The Semantic Web: Research and Applications

7th Extended Semantic Web Conference, ESWC 2010
Heraklion, Crete, Greece, May 30 – June 3, 2010
Proceedings, Part I
Preface

This volume contains papers from the technical program of the 7th Extended Semantic Web Conference (ESWC 2010), held from May 30 to June 3, 2010, in Heraklion, Greece. ESWC 2010 presented the latest results in research and applications of Semantic Web technologies. ESWC 2010 built on the success of the former European Semantic Web Conference series, but sought to extend its focus by engaging with other communities within and outside Information and Communication Technologies, in which semantics can play an important role. At the same time, ESWC has become a truly international conference.

Semantics of Web content, enriched with domain theories (ontologies), data about Web usage, natural language processing, etc., will enable a Web that provides a qualitatively new level of functionality. It will weave together a large network of human knowledge and make this knowledge machine-processable. Various automated services, based on reasoning with metadata and ontologies, will help the users to achieve their goals by accessing and processing information in machine-understandable form. This network of knowledge systems will ultimately lead to truly intelligent systems, which will be employed for various complex decision-making tasks. Research about Web semantics can benefit from ideas and cross-fertilization with many other areas: artificial intelligence, natural language processing, database and information systems, information retrieval, multimedia, distributed systems, social networks, Web engineering, and Web science.

To reflect its expanded focus, the conference call for research papers was organized in targeted tracks:

- Mobility
- Ontologies and Reasoning
- Semantic Web in Use
- Sensor Networks
- Services and Software
- Social Web
- Web of Data
- Web Science

The research papers program received 245 full paper submissions, which were first evaluated by the Program Committees of the respective tracks. The review process included evaluation by Program Committee members, discussions to resolve conflicts, and a metareview for each potentially acceptable borderline submission. After this a physical meeting among Track and Conference Chairs was organized to see that comparable evaluation criteria in different tracks had been used and to discuss remaining borderline papers. As a result, 52 research papers were selected to be presented at the conference and are included in the
proceedings. The ESWC 2010 proceedings also include ten PhD symposium papers presented at a separate track proceeding the main conference, and 17 demo papers giving a brief description of the system demos that were accepted for presentation in a dedicated session during the conference.

ESWC 2010 was happy to have had three keynote speakers and a dinner talk by high-profile researchers:

− Noshir Contractor, the Jane S. & William J. White Professor of Behavioral Sciences in the School of Engineering, School of Communication and the Kellogg School of Management at Northwestern University
− Sean Bechhofer, lecturer in the Information Management Group within the School of Computer Science at the University of Manchester
− Wolfgang Wahlster, Director and CEO of the German Research Center for Artificial Intelligence and a professor of Computer Science at Saarland University (Saarbruecken, Germany)
− Aldo Gangemi, senior researcher at the CNR Institute of Cognitive Sciences and Technology in Rome, and head of the Semantic Technology Lab.

Special thanks go to all the Chairs, Program Committee members, and additional reviewers of the different refereed tracks who all contributed to ensuring the scientific quality of ESWC 2010. Many thanks also go to the members of the Organizing Committee for their hard work in selecting outstanding tutorials, workshops, panels, lightning talks, and posters. We would like to also thank the Sponsorship Chair for reaching out to industry and various organizations supporting the 2010 edition of the conference, as well as the local organization, website and conference administration team put together by STI International for their excellent coordination during the conference preparation. Finally, we would like to thank the Proceedings Chair for the hard work in preparing this volume, Springer for the support with the preparation of the proceedings, and the developers of the EasyChair conference management system, which was used to manage the submission and review of papers, and the production of this volume.

May 2010

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Viesturs Zarins
Yuqing Zhai
Xiaowang Zhang
Xiao Zhang
Antoine Zimmermann

Sponsoring Institutions
# Table of Contents – Part I

## Mobility Track

Incremental Reasoning on Streams and Rich Background Knowledge

*Davide Francesco Barbieri, Daniele Braga, Stefano Ceri, Emanuele Della Valle, and Michael Grossniklaus*

