

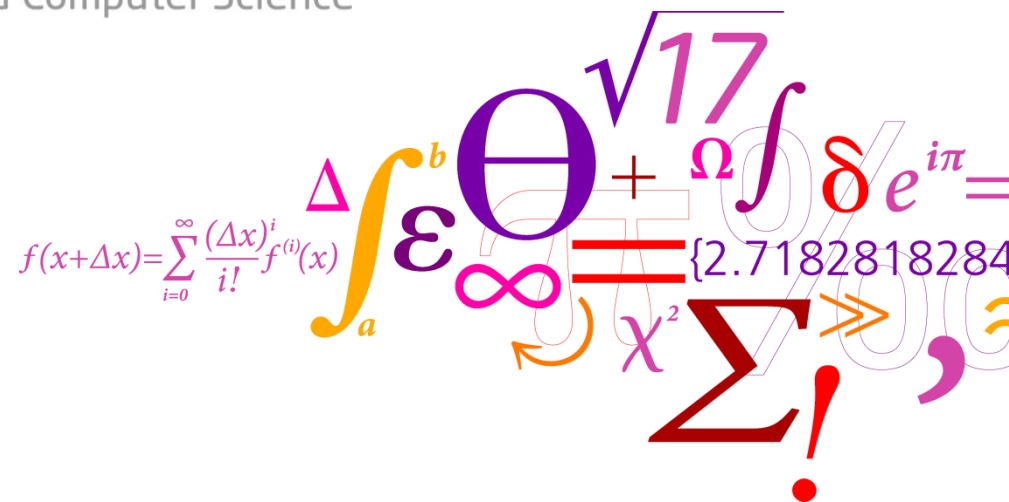
# Software Engineering 2

## A practical course in software engineering

Ekkart Kindler

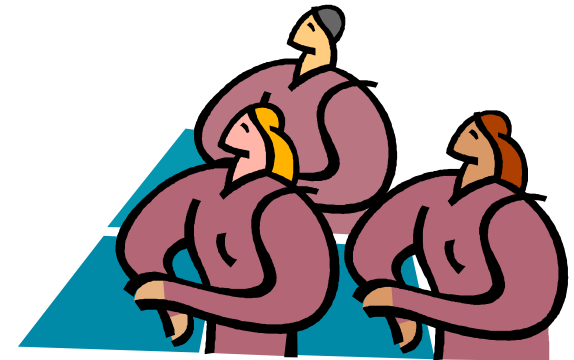
DTU Compute

Department of Applied Mathematics and Computer Science





# Giving good talks! But how?



**DTU Compute**

Department of Applied Mathematics and Computer Science

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

$$\Delta \int_a^b \varepsilon \Theta^{\sqrt{17}} + \Omega \int \delta e^{i\pi} = \{2.7182818284\}$$

$$\infty = \chi^2 \sum! >>$$

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

Typically, at this point, it is too early for such a slide! Wait until after the motivation!

**Tip:** Do not talk about this slide! Just show it on a second projector!

- ~~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!

