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Preface

ABMB 2006 was the second International Workshop on Aspect-Based and Model-Based Separation of Concerns in Software Systems. It was held in Bilvao (Spain) on the 10th of July following the first workshop ABMB 2005 held in November the 7th, Nuremberg (Germany).

The field of the workshop ABMB 2006 is concerned with the theory, modelling and implementation techniques for evolutionary software development. There are two competitive approaches in this area: model-based and aspect-based approaches. The mainstream of the model-based approach supports the elaboration of models. When a Platform Independent Model has been created, a tool generates a skeleton of the corresponding Platform Specific Model which a developer can elaborate or extend. The elaboration techniques, however, are not defined by the model-based approach. We see that the aspect-oriented approach can offer the elaboration techniques if it can expand from the implementation level to the modeling level. In this context the work on early aspects gets a new stimulus. However, current research consider aspects in the context of programming; concentrating on the idea of composition as the weaving of executions of two programs. Consequently it does not achieve a lifting of the level of abstraction to models. The aim of this workshop is to simulate aspect application on models in the context of elaboration of models.

The papers presented during the workshop have demonstrated that the model-based approach has lack of attention to the process related issues.

B. Tekinerdogan, M. Akşit and F. Henninger, Department of Computer Science; University of Twente, have provided systematic analysis on crosscutting concerns within the MDA context. They define an abstract model of MDA transformation with respect to concerns. They analyse a number of evolution scenarios and come to the conclusion that the process related issues directly impact model transformations and appearance of crosscutting concerns.

M. Braem, N. Joncheere, W. Vanderperren, R. Van Der Straeten, V. Jonckers, System and Software Engineering Laboratory of Vrije Universiteit Brussel have presented the concern separation and composition through the lifestyle of a service-oriented system. Their Service Creation Environment supports visually deploying aspects onto concrete services, visualization of join points, integration of aspects and verification the results.

A M. Reina Quintero and J. Torres Valderrama from Department of Languages and Computer Systems, University of Seville, Spain have pointed out that the MDA model transformation techniques need an approach to extend the metamodels. The authors investigate three different approaches: one using traditional object-oriented techniques, and the other two using aspect-oriented techniques.

T. Mikkonen; Institute of Software Systems; Tampere University of Technology; Tampere, Finland has investigated the impact of the decompositions in models on their aspect-oriented implementation and connect these results to MDA that requires a dominant decomposition for meaningful binding to control flow.

J. Reznik, T. Ritter, Froundhofer Institute FOKUS, Berlin, Germany, R. Schreiner, U. Lang, ObjectSecurity Ltd., Cambridge, UK, have focused on the Model Driven Development of Security Aspects.

The discussion during the workshop has shown the need of precise definitions of terms of aspect-orientation at the modelling level. Aspect technologies were first proposed as a programming technology. Recent work, however, has emphasized the need to and advantages of considering aspects early in the software lifecycle as part of the basic strategy for the structural design of the software architecture. This has led to consideration of aspectual thinking at higher levels of abstraction than code: in particular, about how aspectual design concepts can be incorporated into the modelling stage of software development so that proper separation and encapsulation of concerns can become integral to the blueprint from which final code has to be produced.

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