Mobile Semantic-Based Matchmaking: A Fuzzy DL Approach

*Michele Ruta, Floriano Scioscia, and Eugenio Di Sciascio*

Replication and Versioning of Partial RDF Graphs

*Bernhard Schandl*

Finding Your Way through the Rijksmuseum with an Adaptive Mobile Museum Guide

*Willem Robert van Hage, Natalia Stash, Yiwen Wang, and Lora Aroyo*

A Hybrid Model and Computing Platform for Spatio-semantic Trajectories

*Zhixian Yan, Christine Parent, Stefano Spaccapietra, and Dipanjan Chakraborty*

## Ontologies and Reasoning Track

Reactive Policies for the Semantic Web

*Piero A. Bonatti, Philipp Kärger, and Daniel Olmedilla*

Categorize by: Deductive Aggregation of Semantic Web Query Results

*Claudia d’Amato, Nicola Fanizzi, and Agnieszka Lawrynowicz*

Natural Language Interfaces to Ontologies: Combining Syntactic Analysis and Ontology-Based Lookup through the User Interaction

*Danica Damljanovic, Milan Agatonovic, and Hamish Cunningham*

GeoWordNet: A Resource for Geo-spatial Applications

*Fausto Giunchiglia, Vincenzo Maltese, Feroz Farazi, and Biswanath Dutta*

Assessing the Safety of Knowledge Patterns in OWL Ontologies

*Luigi Iannone, Ignazio Palmisano, Alan L. Rector, and Robert Stevens*
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entity Reference Resolution via Spreading Activation on RDF-Graphs</td>
<td>152</td>
</tr>
<tr>
<td>Joachim Kleb and Andreas Abecker</td>
<td></td>
</tr>
<tr>
<td>A Generic Approach for Correcting Access Restrictions to a Consequence</td>
<td>167</td>
</tr>
<tr>
<td>Martin Knechtel and Rafael Peñaloza</td>
<td></td>
</tr>
<tr>
<td>Dealing with Inconsistency When Combining Ontologies and Rules Using DL-Programs</td>
<td>183</td>
</tr>
<tr>
<td>Jörg Pührer, Stijn Heymans, and Thomas Eiter</td>
<td></td>
</tr>
<tr>
<td>Aligning Large SKOS-Like Vocabularies: Two Case Studies</td>
<td>198</td>
</tr>
<tr>
<td>Anna Tordai, Jacco van Ossenbruggen, Guus Schreiber, and Bob Wielinga</td>
<td></td>
</tr>
<tr>
<td>OWL Reasoning with WebPIE: Calculating the Closure of 100 Billion Triples</td>
<td>213</td>
</tr>
<tr>
<td>Jacopo Urbani, Spyros Kotoulas, Jason Maassen, Frank van Harmelen, and Henri Bal</td>
<td></td>
</tr>
<tr>
<td>Efficiently Joining Group Patterns in SPARQL Queries</td>
<td>228</td>
</tr>
<tr>
<td>María-Ester Vidal, Edna Ruckhaus, Tomas Lampo, Amadís Martínez, Javier Sierra, and Axel Polleres</td>
<td></td>
</tr>
<tr>
<td>Reasoning-Based Patient Classification for Enhanced Medical Image</td>
<td>243</td>
</tr>
<tr>
<td>Sonja Zillner</td>
<td></td>
</tr>
<tr>
<td><strong>Semantic Web in Use Track</strong></td>
<td></td>
</tr>
<tr>
<td>Facilitating Dialogue - Using Semantic Web Technology for eParticipation</td>
<td>258</td>
</tr>
<tr>
<td>George Anadiotis, Panos Alexopoulos, Konstantinos Mpaslis, Aristotelis Zosakis, Konstantinos Kafentzis, and Konstantinos Kotis</td>
<td></td>
</tr>
<tr>
<td>Implementing Archaeological Time Periods Using CIDOC CRM and SKOS</td>
<td>273</td>
</tr>
<tr>
<td>Ceri Binding</td>
<td></td>
</tr>
<tr>
<td>Facet Graphs: Complex Semantic Querying Made Easy</td>
<td>288</td>
</tr>
<tr>
<td>Philipp Heim, Thomas Ertl, and Jürgen Ziegler</td>
<td></td>
</tr>
<tr>
<td>Interactive Relationship Discovery via the Semantic Web</td>
<td>303</td>
</tr>
<tr>
<td>Philipp Heim, Steffen Lohmann, and Timo Stegemann</td>
<td></td>
</tr>
</tbody>
</table>
Put in Your Postcode, Out Comes the Data: A Case Study .......................... 318
Tope Omitola, Christos L. Koumenides, Igor O. Popov, Yang Yang, Manuel Salvador, Martin Szomszor, Tim Berners-Lee, Nicholas Gibbins, Wendy Hall, mc schraefel, and Nigel Shadbolt

Taking OWL to Athens: Semantic Web Technology Takes Ancient Greek History to Students ............................................................. 333
Jochen Reutelshoefer, Florian Lemmerich, Joachim Baumeister, Jorit Wintjes, and Lorenz Haas