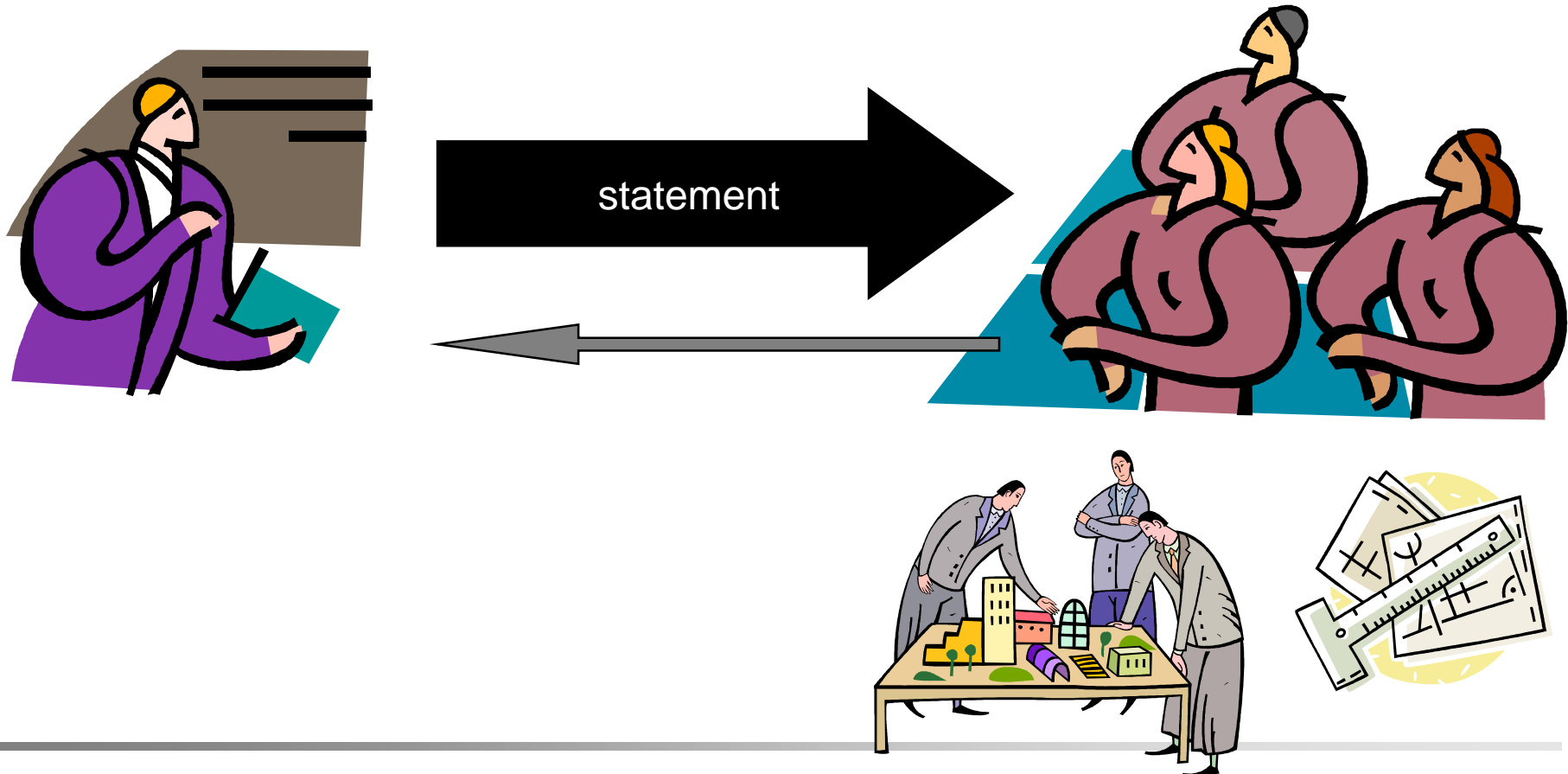
# Theses

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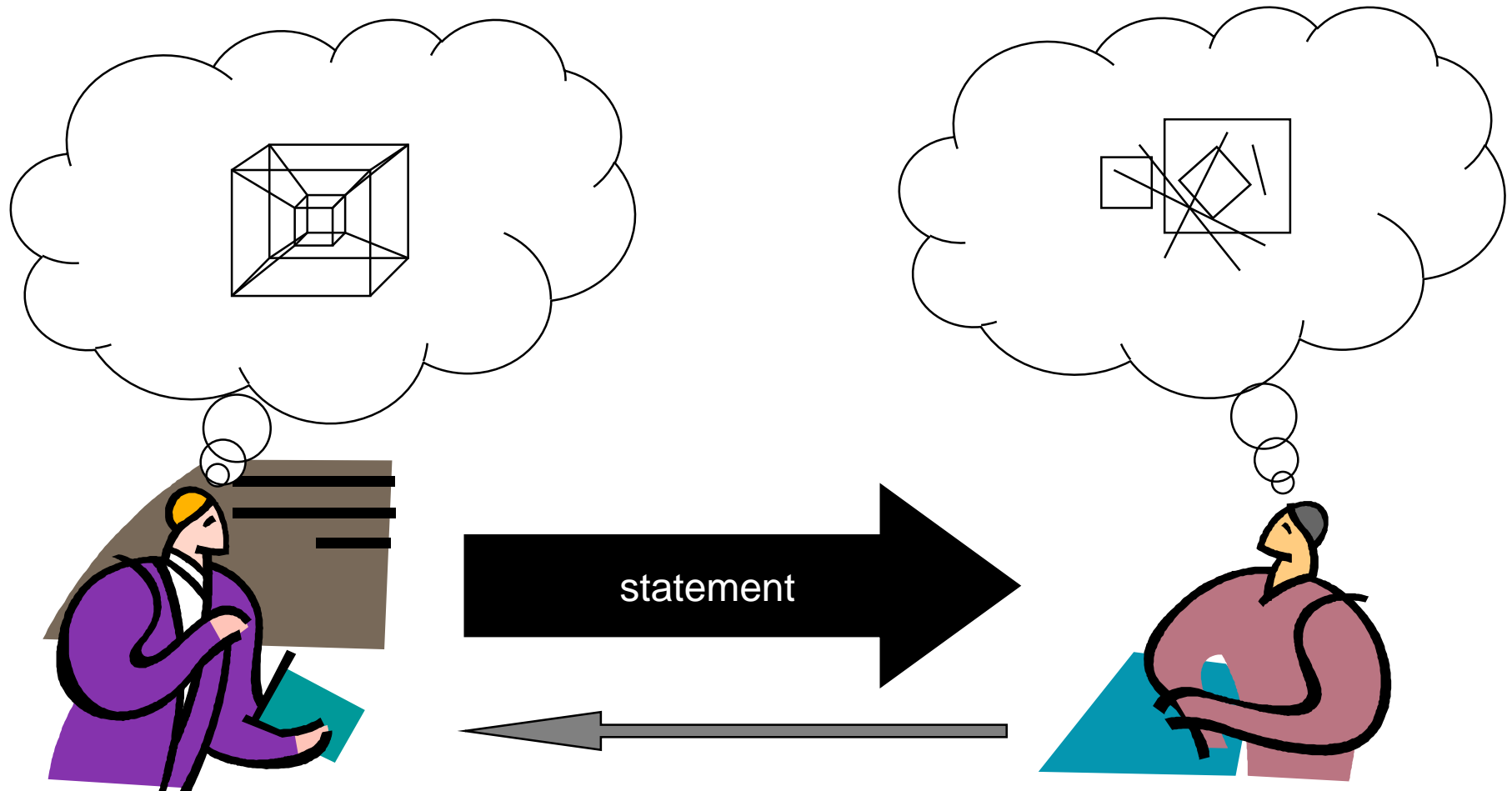
- Science is  
producing results and **communicating** them
- Giving good talks will push your career
- Giving good talks is fun
- ...

And the same goes for software development: Produce useful software and **talk about it!**

