On case studies (in JCSE)

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What are case studies in JCSE

- A 'longer', educational (but realistic) example that is used throughout the lecture to illustrate some (most?) of concepts introduced during the lecture

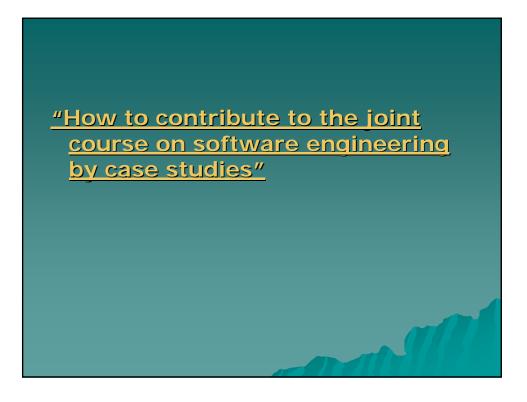**Case studies are important!**

- Currently:

  - **- Without them the lectures would be boring, not 'good-enough', not realistic, too theoretical, full of do/don't do lists, ...**

  - **- The existence of case-studies are one of the main differences bewteen JCSE and similar courses**

  - **- They provide a good basis for realistic and sensible assignments**

Why do we need more?

- The course can be more flexible by exchanging the case study in the presentation slides according to the needs of the lecturer and according to the conditions of the home university.

- Lecturer's personal experience can be incorporated.

- Case studies from other fields of applications may cover other points of interest or particular challenges to be solved.

- Additional case studies may be used as assignments for the students.

- In a future course material management system, an automated exchange of one case study by another one should be possible. To implement and test such a feature, it is necessary to have other case studies besides our main case study "Seminar Organization".

- Copyright – it is better to have also our own case studies than to use others.

"How to contribute to the joint course on software engineering by case studies"

Summary for the main case study

- Find a problem of reasonably large size an complexity (for example from textbooks, real projects or educational projects)
- Develop requirements specification
- Develop a full class diagram as the basis of object-oriented analysis
- Develop accompanying diagrams for the dynamic view of object-oriented analysis: state automata (object life cycle), activity diagrams, collaboration diagram, sequence diagram
- Develop a data-flow diagram for a significant part of requirements
- Perform the structured analysis of the system: develop a hierarchy of data flow diagrams for a significant part of the requirements
- Do a cost estimation
- Implement the case study
- Write parts of user manual

To replace the existing case study with the new one, one should replace about 120 slides in the lecture.