Generating Innovation with Semantically Enabled TasLab Portal........ 348
Pavel Shvaiko, Alessandro Oltramari, Roberta Cuel, Davide Pozza, and Giuseppe Angelini

Context-Driven Semantic Enrichment of Italian News Archive ........... 364
Andrei Tamilin, Bernardo Magnini, Luciano Serafini, Christian Girardi, Mathew Joseph, and Roberto Zanoli

A Pragmatic Approach to Semantic Repositories Benchmarking ........... 379
Dhavalkumar Thakker, Taha Osman, Shakti Gohil, and Phil Lakin

A Web-Based Repository Service for Vocabularies and Alignments in the Cultural Heritage Domain .......................................................... 394
Lourens van der Meij, Antoine Isaac, and Claus Zinn

Ontology Management in an Event-Triggered Knowledge Network ....... 410
Chen Zhou, Xuelian Xiao, Jeff DePree, Howard Beck, and Stanley Su

Sensor Networks Track

Modeling and Querying Metadata in the Semantic Sensor Web:
The Model stRDF and the Query Language stSPARQL ....................... 425
Manolis Koubarakis and Kostis Kyziarakos

Author Index .................................................................................. 441
# Table of Contents – Part II

## Services and Software Track

A Model of User Preferences for Semantic Services Discovery and Ranking ................................................................. 1  
*José María García, David Ruiz, and Antonio Ruiz-Cortés*

Towards Practical Semantic Web Service Discovery .................. 15  
*Martin Junghans, Sudhir Agarwal, and Rudi Studer*

iSeM: Approximated Reasoning for Adaptive Hybrid Selection of Semantic Services ............................................ 30  
*Matthias Klusch and Patrick Kapahnke*

Measures for Benchmarking Semantic Web Service Matchmaking Correctness ......................................................... 45  
*Ulrich Küster and Birgitta König-Ries*

Efficient Semantic Event Processing: Lessons Learned in User Interface Integration ..................................................... 60  
*Heiko Paulheim*

Usage Policies for Document Compositions ............................ 75  
*Sebastian Speiser and Rudi Studer*

## Social Web Track

The Impact of Multifaceted Tagging on Learning Tag Relations and Search ................................................................. 90  
*Fabian Abel, Nicola Henze, Ricardo Kawase, and Daniel Krause*

OKBook: Peer-to-Peer Community Formation ....................... 106  
*Xi Bai, Wamberto Vasconcelos, and Dave Robertson*

Acquiring Thesauri from Wikis by Exploiting Domain Models and Lexical Substitution ............................................. 121  
*Claudio Giuliano, Alfio Massimiliano Gliozzo, Aldo Gangemi, and Kateryna Tymoshenko*

Efficient Semantic-Aware Detection of Near Duplicate Resources .... 136  
*Ekaterini Ioannou, Odysseas Papapetrou, Dimitrios Skoutas, and Wolfgang Nejdl*

Guarding a Walled Garden — Semantic Privacy Preferences for the Social Web ..................................................... 151  
*Philipp Kärger and Wolf Siberski*
Using Social Media for Ontology Enrichment ............................... 166
  Paola Monachesi and Thomas Markus

Representing Distributed Groups with dgFOAF .............................. 181
  Felix Schwagereit, Ansgar Scherp, and Steffen Staab

Semantics, Sensors, and the Social Web: The Live Social Semantics
Experiments .................................................................................. 196
  Martin Szomszor, Ciro Cattuto, Wouter Van den Broeck,
  Alain Barrat, and Harith Alani

Web of Data Track

LESS – Template-Based Syndication and Presentation of Linked
Data ............................................................................................. 211
  Sören Auer, Raphael Doehring, and Sebastian Dietzold

Hierarchical Link Analysis for Ranking Web Data ............................. 225
  Renaud Delbru, Nickolai Toupikov, Michele Catasta,
  Giovanni Tummarello, and Stefan Decker

A Node Indexing Scheme for Web Entity Retrieval .............................. 240
  Renaud Delbru, Nickolai Toupikov, Michele Catasta, and
  Giovanni Tummarello

Object Link Structure in the Semantic Web ........................................ 257
  Weiyi Ge, Jianfeng Chen, Wei Hu, and Yuzhong Qu

ExpLOD: Summary-Based Exploration of Interlinking and RDF Usage
in the Linked Open Data Cloud ....................................................... 272
  Shahan Khatchadourian and Mariano P. Consens

