DF14900 Software Engineering

Component-Based Software

2017

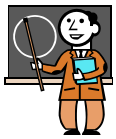
Organizational Issues

Christoph Kessler, IDA

Main Goals

- Understand the concept of a component
- Understand limitations of OOP
- Understand static and dynamic metaprogramming
- Understand black-box, gray-box, white-box composition
- Know principles, potential, and limitations of some existing component and composition systems
  - Classify by Component model, Composition technique, Composition language
  - Classify by Adaptability, Mismatch Glueing, Variability, Extensibility, …
- Fundamentals only – EJB the only case study
  - For further current CBSE systems see the master-level course TDDD05, http://www.ida.liu.se/~TDDD05

Schedule



(for times and rooms see the web schedule on the course homepage)

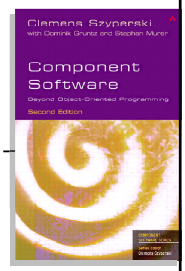
Today 13:15-16:30 (ca.)

- Introduction and Overview Christoph Kessler (CK)
- OO Technology: Properties and limitations for component based design (CK)
- Metamodeling and Metaprogramming (CK)
- Problems and solutions in classical component systems (CK)
  - CORBA (self-learning material in slide set) (CK)

Tomorrow: 10-12, 13:15-15:30

- Enterprise Java Beans (EJB) (Lu Li)
- Aspect-Oriented Programming and Aspect-J (CK)
- Model-Driven Development (CK) – *as time permits*

Literature



Recommended:

- Clemens Szyperski: *Component Software – Beyond Object-Oriented Programming.* Second Edition, Addison-Wesley, 2002.
  - Covers most of lectures contents

Optional and background literature:

- see the course homepage http://www.ida.liu.se/~TDDD05