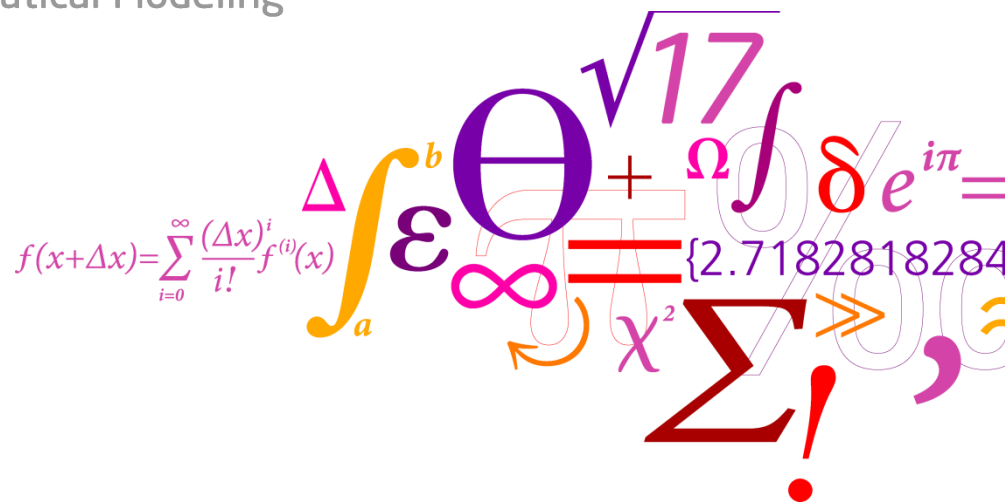# Software Engineering 2
A practical course in software engineering

Ekkart Kindler
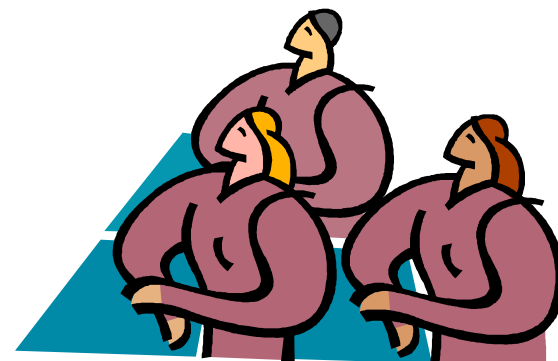
DTU Informatics
Department of Informatics and Mathematical Modeling

$$f(x+\Delta x)=\sum_{i=0}^{\infty}\frac{(\Delta x)^i}{i!}f^{(i)}(x)$$

Giving good talks!
But how?

DTU Informatics
Department of Informatics and Mathematical Modeling

Theses

- ~~Giving good talks is a matter of talent~~

- Everybody can learn how to give good talks

- Giving good talks
  - is a matter of attitude
  - is a craft
  - is a matter of practice
  - is hard work

> Main point of this talk!