Combining Query Translation with Query Answering for Efficient
Keyword Search ............................................................................. 288
  Günter Ladwig and Thanh Tran

Improving the Performance of Semantic Web Applications with
SPARQL Query Caching .................................................................. 304
  Michael Martin, Jörg Unbehauen, and Sören Auer

An Unsupervised Approach for Acquiring Ontologies and RDF Data
from Online Life Science Databases .............................................. 319
  Saqib Mir, Steffen Staab, and Isabel Rojas

Leveraging Terminological Structure for Object Reconciliation .......... 334
  Jan Noessner, Mathias Niepert, Christian Meilicke, and
  Heiner Stuckenschmidt
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usability of Keyword-Driven Schema-Agnostic Search: A Comparative Study of Keyword Search, Faceted Search, Query Completion and Result Completion</td>
<td>349</td>
</tr>
<tr>
<td>Thanh Tran, Tobias Mathäss, and Peter Haase</td>
<td></td>
</tr>
<tr>
<td><strong>Demo and Poster Track</strong></td>
<td></td>
</tr>
<tr>
<td>Collaborative Semantic Points of Interests</td>
<td>365</td>
</tr>
<tr>
<td>Max Braun, Ansgar Scherp, and Steffen Staab</td>
<td></td>
</tr>
<tr>
<td>Publishing Math Lecture Notes as Linked Data</td>
<td>370</td>
</tr>
<tr>
<td>Catalin David, Michael Kohlhase, Christoph Lange, Florian Rabe, Nikita Zhiltsov, and Vyacheslav Zholudev</td>
<td></td>
</tr>
<tr>
<td>GoNToggle: A Tool for Semantic Annotation and Search</td>
<td>376</td>
</tr>
<tr>
<td>Giorgos Giannopoulos, Nikos Bikakis, Theodore Dalamagas, and Timos Sellis</td>
<td></td>
</tr>
<tr>
<td>A Software Tool for Visualizing, Managing and Eliciting SWRL Rules</td>
<td>381</td>
</tr>
<tr>
<td>Saeed Hassanpour, Martin J. O’Connor, and Amar K. Das</td>
<td></td>
</tr>
<tr>
<td>A Knowledge Infrastructure for the Dutch Immigration Office</td>
<td>386</td>
</tr>
<tr>
<td>Ronald Heller, Freek van Teeseling, and Menno Gülpers</td>
<td></td>
</tr>
<tr>
<td>Verifying and Validating Multi-layered Models with OWL FA Toolkit</td>
<td>391</td>
</tr>
<tr>
<td>Nophadol Jekjantuk, Jeff Z. Pan, and Gerd Gröner</td>
<td></td>
</tr>
<tr>
<td>What’s New in WSMX?</td>
<td>396</td>
</tr>
<tr>
<td>Srdjan Komazec and Federico Michele Facca</td>
<td></td>
</tr>
<tr>
<td>OntoFrame S3: Semantic Web-Based Academic Research Information Portal Service Empowered by STAR-WIN</td>
<td>401</td>
</tr>
<tr>
<td>Seungwoo Lee, Mikiyoung Lee, Pyung Kim, Hanmin Jung, and Won-Kyung Sung</td>
<td></td>
</tr>
<tr>
<td>Rapid Prototyping a Semantic Web Application for Cultural Heritage: The Case of MANTIC</td>
<td>406</td>
</tr>
<tr>
<td>Glauco Mantegari, Matteo Palmonari, and Giuseppe Vizzari</td>
<td></td>
</tr>
<tr>
<td>Hey! Ho! Let’s Go! Explanatory Music Recommendations with dbrec</td>
<td>411</td>
</tr>
<tr>
<td>Alexandre Passant and Stefan Decker</td>
<td></td>
</tr>
<tr>
<td>PossDL — A Possibilistic DL Reasoner for Uncertainty Reasoning and Inconsistency Handling</td>
<td>416</td>
</tr>
<tr>
<td>Guilin Qi, Qiu Ji, Jeff Z. Pan, and Jianfeng Du</td>
<td></td>
</tr>
<tr>
<td>PoolParty: SKOS Thesaurus Management Utilizing Linked Data</td>
<td>421</td>
</tr>
<tr>
<td>Thomas Schandl and Andreas Blumauer</td>
<td></td>
</tr>
<tr>
<td>DSMW: Distributed Semantic MediaWiki</td>
<td>426</td>
</tr>
<tr>
<td>Hala Skaf-Molli, Gérôme Canals, and Pascal Molli</td>
<td></td>
</tr>
</tbody>
</table>