# Talks are communication

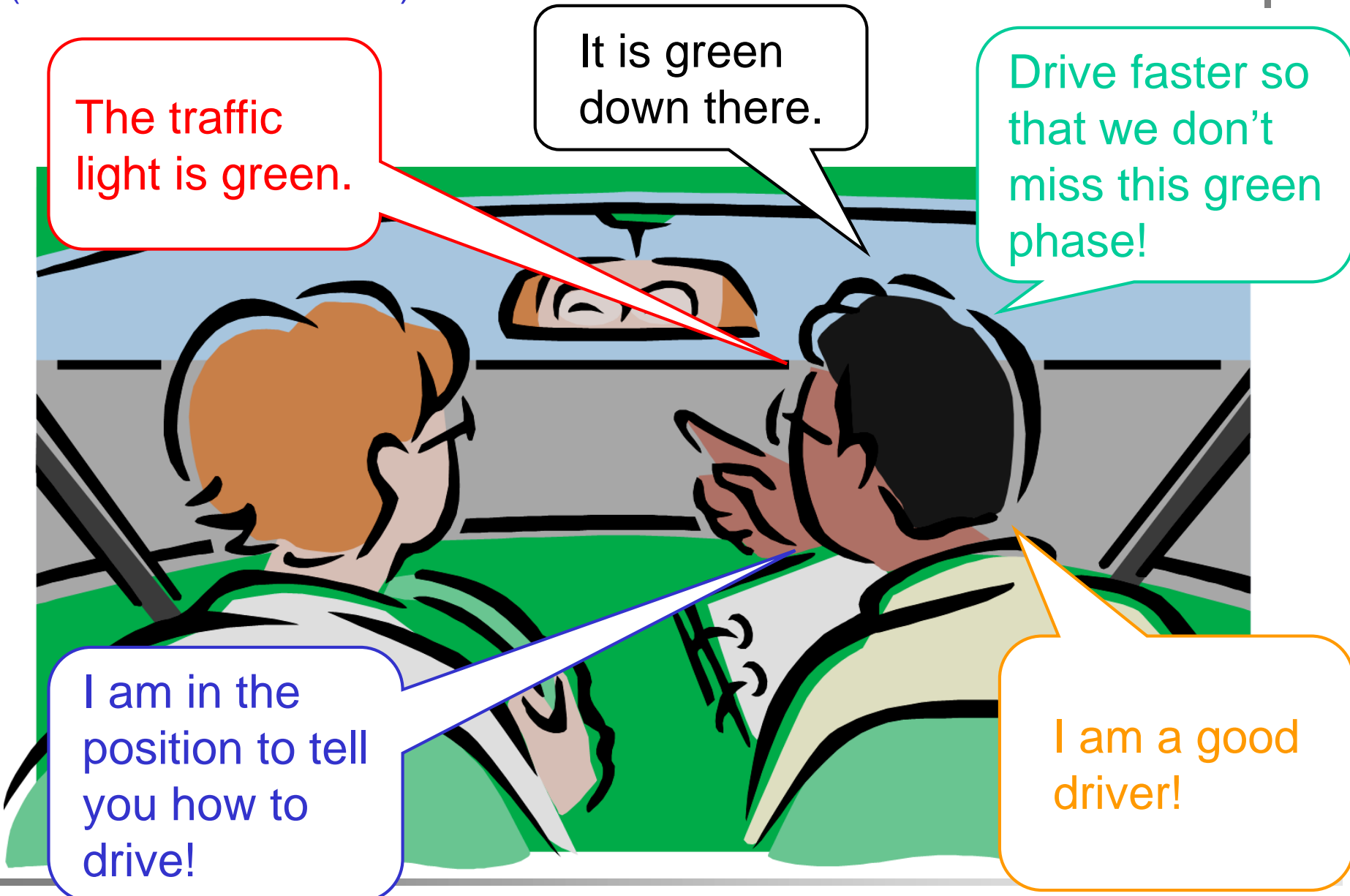


# Talks are communication



