Table of Contents

Middleware, and Applications) International Symposium	
Orchestration of Middleware Services	1
Posters of the 2009 IS (Information Security) International Symposium	
Discontinuity of SVD Embedding Mapping Used for Watermarks Kazuo Ohzeki, Yuki Seo, and Engyoku Gi	4
Virtualization in Network Intrusion Detection Systems	6
Posters of the 2009 ODBASE (Ontologies, DataBases, and Applications of Semantics) International Conference	
Pre-matching: Large XML Schemas Decomposition Approach	9
Enriching and Answering Proteomic Queries Using Semantic Knowledges	11
Ontology-Based Support for Graph Algorithms in Online Exploration Workflows	13
Auto-updatable Index Approach for OODBMSs	15
Workshop on Ambient Data Integration (ADI)	
ADI 2009 PC Co-chairs' Message	17
Invited Talk	
Effective Ontology-Based Data Integration	18



Modeling and Management of Data A Model Driven Engineering Approach Applied to Master Data 19 Ludovic Menet and Myriam Lamolle Managing XML Schema Mappings and Annotations in P2P Data 29 Tadeusz Pankowski and Magdalena Niwińska Managing Large, Structured, and Annotated Documents: A Study of Three Operational Cases in the Field of Environmental Legislation 39 Michel Treins, Carine Louvion, and Jacques Vaudelin **Data Integration Solution** Merging Expressive Ontologies Using Formal Concept Analysis 49 Olivier Curé Contemporary Challenges in Ambient Data Integration for Biodiversity Informatics...... 59David Thau, Robert A. Morris, and Sean White A Hierarchical Representation for Recording Semantically Condensed Data from Physically Massive Data Out of Sensor Networks Geographically Dispersed 69 MinHwan Ok Workshop on Context Aware Mobile Systems (CAMS) CAMS 2009 PC Co-chairs' Message 77 Models and Frameworks 78 Rethinking Context Models Emiliano Pérez, Andrés Fortier, Gustavo Rossi, and Silvia Gordillo A Framework for Decentralized, Context-Aware Mobile Applications 88 William Van Woensel, Sven Casteleyn, and Olga De Troyer Context at Work 98 Modeling Dynamic Context Awareness for Situated Workflows..... Hannes Wolf, Klaus Herrmann, and Kurt Rothermel

Enterprise Integration and Interoperability	
ProcessGene-Connect: SOA Integration between Business Process Models and Enactment Transactions of Enterprise Software Systems Avi Wasser and Maya Lincoln	184
Dynamic Business Networks: A Headache for Sustainable Systems Interoperability	194
On the Use of Description Logic for Semantic Interoperability of Enterprise Systems	205
A Maturity Model for Enterprise Interoperability	216
Workshop on Information System in Distributed Environment (ISDE)	
ISDE 2009 PC Co-chairs' Message	226
Tools and Task Allocation in Distributed Information System Development	
Systematic Task Allocation Evaluation in Distributed Software Development	228
Extending Global Tool Integration Environment towards Lifecycle Management	238
Dynamic SLA Negotiation in Autonomic Federated Environments Pawel Rubach and Michael Sobolewski	248
Requirement Validation in Distributed Information System Development	
Network Security Validation Using Game Theory	259
Process Management in Distributed Information System Development	
On the Use of Handover Checkpoints to Manage the Global Software Development Process	267

Using AOSD and MDD to Enhance the Architectural Design Phase

Mónica Pinto, Lidia Fuentes, Luis Fernández, and

Juan A. Valenzuela

360

A Model Transformation Approach to Derive Architectural Models from Goal-Oriented Requirements Models	370
Evaluation, Verification and Validation	
Applying Formal Verification Techniques to Ambient Assisted Living Systems	38
Software Architecture Evaluation in Global Software Development Projects Frank Salger	39
Design	
An Architectural Pattern for Mobile Groupware Platforms	40
Refinement of Software Product Line Architectures through Recursive Modeling Techniques	41
Designing and Supporting Cooperative and Ubiquitous Learning Systems for People with Special Needs Álvaro Fernández López, María José Rodríguez Fórtiz, and Manuel Noguera García	42
Software System Understanding via Architectural Views Extraction According to Multiple Viewpoints	43
Workshop on Mobile and Networking Technologies for Social Applications (MONET)	
MONET 2009 PC Co-chairs' Message	44
Social Networking	
SocioNet: A Context-Aware Approach for Lowering the Communication Barrier	44
Igor Pernek and Karin Anna Hummel	

Table of Contents
Models of Charity Donations and Project Funding in Social Networks
Adam Wojciechowski
Mobile Context Provider for Social Networking
Business Applications
Personalized Services Oriented towards Commercial Establishments David Marin Díaz, Alejandro Rico Zuluaga, and Angela Carrillo-Ramos
CRM System Implementation in a Multinational Enterprise
Mobile Applications and Services
An Architecture for Dynamic Trust Monitoring in Mobile Networks Olufunmilola Onolaja, Rami Bahsoon, and Georgios Theodoropoulos
ME: Multimodal Environment Based on Web Services Architecture Maria Chiara Caschera, Alessia D'Andrea, Arianna D'Ulizia, Fernando Ferri, Patrizia Grifoni, and Tiziana Guzzo
Workshop on Ontology Content (OnToContent)
OnToContent 2009 PC Co-chairs' Message
Ontology Design
Towards a Pattern-Driven Topical Ontology Modeling Methodology in
Elderly Care Homes
A Socio-semantic Approach to Collaborative Domain
Conceptualization
Termontography and DOGMA for Knowledge Engineering within PROLIX
Peter De Baer, Robert Meersman, and Rita Temmerman