Theses

- Science is
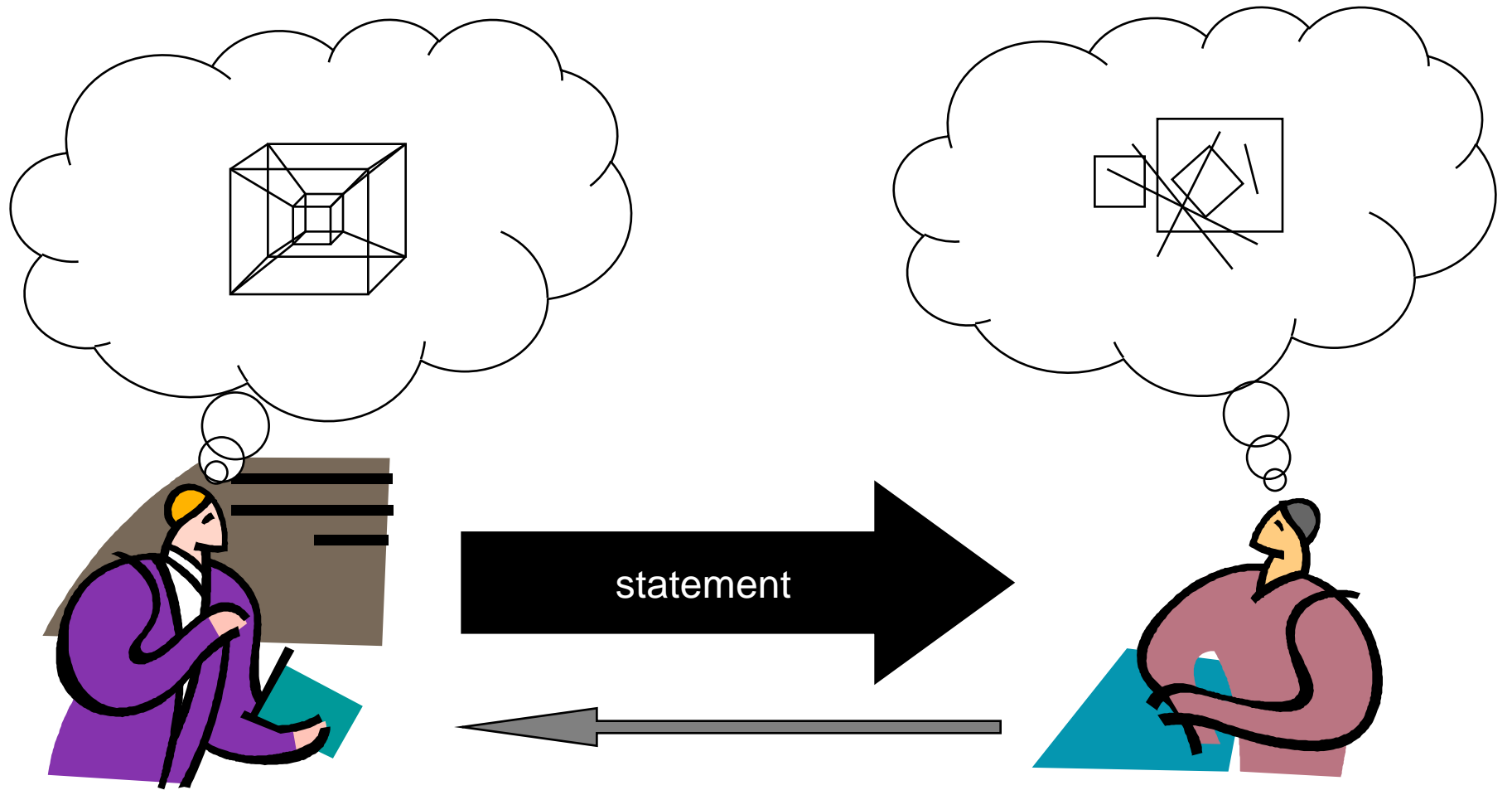
    producing results and communicating **then**

