again: mind map
 - For yourself
 - On handout (map of topic and structure)



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Visualization

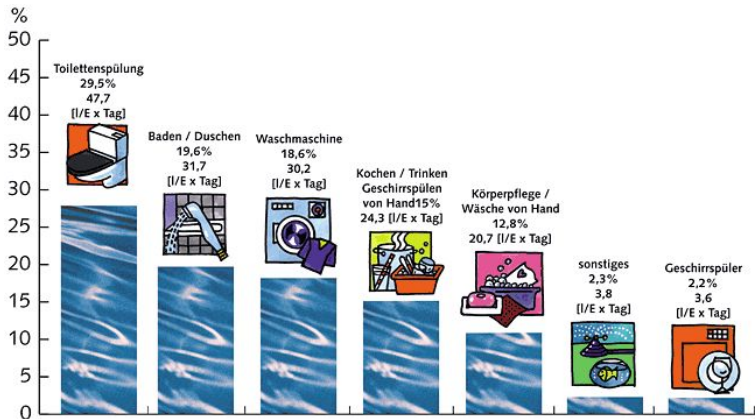
The term visualization may refer to:

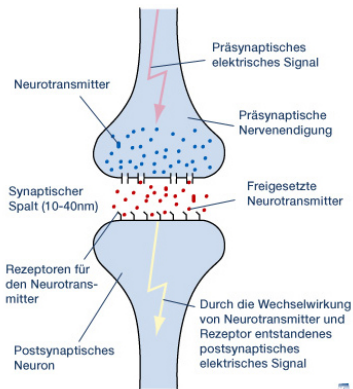
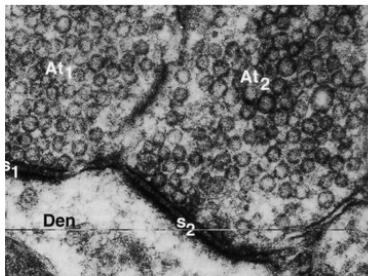
- Visual representation of information, data, or knowledge
- Illustration (images, drawings)

Why Visualize?

- Motivate
- Help to remember
- Help to understand







How Visualize?

Numbers & Diagrams

- Structure (pie)
- Order, Ranking (horizontal bars)
- Timeline, frequency (vertical bars, lines)
- Correlation (horizontal bars to left/right)
- Beware: manipulation!



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How Visualize?

Tools: Blackboard

big surface
easy erasing/correcting
stepwise developing
collecting items
giving examples

cannot be saved
tedious
turned away from audience
one has to speak louder
dusty and noisy

Whiteboard: cleaner, sometimes more colors



How Visualize?

Tools: Flipchart

sheets can be prepared in advance
portable
sheets can be hanged on the wall
colored pens

turned away from audience
one has to speak louder
smaller surface
no erasing



How Visualize?

Tools: Overhead projector

Slides should motivate audience to listen and enable them to comprehend and memorize

slides are prepared
slides can be copied
turned towards the audience

Beware of slide-slingers!
difficult handling (slides)
dazzling



How Visualize?

Tools: Beamer

slides are prepared
slides can be copied
turned towards the audience
multimedia
portable

Beware of slide-slingers!
difficult handling (tech)
dazzling



How Visualize?

Tools: Smartboard

stepwise developing
“screens” can be saved & printed
interactive presentation
multimedia

difficult to use?
~ 2.500,- EUR (w/o Beamer)



