

Welcome to the 9th Workshop on Domain-Specific Modeling Workshop – DSM'09

Preface

Domain-Specific Modeling (DSM) is continuing to receive interest among the general software engineering community. As an example, the special issue of *IEEE Software* (July/August 2009) gave the approach much needed visibility. Several controlled experiments have shown that DSMs are more productive than general model based approaches. As Booch et al. have stated, “the full value of MDA is only achieved when the modeling concepts map directly to domain concepts rather than computer technology concepts.” For example, DSM for cell phone software would have concepts like “Soft key button,” “SMS” and “Ring tone,” and generators to create calls to the corresponding code components.

Continued investigation is still needed in order to advance the acceptance and viability of DSM. This workshop, which is in its ninth incarnation at OOPSLA 2009, features research and experience papers describing new ideas at either a practical or theoretical level. On the practical side, several papers in these proceedings describe application of modeling techniques within a specific domain. As in previous workshops, there are plenty of language examples contributed to these proceedings.

We have organized the 18 papers in these proceedings to emphasize general areas of interest into which the papers loosely fit. Authors from both industry and academia have contributed research ideas that initiate and forward the technical underpinnings of domain-specific modeling. The papers in this proceedings are categorized into the areas of *Language Design*, *Language Examples*, *DSLs for the web*, *Transformations and Language Evolution*, *Model Verification and Testing* and *Special Topics*. Many papers in these proceedings are cross-cutting in their analysis and reporting. As a whole, the body of work highlights the importance of metamodeling and related tooling, which significantly ease the implementation of domain-specific languages and provide support for experimenting with the modeling language as it is built (thus, metamodel-based language definition also assists in the task of constructing generators that reduce the burden of tool creation and maintenance).

We hope that you will enjoy this record of the workshop and find the information within these proceedings valuable toward your understanding of the current state-of-the-art in Domain-Specific Modeling.

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9th WORKSHOP ON DOMAIN-SPECIFIC MODELING

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Jeff Gray, University of Alabama at Birmingham
Matti Rossi, Helsinki School of Economics
Jonathan Sprinkle, University of Arizona

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- Evaluating the Use of Domain-Specific Modeling in Practice
Juha Kärrnä, Juha-Pekka Tolvanen and Steven Kelly
- Multi-Language Development of Embedded Systems
Thomas Kuhn, Soeren Kemmann, Mario Trapp and Christian Schäfer

Language Examples

- ITML : A Domain-Specific Modeling Language for Supporting Business Driven IT Management
Ulrich Frank, David Heise, Heiko Kattenstroth, Donald F. Ferguson, Ethan Hadar and Marvin G. Waschke
- Domain Specific Languages for Business Process Management: a Case Study
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- Use of a Domain Specific Modeling Language for Realizing Versatile Dashboards
Ulrich Frank, David Heise and Heiko Kattenstroth
- DSML-Aided Development for Mobile P2P Systems
Tihamer Levendovszky, Tamás Mészáros, Péter Ekler and Mark Asztalos

DSLs for the Web

- MobiDSL - a Domain Specific Language for Mobile Web : developing applications for mobile platform without web programming
Ankita Arvind Kejriwal and Mangesh Bedekar
- MontiWeb - Modular Development of Web Information Systems
Michael Dukaczewski, Dirk Reiss, Bernhard Rumpe and Mark Stein
- ProcDSL + ProcEd - a Web-based Editing Solution for Domain Specific Process-Engineering
Christian Berger, Tim Gülke and Bernhard Rumpe

Transformations and Language Evolution

- Model-View-Controller Architecture Specific Model Transformation
Hiroshi Kazato, Rafael Weiss, Shinpei Hayashi, Takashi Kobayashi and Motoshi Saeki
- Evolution of a Domain Specific Language and its engineering environment - Lehman's laws revisited
Mika Karaila
- Automatic Domain Model Migration to Manage Metamodel Evolution
Daniel Balasubramanian, Tihamer Levendovszky, Anantha Narayanan and Gabor Karsai

Model Verification and Testing

Using Model-Based Testing for Testing Application Models in the Context of Domain-Specific Modelling

Janne Merilinna and Olli-Pekka Puolitaival

Right or Wrong? – Verification of Model Transformations using Colored Petri Nets

Manuel Wimmer, Gerti Kappel, Angelika Kusel, Werner Retschitzegger, Johannes Schoenboeck and Wieland Schwinger

A Tooling Environment for Quality-Driven Model-Based Software Development

Janne Merilinna and Tomi Rätty

Special Topics

Towards a Generic Layout Composition Framework for Domain-Specific Models

Jendrik Johannes and Karsten Gaul

Model-Based Autosynthesis of Time-Triggered Buffers for Event-Based Middleware Systems

Jonathan Sprinkle and Brandon Eames