# Four sides of a statement

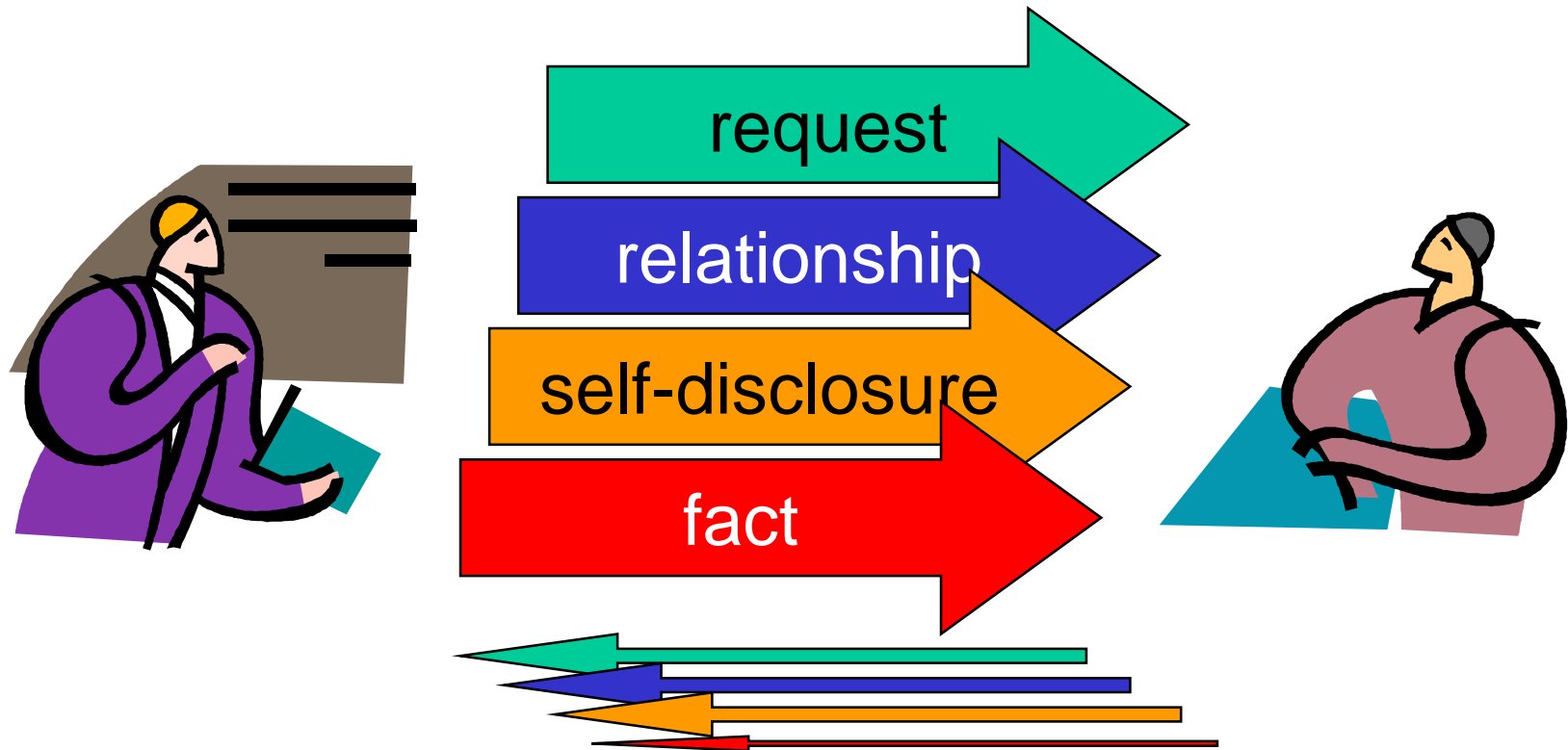
(after Schulz von Thun)