A Pattern-Based Framework of Change Operators for Ontology Evolution	544
Muhammad Javed, Yalemisew M. Abgaz, and Claus Pahl	
Business Model Ontologies	
A Simulation Model Articulation of the REA Ontology	554
An Ontology for Modeling Complex Inter-relational Organizations Yves Wautelet, Nicolas Neysen, and Manuel Kolp	564
Ontology Evaluation and Management	
Efficient Management of Biomedical Ontology Versions	574
SemioSem: A Semiotic-Based Similarity Measure	584
Ontology Evaluation through Usability Measures: An Experiment with the SUS Scale in the Legal Domain	594
Ontologies in Distributed and Interactive Systems (ODIS)	
Semantically Enhanced Recommender Systems	604
Photo-Based User Interfaces: Picture It, Tag It, Use It	610
Ontology Based Proactive Design and Patterns towards the Adaptability of Knowledge Management Systems	616
ELDeR: An Ontology for Enabling Living inDependently of Risks Diana Saldaña-Jimenez, Marcela D. Rodríguez, Juan-Pablo García-Vázquez, and Adán-Noé Espinoza	622
Workshop on Fact-Oriented Modeling (ORM)	
ORM 2009 PC Co-chairs' Message	628

Business Service and Process Modeling	
Towards a Common Platform to Support Business Processes, Services and Semantics	629
BPMN as a Communication Language for the Process- and Event-Oriented Perspectives in Fact-Oriented Conceptual Models $Peter\ Bollen$	639
A Model for Semantic Equivalence Discovery for Harmonizing Master Data Baba Piprani	649
An ORM-Driven Implementation Framework for Database Federations	659
ORM-Based Semantics of B2B Transactions	671
Language and Tool Extensions	
The Constellation Query Language	682
A Role Calculus for ORM	692
Automated Test Input Generation for Software That Consumes ORM Models	704
Development of Tooling to Support Fact-Oriented Modeling at ESA Inge Lemmens, Francesco Sgaramella, and Serge Valera	714
Predicate Reference and Navigation in ORM Terry Halpin	723
Positionalism of Relations and Its Consequences for Fact-Oriented Modelling	735
Industrial Case Studies	
Fact-Orientation Applied to Develop a Flexible Employment Benefits System	745

Business Semantics Management Supports Government Innovation Information Portal	757
Geert Van Grootel, Peter Spyns, Stijn Christiaens, and Brigitte Jörg	
Workshop on OTM Academy	
OnTheMove Academy 2009 Organizers' Message	767
Automatic Detection of Terminology Evolution	769
Ambient Information Systems to Support the Elderly in Carrying Out Their Activities of Daily Living	779
K^{4R} — Knowledge to the Power of RESTful, Resourceful and Reactive Rules	789
Automatic Construction of a Semantic, Domain-Independent Knowledge Base	800
Solving Identity Management and Interoperability Problems at Pan-European Level	805
An Application Framework for a Situation-Aware System Support for Smart Spaces	810
Workshop on Semantic Web and Web Semantics (SWWS)	
SWWS 2009 PC Co-chairs' Message	815
On Constructing, Grouping and Using Topical Ontology for Semantic Matching	816
Query Results Clustering by Extending SPARQL with CLUSTER BY	826
An Agent-Based Data Mining System for Ontology Evolution Maja Hadzic and Darshan Dillon	836

	Table of Contents	XXXIII
A Hybrid Concept Similarity Measure Model for Environment	·	848
Semantic Wiki as a Basis for Software Engineering Evolution		858
Semantic Extensions to Middleware: Scale Knowledge Applications (SEME		
Implementation of a Service-Based Grid Middlewa RDF Databases	_	866
Towards a Reactive Semantic Execution Environm Srdjan Komazec and Federico Michele Facca	ent	. 877
Collaborative Building, Sharing and Handling of G Using P2P File-Sharing		888
The Next Steps After SAWSDL (Bey	ond SAWSDL)	
Management Tool for Semantic Annotations in WS Nicolas Boissel-Dallier, Jean-Pierre Lorré, and		898
SAWSDL for Self-adaptive Service Composition Teodoro De Giorgio, Gianluca Ripa, and Mauri		907
Adapting SAWSDL for Semantic Annotations of R Maria Maleshkova, Jacek Kopecký, and Carlos		917
Community-Based Evolution of Know Systems (COMBEK)	eledge-Intensive	
An Evolutionary Ontology Approach for Commu Competency Management	· · · · · · · · · · · · · · · · · · ·	927
MaSiMe: A Customized Similarity Measure and Its Cloud Refactoring		
Author Index	• • • • • • • • • • • • • • • • • • • •	947