Table of Contents

Preface .................................................................................................................................................. xiii

Section 1
Ontology Development and Ontology-Based Services

Chapter 1
Building Chemical Ontology for Semantic Web Using Substructures Created by Chem-BLAST ........ 1
Talapady N. Bhat, National Institute of Standards and Technology, USA

Chapter 2
A Pattern-Based Method for Re-Engineering Non-Ontological Resources into Ontologies .......... 17
Boris Villazón-Terrazas, Universidad Politécnica de Madrid, Spain
Mari Carmen Suárez-Figueroa, Universidad Politécnica de Madrid, Spain
Asunción Gómez-Pérez, Universidad Politécnica de Madrid, Spain

Chapter 3
An Ontology-Based, Cross-Application Context Modeling and Management Service ................. 55
Annett Mitschick, Technische Universität Dresden, Germany
Stefan Pietschmann, Technische Universität Dresden, Germany
Klaus Meißner, Technische Universität Dresden, Germany

Section 2
Annotation, Mappings and Tools

Chapter 4
Files are Siles:Extending File Systems with Semantic Annotations............................................... 73
Bernhard Schandl, University of Vienna, Austria
Bernhard Haslhofer, University of Vienna, Austria
Chapter 5
Towards Controlled Natural Language for Semantic Annotation

Brian Davis, Digital Enterprise Research Institute, National University of Ireland, Ireland
Pradeep Dantuluri, Digital Enterprise Research Institute, National University of Ireland, Ireland
Siegfried Handschuh, Digital Enterprise Research Institute, National University of Ireland, Ireland
Hamish Cunningham, University of Sheffield, UK

Chapter 6
A Tool Suite to Enable Web Designers, Web Application Developers and End-users to Handle Semantic Data

Mariano Rico, Universidad Autónoma de Madrid, Spain
Óscar Corcho, Universidad Politécnica de Madrid, Spain
José Antonio Macías, Universidad Autónoma de Madrid, Spain
David Camacho, Universidad Autónoma de Madrid, Spain

Chapter 7
Adaptive Hybrid Semantic Selection of SAWSDL Services with SAWSDL-MX2

Matthias Klusch, German Research Center for Artificial Intelligence (DFKI), Germany
Patrick Kapahnke, German Research Center for Artificial Intelligence (DFKI), Germany
Ingo Zinnikus, German Research Center for Artificial Intelligence (DFKI), Germany

Section 3
Semantic Applications

Chapter 8
Enhancing Folksonomy-Based Content Retrieval with Semantic Web Technology

Rachanee Ungrangsi, Shinawatra University, Thailand
Chutiporn Anutariya, Shinawatra University, Thailand
Vilas Wuwongse, Asian Institute of Technology, Thailand

Chapter 9
Semantic Search on Unstructured Data: Explicit Knowledge through Data Recycling

Alex Kohn, Roche Diagnostics GmbH, Germany
François Bry, University of Munich, Germany
Alexander Manta, Roche Diagnostics GmbH, Germany

Chapter 10
Ontology-Enhanced User Interfaces: A Survey

Heiko Paulheim, SAP Research CEC Darmstadt, Germany
Florian Probst, SAP Research CEC Darmstadt, Germany
Chapter 11
Integrating Interactive TV Services and the Web through Semantics ............................................. 239
Vassileios Tsetsos, University of Athens, Greece
Antonis Papadimitriou, University of Athens, Greece
Christos Anagnostopoulos, University of Athens, Greece
Stathes Hadjiefthymiades, University of Athens, Greece

Chapter 12
Music Retrieval and Recommendation Scheme Based on Varying Mood Sequences .................. 257
Sanghoon Jun, Korea University, South Korea
Seungmin Rho, Korea University, South Korea
Eenjun Hwang, Korea University, South Korea

Compilation of References .................................................................................................................. 274

About the Contributors ....................................................................................................................... 296

Index .................................................................................................................................................. 302