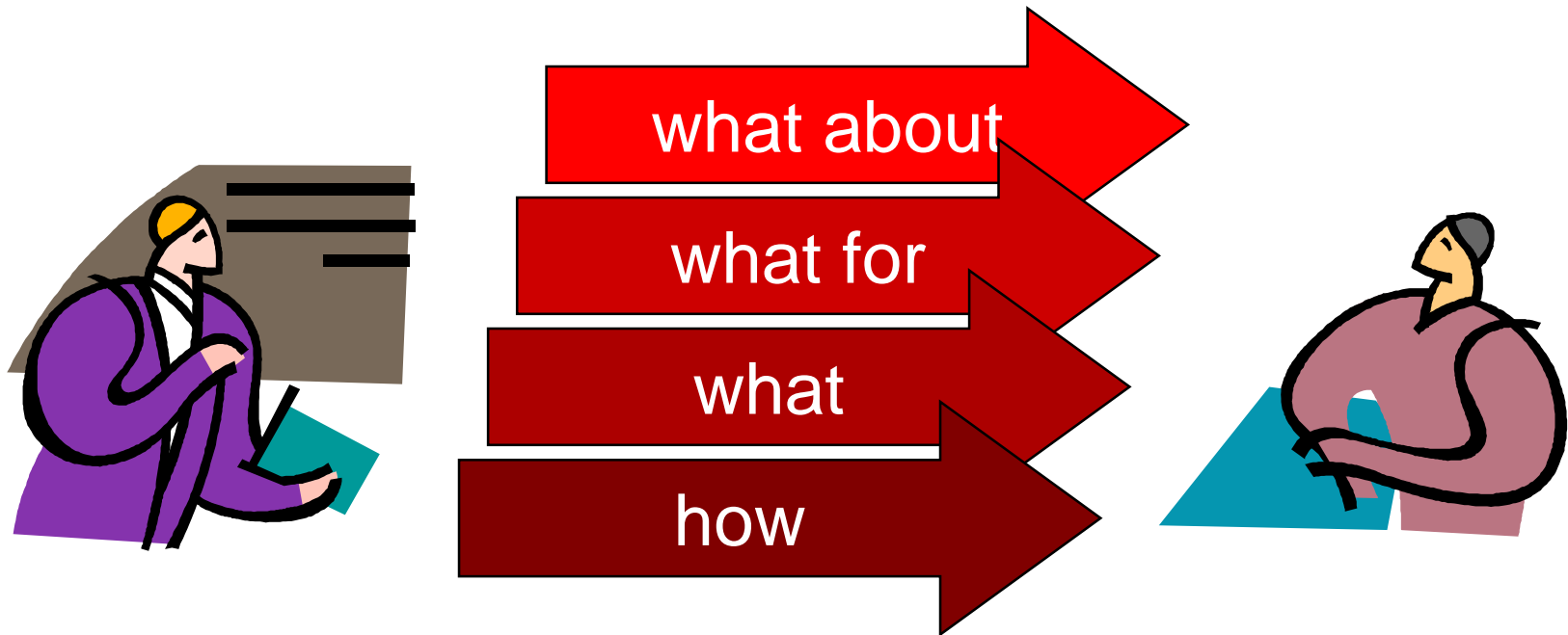


# Four sides of a statement

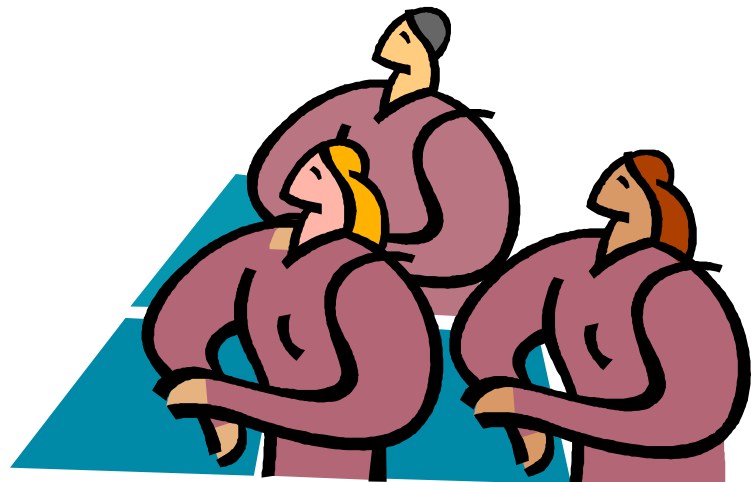
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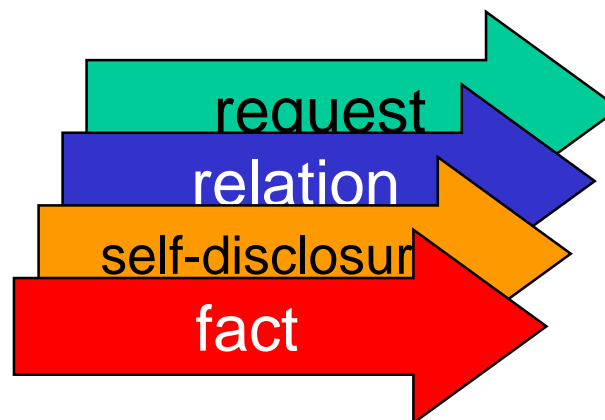
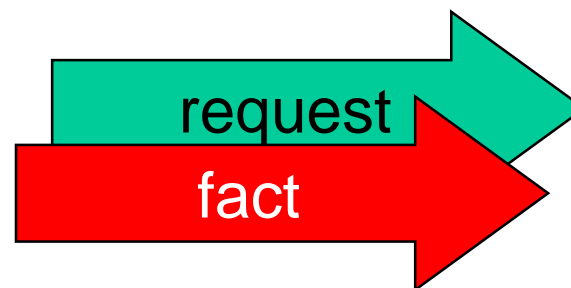
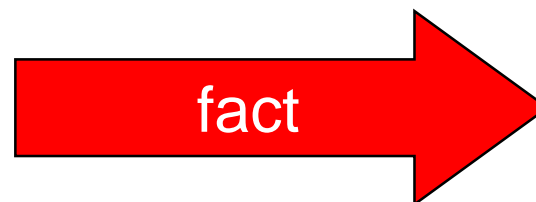
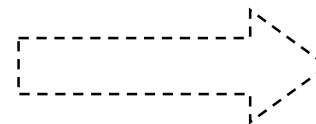
3 level are often forgotten



