

Lecture Notes
in Business Information Processing

68

Series Editors

Wil van der Aalst

Eindhoven Technical University, The Netherlands

John Mylopoulos

University of Trento, Italy

Michael Rosemann

Queensland University of Technology, Brisbane, Qld, Australia

Michael J. Shaw

University of Illinois, Urbana-Champaign, IL, USA

Clemens Szyperski

Microsoft Research, Redmond, WA, USA

Patrick van Bommel Stijn Hoppenbrouwers
Sietse Overbeek Erik Proper
Joseph Barjis (Eds.)

The Practice of Enterprise Modeling

Third IFIP WG 8.1 Working Conference, PoEM 2010
Delft, The Netherlands, November 9-10, 2010
Proceedings

Volume Editors

Patrick van Bommel
Stijn Hoppenbrouwers
Radboud University Nijmegen
P.O. Box 9010, 6500 GL Nijmegen, The Netherlands
E-mail: {pvb,stijnh}@cs.ru.nl

Sietse Overbeek
Delft University of Technology
Faculty of Technology, Policy and Management
Section of Information and Communication Technology
P.O. Box 5015, 2600 GA Delft, The Netherlands
E-mail: s.j.overbeek@tudelft.nl

Erik Proper
Public Research Centre Henri Tudor
29, avenue John F. Kennedy, 1855 Luxembourg-Kirchberg, Luxembourg
E-mail: erik.proper@tudor.lu

Joseph Barjis
Delft University of Technology
Faculty of Technology, Policy and Management
Section of Systems Engineering
P.O. Box 5015, 2600 GA Delft, The Netherlands
E-mail: j.barjis@tudelft.nl

Library of Congress Control Number: 2010937669

ACM Computing Classification (1998): J.1, H.3.5, H.4.1

ISSN 1865-1348
ISBN-10 3-642-16781-0 Springer Berlin Heidelberg New York
ISBN-13 978-3-642-16781-2 Springer Berlin Heidelberg New York

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the German Copyright Law of September 9, 1965, in its current version, and permission for use must always be obtained from Springer. Violations are liable to prosecution under the German Copyright Law.

springer.com

© IFIP International Federation for Information Processing 2010
Printed in Germany

Typesetting: Camera-ready by author, data conversion by Scientific Publishing Services, Chennai, India
Printed on acid-free paper 06/3180 5 4 3 2 1 0

Preface

These are the proceedings of the Third IFIP WG 8.1 Working Conference on the Practice of Enterprise Modeling, held in Delft (The Netherlands) on November 9 and 10, 2010. It followed the success of PoEM 2008 and 2009 (both held in Stockholm), which each attracted over 50 participants from all over the world, representing both industry and academia. This indicates that enterprise modeling (EM) has gained popularity both in the academic community and among practitioners. The interactive format of the previous conferences sparked constructive interaction between research and practice. PoEM 2010 further strengthened this interaction.

The PoEM conferences contribute to establishing a dedicated forum where the use of EM in practice is addressed by bringing together researchers, users and practitioners. The main focus of PoEM is EM methods, approaches, and tools, and how they are used in practice. The goal of the conference was to further a better understanding of the practice of EM and improve the theory behind the practice, contributing to improved EM practice and to the sharing of knowledge.

For this third edition, the founders of PoEM, Anne Persson and Janis Stirna, passed the torch for the first time; we hope we lived up to the high standards set by them and thank them for their initiative, commitment, and excellent work. PoEM will return to Scandinavia next year, and will remain to do so every other year.

The 17 high-quality papers (out of 44 submissions) presented at PoEM 2010 display a welcome diversity in topics while being duly centered around the enterprise modeling theme. A number of submissions reflected the trend for both practitioners and academics to look into domains and conceptualizations that are more and more distant from those that are the focus in traditional information systems engineering, addressing a continuation of the move towards dedicated and far reaching “business-orientation.” Also, we observe that the field is slowly but surely maturing, as indicated by an increase in detail and specialization of the contributions.

In its 2010 edition, PoEM saw relatively few submissions concerning enterprise architecture. It is very likely this is because this year PoEM was co-located with two other events: the Practice-Driven Research in Enterprise Transformations (PRET 2010) working conference, and the Trends in Enterprise Architecture Research (TEAR 2010) workshop. Proceedings of both events also appear in the Springer LNBIP series. The three events together constituted Enterprise Engineering Week, with Erik Proper at the helm.

We would like to extend warm thanks to everyone involved in making PoEM 2010 happen: the members of the PC, the people who submitted papers, keynote speakers Etienne Rouwette (Radboud University Business School) and Jeroen van Grondelle (Be Informed), and everyone involved in the organization.

September 2010

Patrick van Bommel
Stijn Hoppenbrouwers
Sietse Overbeek
Erik Proper
Joseph Barjis

Organization

POEM 2010 was organized by the Radboud University Nijmegen and the Delft University of Technology.