- Giving good talks will push your career

- Giving good talks is fun

- …

Talks are communication

statement

Talks are communication

statement

Four sides of a statement
(after Schulz von Thun)
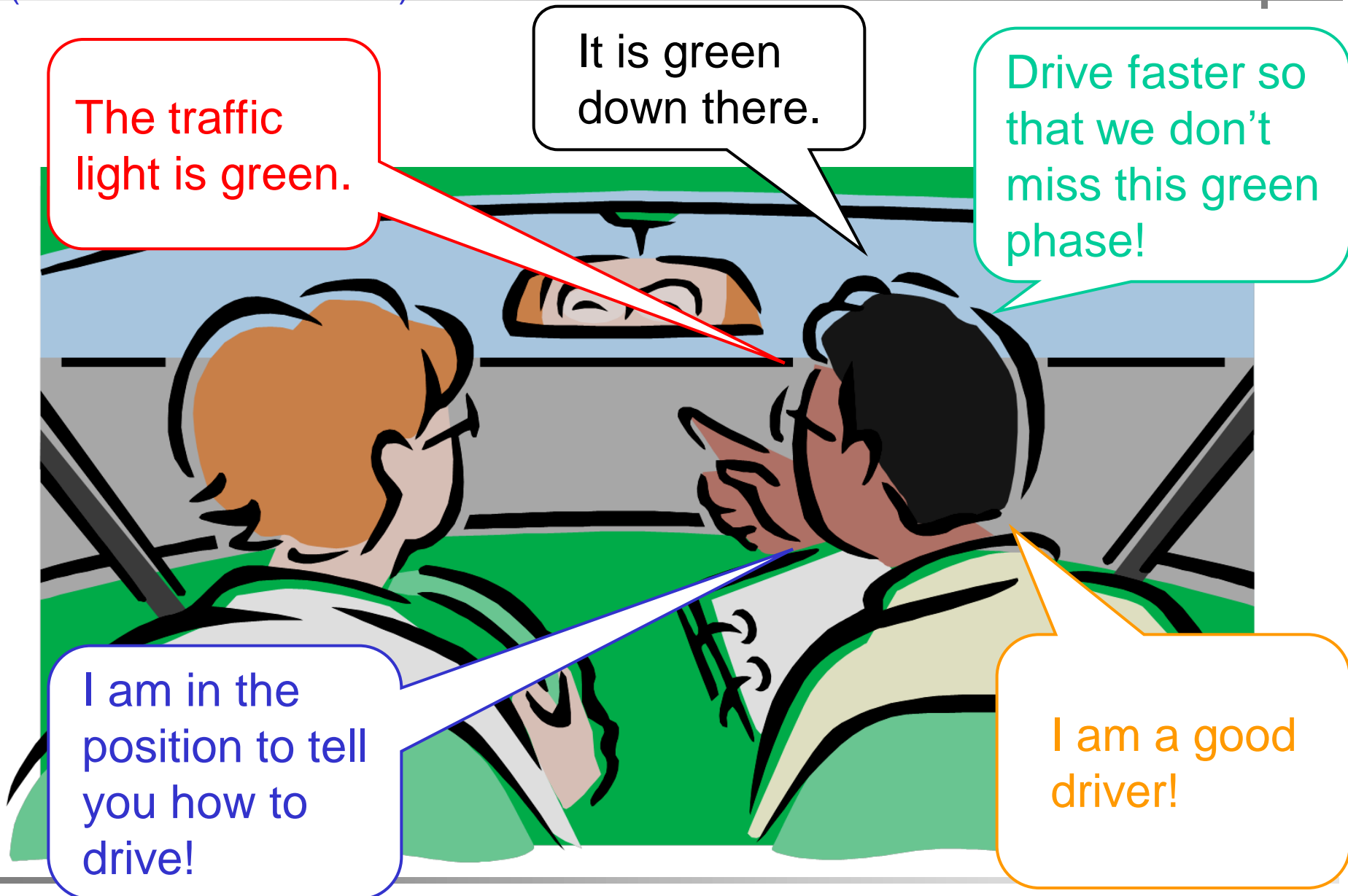
Four sides of a statement
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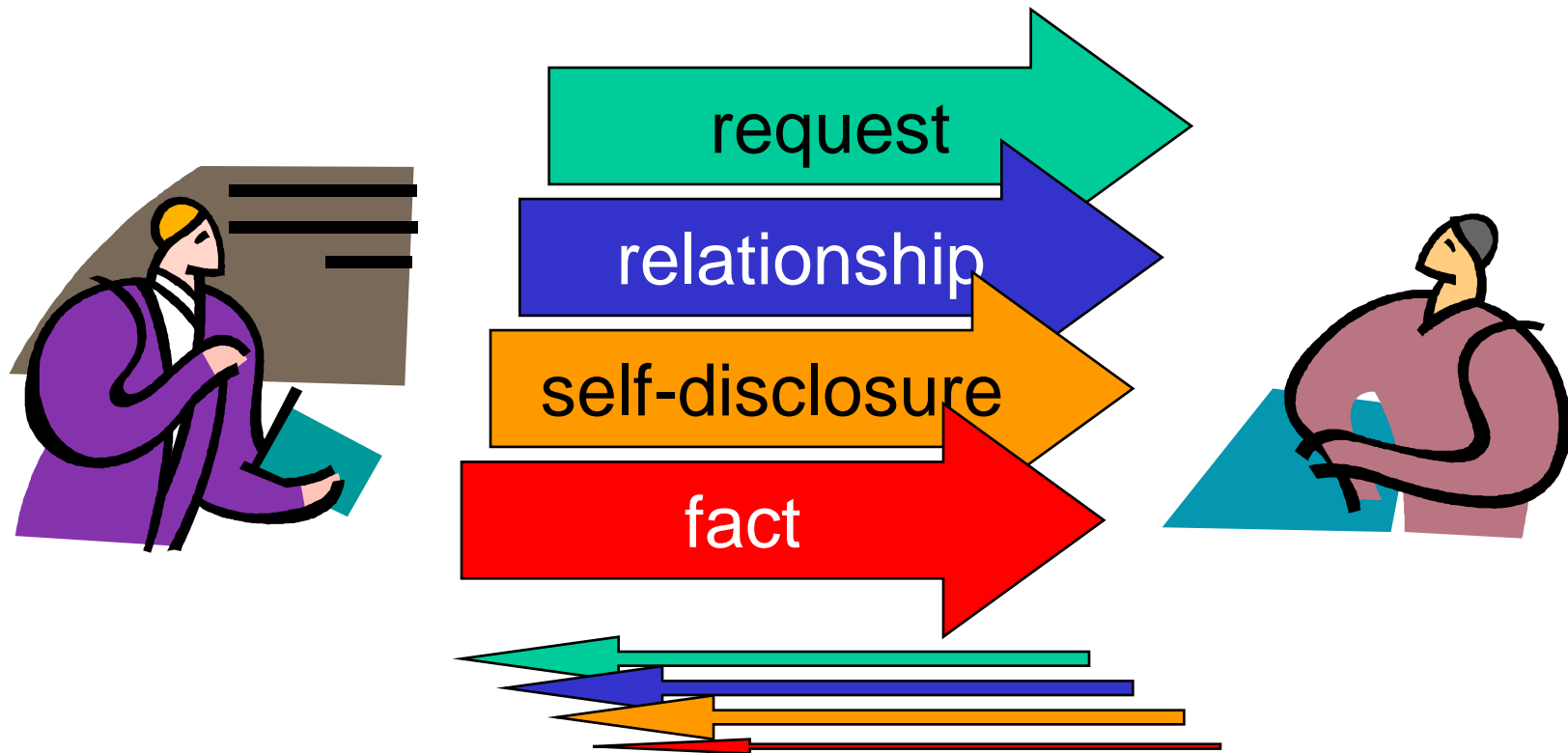
3 level are often forgotten