- Good talks need a motivation
- Good talks need a message
- Good talks are focussed on the audience
  - expectations
  - background / education
  - learning curve
  - attention

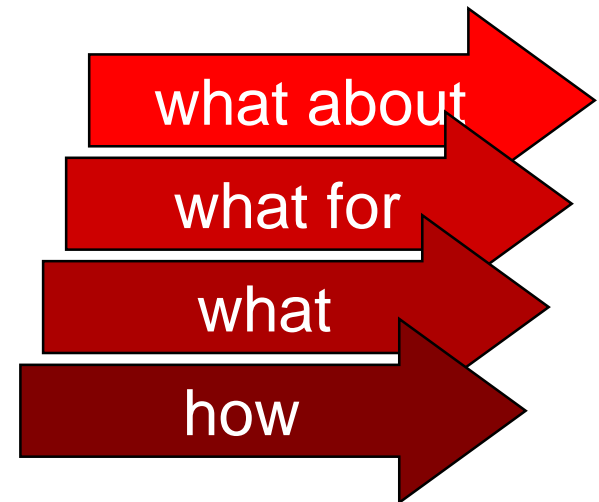


- “Have to do it”
- Convey facts
- Convince about contents
- Enthuse audience



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!!!



- Introduction
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- 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

- Which idea should the audience carry away?
- Which slogan should the audience remember?
- 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!

- Find an “exciting” plot

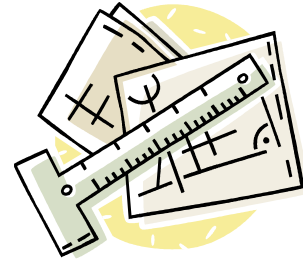
**Rule:**  
omit everything that does  
not fit into the “plot”.

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

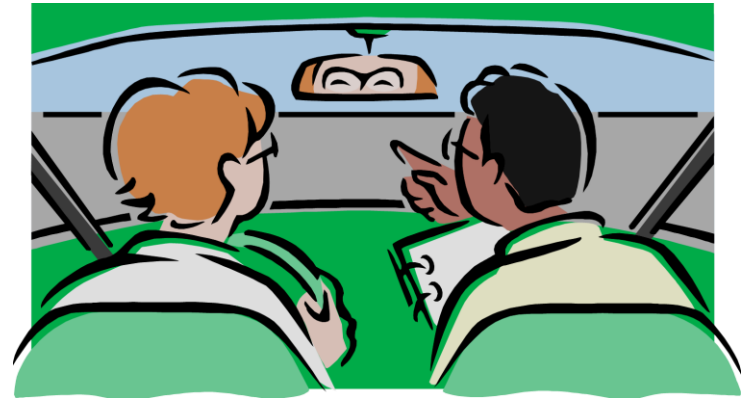
**Golden rule:**  
**One section, one point!**

- Visualize point

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



- Look for illustrations and metaphors
- Change media
- Be creative



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- Understand subject
- Analyse audience
- Analyse conditions and parameters
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“Be there”!

Be prepared for questions!

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Remember:  
Giving talks is  
a craft.

- inductive vs. deductive
- graphical vs. textual
- repetition vs. omission
- leading vs. leaving alone

**Golden rule:**  
Examples, Examples,  
Examples!

Giving a talk is  
generating “images in  
the mind of the  
audience”!

