

Table of Contents

Preface..... viii

Acknowledgment..... xi

Section 1
Models and Methods

Chapter 1

Ontologies and Controlled Vocabulary: Comparison of Building Methodologies 1

Daniela Lucas da Silva, Universidade Federal do Espírito Santo, Brazil

Renato Rocha Souza, Fundação Getúlio Vargas, Brazil

Maurício Barcellos Almeida, Universidade Federal de Minas Gerais, Brazil

Chapter 2

An Ontology-Based Method to Construct a Reference Model Catalogue for the Energy Sector 16

José M. González and Vázquez, OFFIS – Institute for Information Technology, Germany

Mathias Uslar, OFFIS – Institute for Information Technology, Germany

Chapter 3

Ontological Evaluation of Scheer’s Reference Model for Production Planning and Control Systems 40

Peter Fettke, German Research Center for Artificial Intelligence, Germany

Peter Loos, German Research Center for Artificial Intelligence, Germany

Section 2
Data and Knowledge Management

Chapter 4

Heterogeneous Text and Numerical Data Mining with Possible Applications in Business and Financial Sectors 60

Farid Bourennani, University of Ontario Institute of Technology, Canada

Shahryar Rahnamayan, University of Ontario Institute of Technology, Canada

Chapter 5

Semantic Integration of Structured and Unstructured Data in Data Warehousing and Knowledge Management Systems	81
<i>Liane Haak, University of Oldenburg, Germany</i>	

Chapter 6

Enhancing the Personal Knowledge Management with Semantic Desktop Technologies: SCAN Approach	106
<i>Alexey V. Alishevskikh, ViceVersa Technologies, Russian Federation</i>	
<i>Tatiana V. Emshanova, ViceVersa Technologies, Russian Federation</i>	

Section 3

Semantic Technologies in Conceptual Modeling

Chapter 7

Supporting Conceptual Model Analysis Using Semantic Standardization and Structural Pattern Matching	125
<i>Patrick Delfmann, University of Münster, Germany</i>	
<i>Sebastian Herwig, University of Münster, Germany</i>	
<i>Lukasz Lis, University of Münster, Germany</i>	
<i>Jörg Becker, University of Münster, Germany</i>	

Chapter 8

Semantic Verification of Business Process Models: Prospects and Limitations.....	150
<i>Michael Fellmann, University of Osnabrueck, Germany</i>	
<i>Oliver Thomas, University of Osnabrueck, Germany</i>	
<i>Frank Hoglebe, University of Hamburg, Germany</i>	

Chapter 9

Automated Planning of Process Models: Towards a Semantic-Based Approach.....	169
<i>Bernd Heinrich, University of Innsbruck, Austria</i>	
<i>Mathias Klier, University of Innsbruck, Austria</i>	
<i>Steffen Zimmermann, University of Innsbruck, Austria</i>	

Chapter 10

Stepwise Semantic Enrichment in Health-Related Public Management by Using Semantic Information Models	195
<i>Hans-Georg Fill, University of Vienna, Austria & Stanford University, USA</i>	
<i>Ilona Reischl, AGES PharmMed, Austria</i>	

Section 4

Semantic Process Description

Chapter 11

EPCs Annotated with Lexical and Semantic Labels to Bridge the Gap between Human Understandability and Machine Interpretability	214
<i>Andreas Bögl, Johannes Kepler University Linz, Austria</i>	
<i>Michael Karlinger, Johannes Kepler University Linz, Austria</i>	
<i>Michael Schrefl, Johannes Kepler University Linz, Austria</i>	
<i>Gustav Pomberger, Johannes Kepler University Linz, Austri</i>	

Chapter 12

Semantic Annotation of Business Process Templates.....	242
<i>Yun Lin, Agresso, Norway</i>	
<i>Dariusz Strasunskas, Norwegian University of Science and Technology, Norway</i>	

Chapter 13

Semantically Enhanced Business Process Modeling Notation.....	259
<i>Witold Abramowicz, Poznań University of Economics, Poland</i>	
<i>Agata Filipowska, Poznań University of Economics, Poland</i>	
<i>Monika Kaczmarek, Poznań University of Economics, Poland</i>	
<i>Tomasz Kaczmarek, Poznań University of Economics, Poland</i>	

Section 5

Services and Workflows

Chapter 14

Functional Components Specification in the Semantic SOA-Based Model.....	277
<i>Tariq Mahmoud, Carl von Ossietzky University of Oldenburg, Germany</i>	
<i>Jorge Marx Gómez, Carl von Ossietzky University of Oldenburg, Germany</i>	
<i>Timo von der Dovenmühle, Carl von Ossietzky University of Oldenburg, Germany</i>	

Chapter 15

Semantic-Enabled Compliance Management	292
<i>Rainer Telesko, Fachhochschule Nordwestschweiz, Switzerland</i>	
<i>Simon Nikles, Fachhochschule Nordwestschweiz, Switzerland</i>	

Chapter 16

Semantic Policies for Modeling Regulatory Process Compliance	311
<i>Marwane El Kharbili, University of Luxemburg, Luxemburg</i>	
<i>Elke Pulvermueller, University of Osnabrueck, Germany</i>	

Chapter 17

A Broader View on Context Models towards Supporting Business Process Agility 337

Barbara Thönssen, University of Applied Sciences Northwestern Switzerland, Switzerland

Daniela Wolff, University of Applied Sciences Northwestern Switzerland, Switzerland

About the Contributors 359

Index..... 373