

SOFTWARETECHNIK SS01

ASSIGNMENT 4

Exercise 6: (20 Points) In this assignment we develop the design and architecture of the ECO-system. It should be based on all previously developed documents and artifacts, in particular all diagrams. The design should contain sufficient information to serve as the basis of the first implementation. We require the following artifacts.

- (i) A verbal description of the subsystems and layers/tiers of the software architecture, supported by component diagrams.
- (ii) A specification of all system components by UML-diagrams.

The artifact documenting the software architecture should include the following design decisions: distribution over the net (client/server vs web architecture, middleware), data storage, user interface architecture. Keep in mind that the system is intended as a distributed multi-user system.

The artifact documenting the specification should present the architectural design. UML design diagrams (in particular class diagrams) should be given for each subsystem at the GUI, application and data storage layer. We do not require embedding a database. The diagrams should be based on those of the analysis phase. They should sufficiently describe aspects like navigability, visibility, etc. We recommend to follow the checklists in (Balzert, p.997, p.1007). It should be traceable, which design classes correspond to which analysis classes. The interaction of the subsystems should be clearly specified by interfaces. Also the predefined interfaces to the external databases should appear in the design diagrams.

Optional Exercise 6: (10 Points) Base your design on software patterns or identify patterns in your design, where possible.

Please check in your solutions either as a postscript or a pdf document by June 27, 2001.