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

- 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

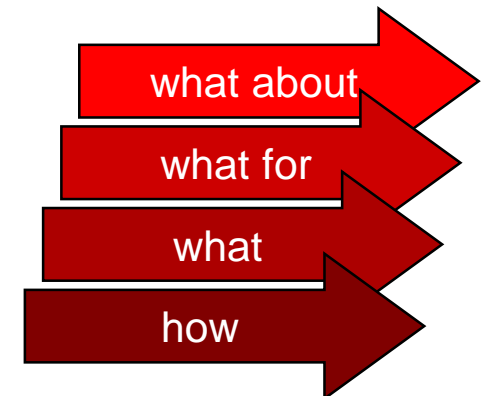
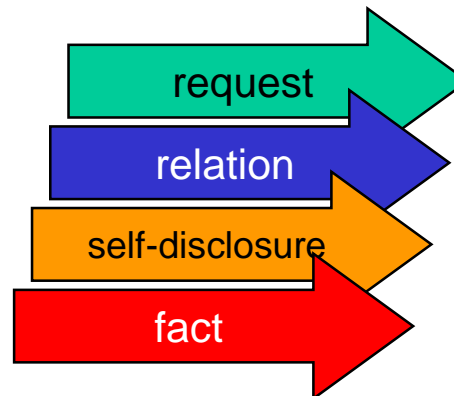
what

how



- Use illustrations and metaphors
- Bullet slides will be boring soon
- Images make quick connections  
(quick recognition of earlier statements)

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



## ■ Clear slides

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

**Red** cannot be distinguished by some audience;  
**blue** is better than **red**.

- Animations
  - deliberately
  - economically

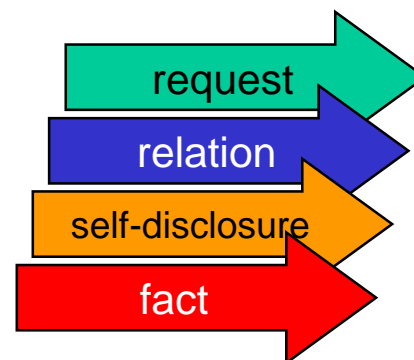
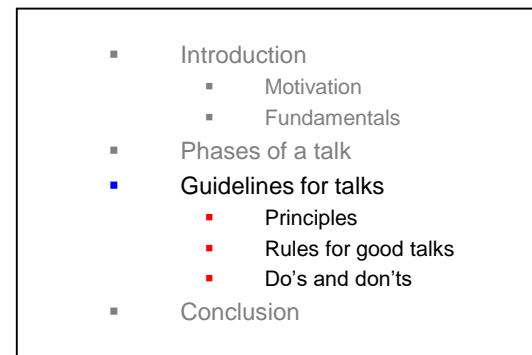
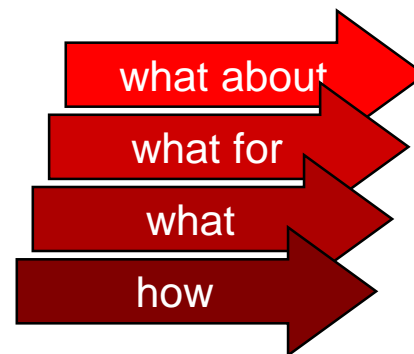
At the end of the talk, the audience should remember the point of the talk and not the animations.

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

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

- 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

- change level of abstraction
- plan for „re-entry“ points and make them explicit
- Change sides (of a message)



- Be creative when structuring the talk
  - not necessarily the structure of the report
  - problem is sometimes more interesting than the solution
  - start with “last” slide
  - pose puzzles
  - don’t reduce your talk to the area of the projector
  - ...
- Simplify (and, if it serves a purpose, “oversimplify”)
- Let your talk “mature”

- too many points
- no (resp. unclear) point
- missing plot
- too many details
- implicit assumptions

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



- too full slides / too small fonts
- unreadable / not distinguishable colours
- monotony / „bullet point slides“
- confusing animations
- implicit references to earlier slides

**Golden rule:**  
Recurrence is the  
mother of all  
learning!



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  - is hard work

Think from the audience's point of view.

User your chances in this course

Cicero: Poets are born, Orators are made!



- **More material in English**

Olivier Danvy: *Communication in Computer Science: Reviews, Papers, and Talks.*

<http://cs.au.dk/~danvy/tips-and-tricks/index.html>