what about

what for

what

how

Theses
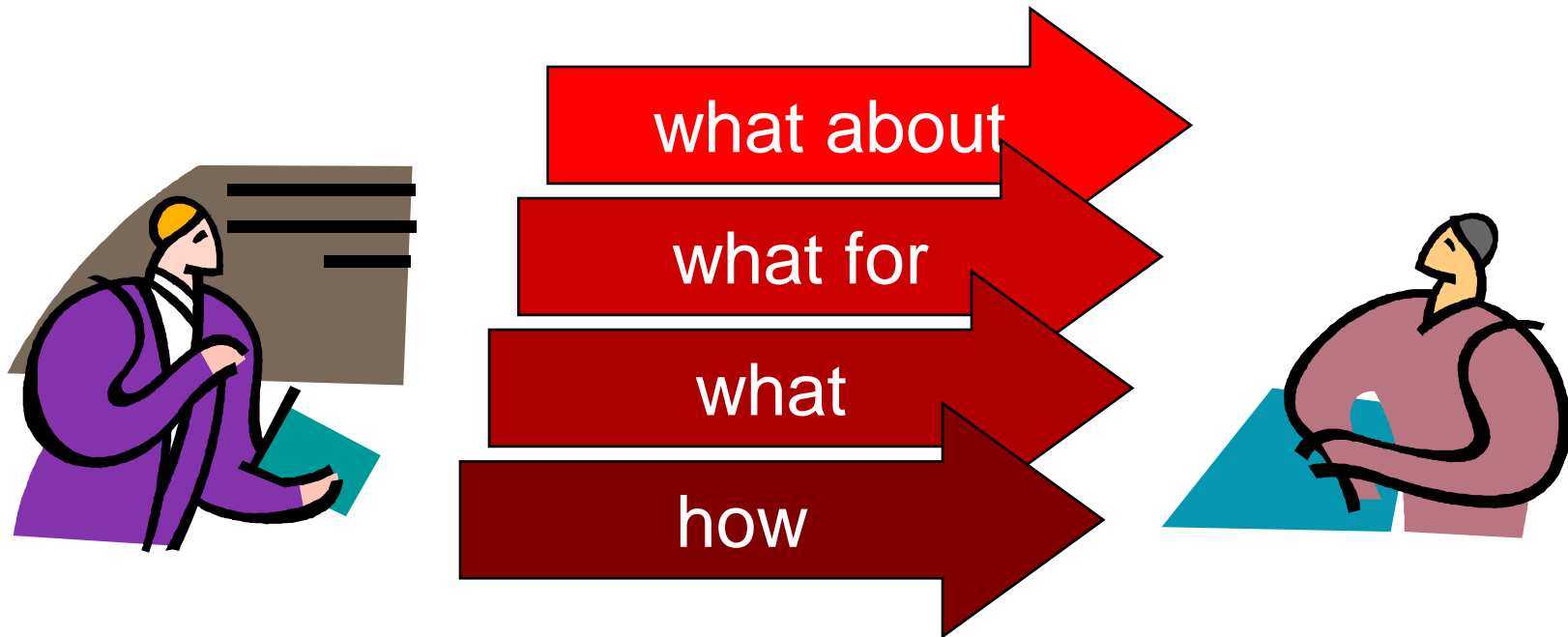
- Good talks need a motivation

- Good talks need a message

- Good talks are focussed on the audience
  - expectations
  - background / education
  - learning curve
  - attention

Reasons (Motivation)

- "Have to do it"

- Convey facts

  fact

- Convince about contents

  request
  fact

- Enthuse audience

  request
  relation
  self-disclosur
  fact

Giving talks is a "show"
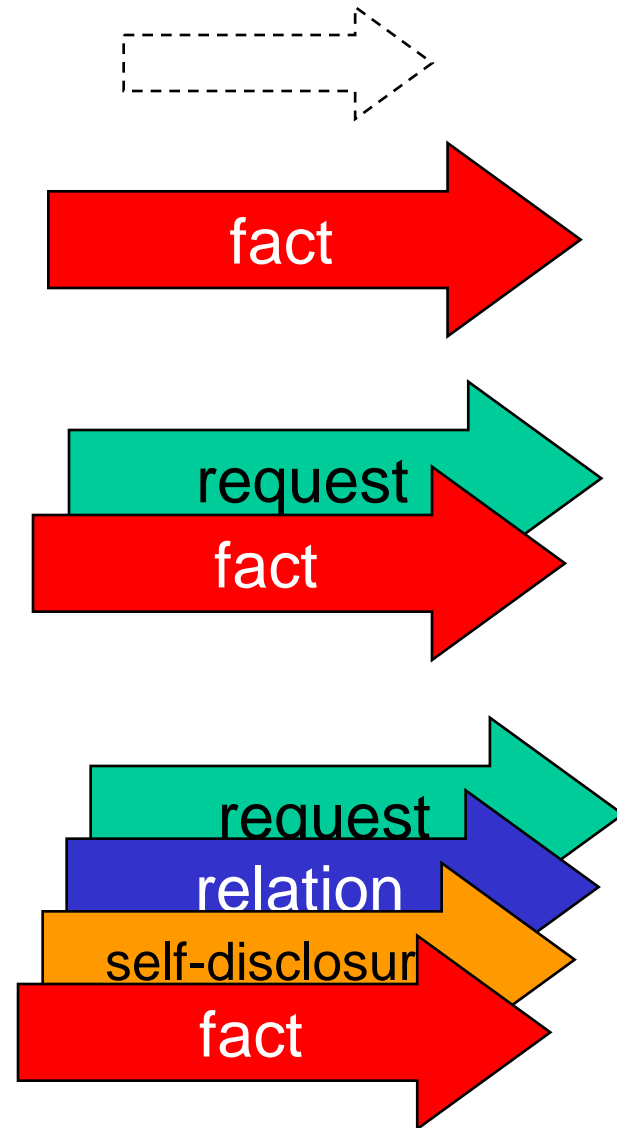
A good talk is more like an advertorial (for an idea or the contents) than an encyclopaedia or a user manual!

