

Till Schümmer

A Pattern Approach for End-User Centered Groupware Development

Reihe „**Schriften zu Kooperations- und Mediensystemen**“, Band 3

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Lohmar – Köln 2005, 310 Seiten

ISBN 3-89936-383-3

€ 52,- (D) ♦ € 53,50 (A) ♦ sFr 85,-

New network technologies have changed the ways how people interact and collaborate over a distance. The understanding of such interaction is, however, still limited. This thesis discusses how new groupware applications can be built that support such networked groups. The main focus thereby is not on how to support application specific tasks – which is in many aspects comparable to single user support – but on the group specific aspects like group formation and group maintenance.

The approach presented in this thesis sheds light on the problem of groupware development by taking a closer look at theoretic approaches to design. Especially, the situatedness of design as it is propagated by the philosopher Martin Heidegger and the architect Christopher Alexander motivates that groupware development has to pay special attention to the group's situation. Empowering the end-users to express their needs in a specific group situation is therefore crucial to any groupware development.

The Oregon Software Development Process presented in this thesis reflects these ideas. It fosters the communication and interaction between developers and endusers during all phases of software development and ensures that end-user involvement and end-user tailorability is achieved.

Groupware patterns serve as an educational means for empowering end-users to behave like groupware development experts. They describe how to design social interaction in groupware systems as well as technical aspects of groupware systems. A selection of groupware patterns is presented in this thesis.

The approach is validated through analyzing its impact in different case studies: the first case is a two year development project of the collaborative learning system CURE involving six developers and a large user community; the second case describes the application in three smaller student projects.

With a preface by Prof. Dr. Jörg M. Haake, FernUniversität Hagen

Till Schümmer, born 1973 in Frankfurt/Main, Germany, studied computer science at the Darmstadt University of Technology from 1994 to 1999 finishing with a diploma in computer science. From 1999 to 2002, he participated in the DFG supported PhD program „Infrastructures for Electronic Commerce“ at the Darmstadt University of Technology. During his years in Darmstadt, Till collaborated with the CONCERT division of the Fraunhofer IPSI institute where he participated in the development of the COAST groupware framework and several applications for supporting group interaction in work settings and in e-commerce contexts. In 2002, he moved to the FernUniversität in Hagen, where he developed groupware applications that support distributed students in their learning process. His insights of 10 years of groupware development are captured in this thesis for which Till received a Dr. rer. nat. in computer science in July 2005.

Inhaltsübersicht

- 1. Introduction**
 - 1.1 Motivation
 - 1.2 Problem Statement
 - 1.3 Approach
 - 1.4 Organization of this thesis
- 2. Theory of Development Activities**
 - 2.1 Heidegger – Understanding Situatedness
 - 2.2 Alexander – *The Synthesis of Form*
 - 2.3 Rittel and Webber – *Wicked Problems*
 - 2.4 Schön – *Reflection in Action*
 - 2.5 Alexander – Patterns in the Context of Design
 - 2.6 Alexander – The Oregon Experiment
 - 2.7 The Scandinavian Approach – Participatory Design
 - 2.8 Alexander – *The Nature of Order*
 - 2.9 Takeuchi and Nonaka – *The Rugby Approach*
 - 2.10 Groupware Development Requirements
- 3. State of the Art**
 - 3.1 Software Development Processes
 - 3.2 Groupware Development Processes
 - 3.3 Summary of the first part
- 4. Approach**
 - 4.1 The Oregon Software Development Process
 - 4.2 The Pattern Representation
- 5. The Pattern Language**
 - 5.1 Importance of Group Formation
 - 5.2 A Pattern Language
 - 5.3 Summary
- 6. Experiences**
 - 6.1 Observation Method
 - 6.2 Context of the CURE Project
 - 6.3 Conceptual Iterations in CURE
 - 6.4 Development Iterations in CURE
 - 6.5 Tailoring Iterations in CURE
 - 6.6 Student Projects
 - 6.7 Observations Made by Peer Reviewers and Shepherds
 - 6.8 Summary
- 7. Conclusions and Future Work**

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