

Enterprise Modelling and Information Systems Architectures

An International Journal

Volume 5 | No. 3 2010

Special Issue on Best Papers of EMISA'09



German Informatics
Society

Table of Contents

Editorial Preface	2	
Sören Balko, Arthur H. M. ter Hofstede, Alistair Barros, Marcello La Rosa, and Michael Adams	4	Business Process Extensibility
Patrick Delfmann, Sebastian Herwig, Łukasz Lis, Armin Stein, Katrin Tent, Jörg Becker	24	Pattern Specification and Matching in Conceptual Models – A Generic Approach Based on Set Operations
Udo Kannengiesser	44	Towards a Methodology for Flexible Process Specification
Manfred Reichert, Sarita Bassil, Ralph Bobrik, Thomas Bauer	64	The Proviado Access Control Model for Business Process Monitoring Components
Call for Papers	89	
Imprint	90	
Editorial Board	91	
Guidelines for Authors	92	

Editorial Preface

The strategic importance of modelling is recognised by an increasing number of companies and public agencies. Enterprise modelling delivers the "blueprints" for co-designing organisations and their information systems, such that they complement each other in an optimal way. Achieving this interplay requires a multi-perspective approach that takes into account technical, organisational, and economic aspects. It also recommends the cooperation of researchers from different fields such as Information Systems, Business Informatics, and Computer Science.

This special issue features extended contributions based on selected papers originally presented at the 3rd International Workshop on Enterprise Modelling and Information Systems Architectures (EMISA'09). The EMISA'09 workshop took place in September 2009 in Ulm, Germany and was jointly organised by the GI Special Interest Group on Modelling Business Information Systems (GI-SIG MoBIS) and the GI Special Interest Group on Design Methods for Information Systems (GI-SIG EMISA). EMISA'09 attracted more than 30 participants from six countries. The workshop was a full 2-day event featuring 11 high-quality presentations from academia and practice. This year's contributions addressed the research areas of enterprise modelling, measurements, analysis and explorative studies, business process management, and enterprise architectures. Two keynotes from the outstanding speakers Bertram Ludäscher (University of California) and Manfred Reichert (Ulm University) complemented the workshop programme. On the first workshop day, Bertram Ludäscher highlighted the vision and the challenges of scientific workflows. On the second workshop day, Manfred Reichert reported on so-called 'fluid' processes, a new class of processes whose engineering and use is indistinguishable.

This special issue includes extended versions of four of the best papers of the workshop. These papers were thoroughly reviewed by at least

three selected experts resulting in the following accepted contributions:

1. In their paper on business process extensibility, the authors *Sören Balko, Arthur H.M. ter Hofstede, Alistair Barros, Marcello La Rosa, and Michael Adams* introduces a new paradigm for customizing reference processes and managing their evolution over time. The paper approaches process extensibility from the perspective of different stakeholders of reference models including vendors and consumers and identifies different responsibilities and interests. The concept aims to reduce the customization effort of a reference model while offering space for model editing.
2. The contribution by *Patrick Delfmann, Sebastian Herwig, Lukasz Lis, Armin Stein, Katrin Tent, and Jörg Becker* discusses the specification of structural patterns for conceptual model. The authors formalize an approach to retrieve such patterns in a way which is independent from the underlying modeling language and can be used for any graph-based technique. The generic nature of the approach is highlighted by applying it to both Entity-Relationship Diagrams and Event-Driven Process Chains.
3. The work by *Udo Kannengiesser* addresses the problem of flexible process specification. Its contribution is a methodology for specifying such flexibility based on the function-behaviour-structure (FBS) ontology from design research. The approach is tested for its applicability in a case study with a company from the Australian lending industry. In this way, it transfers insights from engineering design to the information systems discipline.
4. The paper by *Manfred Reichert, Sarita Bassil, Ralph Bobrik, Thomas Bauer* presents the the Proviado Access Control Model, which has been defined for business process monitoring

components. It builds on a process visualisation framework and access control requirements identified in case studies in the automotive sector. Two general approaches are discussed (view-based and object-based), from which the latter is found suitable for the presented case studies.

We would like to thank the reviewers for their valuable feedback, which helped us to compile this high-quality special issue. We hope you will find the papers in this issue interesting and stimulating.

December 2010

Jan Mendling
Stefanie Rinderle-Ma
Werner Esswein

Guest Editors' contact information:

Jan Mendling

Institut für Wirtschaftsinformatik
Humboldt-Universität zu Berlin
Unter den Linden 6
10099 Berlin
Germany
contact@mending.com

Stefanie Rinderle-Ma

Fakultät für Informatik
Universität Wien
Rathausstraße 19/9
1010 Vienna
Austria
stefanie.rinderle-ma@univie.ac.at

Werner Esswein

Fakultät Wirtschaftswissenschaften
Technische Universität Dresden
Münchner Platz
01062 Dresden
Germany
werner.esswein@tu-dresden.de