Disclaimer: This does not mean that there should not be any contents!!!
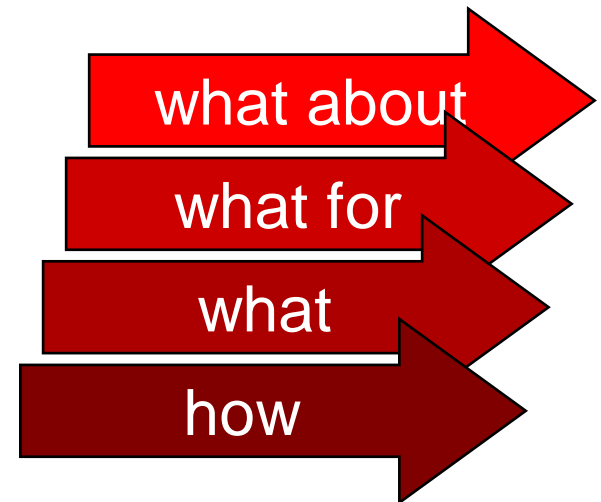
what about

what for

what

how

Overview

- Introduction
  - Motivation
  - Fundamentals
- **Phases of a talk**
- Guidelines for talks
  - Principles
  - Rules for good talks
  - Do's and don'ts
- Conclusion

Phases of a talk

- Define objective of talk
- Understand subject

- Analyse audience
- Analyse conditions and parameters

- Select contents
- Structure contents

- Prepare slides (or other media)
- Prepare keywords and manuscript

- Rehearse the talk (go through it)

- Prepare the room
- **Give the talk**

- Answer questions

Define objective

- Which idea or sentence should the audience carry away?

- What is the point of the talk?

Golden rule:
One talk, **one** point!

- Identify important concepts and terms

- Set priorities

- Check dependencies and relationships

Rules:
Leave out, leave out, leave out!

Structure contents

- Find an "exciting" plot

> **Rule**:
> omit everything that does not fit into the "plot".

- Make a detailed table of contents (sections, subsections, points)

> **Golden rule**:
> **One** section, **one** point!

Prepare slides

- Visualize point

Golden rule:
One slide, **one** point!

- Look for illustrations and metaphors

- Change media

- Be creative

Phases of a talk

- Define objective of talk
- Understand subject

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- Analyse conditions and parameters

- Select contents
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- Prepare slides (or other media)
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- Answer questions

Be prepared for questions!

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Principles

- **inductive** vs. deductive

- **graphical** vs. textual

- **repetition** vs. omission

- **leading** vs. leaving alone

Golden rule:
Examples, Examples, Examples!

Giving a talks is generating "images in the mind of the audience"!

Rule:
The audience does not know what you do not say.

Rule: Structure

- ## Clear structure and orientation

    - Introduction / motivation

    - Main part

    - Conclusion / summary

- ## Running example Running illustrations

Rule:
Say,
what you will do,
what you do,
do it, and say
what you have done –
and why.

what about

what for

what

how

Rule: Illustrations

- Use illustrations and metaphors

Not for their own sake, **but** for making a point!

- Bullet slides will be boring soon

- Images make quick connections
  (quick recognition of earlier statements)

request

relation

self-disclosure

fact

what about

what for

what

how

Rule: Composition of slides
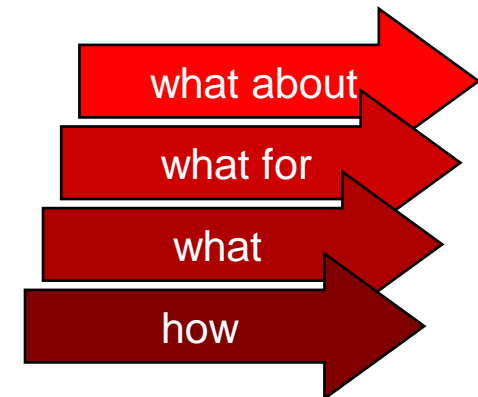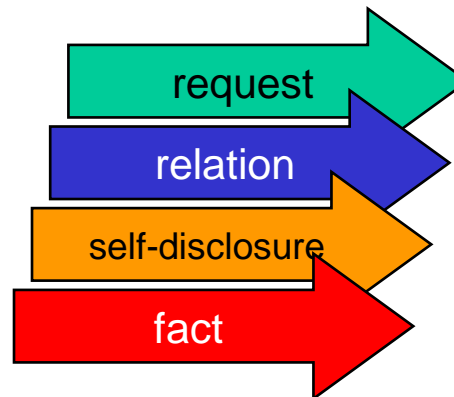
- Clear slides
    - headline is the "point"
    - readable Font ($\geq$ 20pt, no Serifs)
    - max. 7 lines per slide
    - no full sentences
    - deliberate use of colours
    (few, visible, meaningful)