Executive Committee

Conference Chair	Stijn Hoppenbrouwers, Radboud University Nijmegen
PC Chair	Patrick van Bommel, Radboud University Nijmegen
PC Co-chair	Sietse Overbeek, Delft University of Technology
PC Co-chair	Erik Proper, Radboud University Nijmegen

Program Committee

Marko Bajec	University of Ljubljana, Slovenia
Rimantas Butleris	Kaunas University of Technology, Lithuania
Wolfgang Deiters	Fraunhofer ISST, Germany
Eric Dubois	CRP Henri Tudor, Luxembourg
Mathias Ekstedt	KTH, Sweden
Gustaf Ericsson	Alfa Laval AB, Sweden
Xavier Franch	Universitat de Catalunya, Spain
Remigijus Gustas	Karlstad University, Sweden
Terry Halpin	LogicBlox, Australia
Jarl Høglund	Allmentor AB, Sweden
Stijn Hoppenbrouwers	Radboud University Nijmegen, The Netherlands
Pontus Johnsson	KTH, Sweden
Havard Jørgensen	Commitment AS, Norway
John Krogstie	Norwegian University of Science and Technology, Norway
Michel Léonard	University of Geneva, Switzerland
Peri Loucopoulos	Loughborough University, UK
Raimundas Matulevicius	University of Tartu, Estonia
Graham McLeod	PROMIS Solutions AG, South Africa
Daniel Moody	University of Twente, The Netherlands
Christer Nellborn	Nellborn Management Consulting AB, Sweden
Bjorn Nilsson	Anates AB, Luxembourg
Andreas Opdahl	University of Bergen, Norway
Sietse Overbeek	Delft University of Technology, The Netherlands
Oscar Pastor	Valencia University of Technology, Spain
Anne Persson	University of Skövde, Sweden

VIII Organization

Naveen Prakash	GCET, India
Erik Proper	Radboud University Nijmegen, The Netherlands
Jolita Ralyté	University of Geneva, Switzerland
Peter Rittgen	Vlerick Leuven Gent Management School, Belgium
Colette Rolland	University of Paris 1 Pantheon Sorbonne, France
Kurt Sandkuhl	Jonkoping Technical University, Sweden
Ulf Seiggeroth	Jonkoping International Business School, Sweden
Keng Siau	University of Nebraska-Lincoln, USA
Pnina Soffer	University of Haifa, Israel
Maarten Steen	Novay, The Netherlands
Janis Stirna	University of Stockholm, Sweden
Renate Strazdina	Ernst and Young SIA, Latvia
Patrick van Bommel	Radboud University Nijmegen, The Netherlands
Olegas Vasilecas	Vilnius Gediminas Technical University, Lithuania
Eric Yu	University of Toronto, Canada

Table of Contents

Comparing Two Techniques for Intrusion Visualization	1
<i>Vikash Katta, Peter Karpati, Andreas L. Opdahl, Christian Raspotnig, and Guttorm Sindre</i>	
Needs-Driven Bundling of Hosted ICT Services	16
<i>Jaap Gordijn, Floris de Haan, Sybren de Kinderen, and Hans Akkermans</i>	
Enterprise Modeling for Business Intelligence	31
<i>Daniele Barone, Eric Yu, Jihyun Won, Lei Jiang, and John Mylopoulos</i>	
Business Modeling Experience for a State Pension Voluntary Insurance Case	46
<i>Alcedo Coenen, Bas van Gils, Charlotte Bouvy, Roel Kerkhofs, and Sander Meijer</i>	
Composition of Semantic Process Fragments to Domain-Related Process Families	61
<i>Claudia Reuter</i>	
Assessing Collaborative Modeling Quality Based on Modeling Artifacts	76
<i>D. (Denis) Ssebuggawo, S.J.B.A. (Stijn) Hoppenbrouwers, and Erik Proper</i>	
Patient Care across Health Care Institutions: An Enterprise Modelling Approach	91
<i>Sobah Abbas Petersen, Grete Bach, and Astrid Brevik Svarlein</i>	
The Practice of Competence Modelling	106
<i>Thomas Albertsen, Kurt Sandkuhl, Ulf Seigerroth, and Vladimir Tarasov</i>	
Modeling Network-Based Defence: Success and Failure of an Enterprise Modeling Endeavour	121
<i>Thomas Albertsen, Kurt Sandkuhl, Ulf Seigerroth, and Vladimir Tarasov</i>	
Interactive Goal Model Analysis Applied – Systematic Procedures versus Ad hoc Analysis	130
<i>Jennifer Horkoff, Eric Yu, and Arup Ghose</i>	

Adapting UML Activity Diagrams for Mobile Work Process Modelling: Experimental Comparison of Two Notation Alternatives	145
<i>Sundar Gopalakrishnan, John Krogstie, and Guttorm Sindre</i>	
A Repository Architecture for Business Process Characterizing Models	162
<i>Shang Gao and John Krogstie</i>	
A Rule-Based Approach for the Recognition of Similarities and Differences in the Integration of Structural Karlstad Enterprise Modeling Schemata	177
<i>Peter Bellström</i>	
Focused Conceptualisation: Framing Questioning and Answering in Model-Oriented Dialogue Games	190
<i>S.J.B.A. (Stijn) Hoppenbrouwers and I. (Ilona) Wilmont</i>	
Towards a Unified Business Strategy Language: A Meta-model of Strategy Maps	205
<i>Constantinos Giannoulis, Michael Petit, and Jelena Zdravkovic</i>	
Integration of Interactive, Behavioral and Structural Aspects of Conceptual Models	217
<i>Remigijus Gustas</i>	
Towards Defining a Competence Profile for the Enterprise Modeling Practitioner	232
<i>Anne Persson and Janis Stirna</i>	
Author Index	247