

Proceedings of the Fourth International Workshop on Models and Model-driven Methods for Service Engineering - 3M4SE 2013, Vancouver, Canada, September 10, 2013

Held in conjunction with the 17th IEEE International Enterprise Computing Conference - EDOC 2013

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I. PREFACE

Recent developments in metamodeling and model transformation techniques have led to increasing adoption of model-driven engineering practices. The increase in interest and significance of the model-driven approach has also accelerated its application in the development of large distributed IT systems to support collaborative enterprises in developing and exchanging services. Shifting attention from source code to models permits enterprises to focus on their core concerns, such as business processes, services and collaborations, without being forced to simultaneously consider the underlying technologies. Different concerns are typically addressed by different models, with transformations between these models and ultimately to the source code. Although the model-driven approach offers theoretical benefits for the development, maintenance and evolution of enterprise computing systems and corresponding service-oriented solutions, a number of issues for the practical application of the approach still exist. In order to solve these issues further advances in models (business goals, pragmatic interoperability, semantic interoperability) and model-driven methods (design concepts, languages, metamodels, profiles, specification frameworks) are necessary.

The Fourth International Workshop on Models and Model-driven Methods for Service Engineering -3M4SE 2013- aims at helping the convergence of research on model-driven development and practical application of the model-driven approach in the area of enterprise computing and service engineering. The workshop addresses questions with respect to the requirements on, concepts for, properties of and experience with models and model-driven methods for service engineering in the area of enterprise computing. A special focus has been on the combined application of model-driven and semantic approaches in the different phases of the service lifecycle.

This section of the volume contains the proceedings of the 3M4SE 2013 workshop, held on September 10, 2013, in

Vancouver, BC, Canada, in conjunction with the 17th IEEE International EDOC Conference on Enterprise Computing, EDOC 2013. Five papers were selected for oral presentation and publication, based on a thorough review process, in which each paper was reviewed by several experts in the field.

The selected papers present novel contributions concerning the following subjects:

- A service-oriented platform for the development and management of knowledge-intensive collaboration in the logistics domain with sophisticated business models enabling fourth party and lead logistics service providers. The paper demonstrates how the bottom-up construction of comprehensive service models is performed with this platform in a cost-efficient and effective way.
- A model-based integrated planning for logistics service contracts. The paper presents a mechanism for integrating different models that are used during isolated planning tasks. The mechanism is illustrated with a planning process consisting of several planning tasks. This process is transformed into a simulation that can be used to gain insight in the satisfaction of customers' requirements on the overall process.
- A goal-oriented model-driven validation approach for enterprise systems. Enterprise Architectures (EA) are used to provide a holistic view of enterprise systems, representing relevant aspects for their stakeholders. However, it is hard to establish whether EA models are properly aligned with the stakeholders' motivation and the business strategy. This paper contributes to a better understanding on how EA models can be validated in this respect.
- A migration approach for models created in a Domain Specific Language (DSL) to make these models co-evolve whenever this DSL evolves to a new version. The paper discusses an approach for generating a model migration script for an evolved

DSL, with two important benefits: automatic elimination of unnecessary migration actions, and automatic determination of the necessity of human intervention during migration.

- (71) A methodology for the development and execution of scientific experiments. The paper presents the methodology and defines the architecture of the system that realizes this methodology. The methodology consists of steps for data analysis and processing in eScience applications, and enables scientists to develop the domain-specific models of their experiments. The domain-specific models can then be transformed into suitable IT applications without deep IT knowledge.

We would like to take this opportunity to express our gratitude to all people who contributed to the 3M4SE 2013 workshop. We thank the authors for submitting content, which triggered valuable information exchange and stimulating discussions; we thank the reviewers for providing useful feedback to the submitted content, which undoubtedly helped the authors improve their work; and we thank the attendants for expressing interest in the content and initiating relevant discussions. Finally, we are grateful for having the possibility to have 3M4SE being held in conjunction with the EDOC 2013 conference, and we thank the EDOC 2013 organization committee for their support.

II. ORGANISATION

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