Red and green cannot be distinguished by some audience; Blue is better than red.

Rule: Animations

- ## Animations
    - deliberately
    - economically

At the end of the talk, the audience should remember the point of the talk and not the animations.

Rule: Rules

- **Rules may be violated**
    - in few cases
    - deliberate
   - and on purpose

If you break a rule, you should know it—and why!

Tips

- no "table of contents" slide at the beginning (but maybe later)
- no "thank you" slide at the end (rather some contents)
- don't waste space for "gadgets"

- modulate voice
- make breaks (already in the beginning)
- watch your audience and try to interact

- plan for buffer times
- announce the end of the talk

Tips

- change level of abstraction

what about

what for

what

how

- plan for „re-entry" points and make them explicit
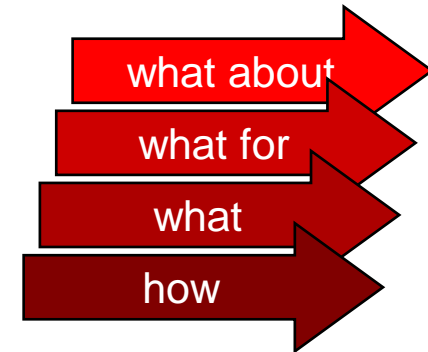
- Introduction
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  - Fundamentals
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- Guidelines for talks
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  - Do's and don'ts
- Conclusion

- Change sides

request

relation

self-disclosure

fact

Tips
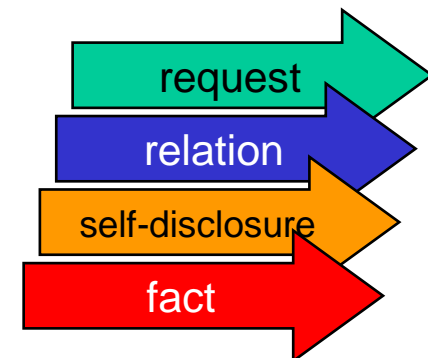
- Be creative when structuring the talk
    - not necessarily the structure of a paper
    - problem is sometimes more interesting than the solution
    - start with "last" slide
    - pose puzzles
    - don't reduce your talk to the beamer area
    - …

- Simplify (and, if it servers a purpose, "oversimplify")

- Let your talk "mature"

Frequent mistakes

- too many points

- no (resp. unclear) point

- missing plot

- too many details

- implicit assumptions

Golden rule:
One talk, **one** point!

Frequent mistakes

- **too full slides** / too small fonts

- **unreadable** / **not distinguishable** colours

- **Monotony / „bullet point slides"**

- **confusing animations**

Golden rule:
Recurrence is the mother of all learning!

- **implicit references to earlier slides**

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Conclusion

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- Everybody can learn how to give good talks!

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  - is hard work

> Try to think from the audience's point of view.

> User your chances in this course.

Literature

Hermann Will

Mini-Handbuch
Vortrag und Präsentation

Weiterbildung

Für Ihren nächsten
vor Publikum

BELTZ
Taschenbu

go
...

Peter Mohr

Erfolgreich
vortragen und
präsentieren

Friedemann Schulz von Thun
Johannes Ruppel
Roswitha Stratmann

MITEINANDER
REDEN:
Kommunikationspsychologie
für Führungskräfte

Sachbuch

More references on the WWW
`http://www.upb.de/cs/kindler/`
`Lehre/Praesentation/Literatur.html`
(some are in English)