

OWL: Experiences and Directions

This volume contains the papers presented at the first OWL:Experiences and Directions Workshop. The workshop was held in Galway, Ireland, from November 11-12, 2005. Each submission was reviewed by at least 2 programme committee members. The committee decided to accept 32 papers. The programme committee consisted of the following researchers in both academia and industry:

- Dean Allemang, TopQuadrant (USA)
- Phil Archer, ICRA (UK)
- Michael Champion, Microsoft (USA)
- Dan Connolly, W3C (USA)
- Mike Dean, BBN Technologies (USA)
- Enrico Franconi, University of Bolzano (Italy)
- Jennifer Golbeck, University of Maryland (USA)
- Christine Golbreich, University Rennes 2 (France)
- Pat Hayes, University of West Florida (USA)
- Kaoru Hiramatsu, NTT (Japan)
- Joanne Luciano, BioPAX (USA)
- Carsten Lutz, TU Dresden (Germany)
- Sheila McIlraith, University of Toronto (Canada)
- Boris Motik, University of Karlsruhe (Germany)
- Enrico Motta, Open University (UK)
- Ryusuke Masuoka, Fujitsu Laboratories of America (USA)
- Gary Ng, Cerebra (USA)
- Natasha Noy, Stanford University (USA)
- Alan L. Rector, University of Manchester (UK)
- Andrew Schain, NASA (USA)
- monica schraefel, University of Southampton (UK)
- Guus Schreiber, Vrije Universitat Amsterdam (Netherlands)
- Evan Wallace, NIST (USA)
- Christopher Welty, IBM Research (USA)

The following additional reviewers, recruited by the PC members, also contributed to the review process:

- Oscar Corcho
- Martin Dzbor
- Birte Glimm
- Antoon Goderis
- Christian Halaschek-Wiener
- Shashi Kant
- Yarden Katz
- Yuanguai Lei
- Lei Li
- Phil Lord
- Dmitry Tsarkov

Technical papers were submitted in two categories: long papers and short papers. All these papers have been peer-reviewed. In addition, participants were encouraged to submit a short position paper. Position papers have not been peer-reviewed. We would like to thank the programme committee members and the additional referees for reviewing the papers and providing valuable suggestions to the authors.

Numerous people helped in the organization of this event, but we would like to express our special thanks to Dr. Jennifer Golbeck for providing the design of the workshop website, and to Prof. Andrei Voronkov, for making the EasyChair system publicly available.

Again, thanks to everybody for making this workshop possible; we are sure that it will prove to be an interesting and stimulating event.

Bernardo Cuenca Grau
Ian Horrocks
Bijan Parsia
Peter Patel-Schneider
The Workshop Organizers

November 2005

1 Table of Contents

A Tool for Storing OWL Using Database Technology	<i>Maria del Mar Roldan-Garcia, Jose F. Aldana-Montes</i>
Modeling Fuzzy Rules with Description Logics	<i>Sudhir Agarwal, Pascal Hitzler</i>
Benchmarking DL Reasoners Using Realistic Ontologies	<i>Zhengxiang Pan</i>
Towards an Object-Oriented Reasoning System for OWL	<i>Georgios Meditskos, Nick Bassiliades</i>
Introducing Customised Datatypes and Datatype Predicates into OWL	<i>Jeff Z. Pan, Ian Horrocks</i>
Closed World Reasoning in the Semantic Web through Epistemic Operators	<i>Stephan Grimm, Boris Motik</i>
Tailoring OWL for data intensive ontologies	<i>Diego Calvanese, Giuseppe De Giacomo, Domenico Lembo, Maurizio Lenzerini, Riccardo Rosati</i>
The Protege OWL Experience	<i>Holger Knublauch, Matthew Horridge, Mark Musen, Alan Rector, Robert Stevens, Nick Drummond, Phil Lord, Natalya F. Noy, Julian Seidenberg, Hai Wang</i>
Fuzzy OWL: Uncertainty and the Semantic Web	<i>Giorgos Stoilos, Giorgos Stamou, Vassilis Tzouvaras, Jeff Z. Pan, Ian Horrocks</i>
Experiences of Using OWL at the Ordnance Survey	<i>John Goodwin</i>
What Have Ontologies Ever Done For Us: Potential Applications at a National Mapping Agency	<i>John Goodwin</i>
The Irresistible SRIQ	<i>Ian Horrocks, Oliver Kutz, Ulrike Sattler</i>
What reasoning support for Ontology and Rules? the brain anatomy case study	<i>Christine Golbreich, Olivier Dameron, Olivier Bierlaire, Bernard Gibaud</i>
Pushing the limits of OWL, Rules and Protg. A simple example.	<i>Anne Cregan, Malgorzata Mochol, Denny Vrandeic, Sean Bechhofer</i>
Logical reconstruction of normative RDF	<i>Enrico Franconi, Jos de Bruijn, Sergio Tessaris</i>
Experiences with using OWL in Military Applications	<i>Lee Lacy, Robert Gaskill</i>
Building Applications and Tools for OWL – Experiences and Suggestions	<i>Thorsten Liebig, Marko Luther, Olaf Noppens, Massimo Paolucci, Matthias Wagner</i>
On Developing a Distributed CBR Framework through Semantic Web Services	<i>Belén Daz-Agudo, Pedro A. González-Calero, Pedro Pablo Gómez-Martín, Marco Antonio Gómez-Martín</i>
Open vs Closed world, Rules vs Queries: Use cases from Industry	<i>Gary Ng</i>
The Foundational Model of Anatomy in OWL: experience and perspectives	<i>Christine Golbreich, Songmao Zhang, Olivier Bodenreider</i>

- Experience Using OWL DL for the Exchange of Biological Pathway Information
Alan Ruttenberg, Jonathan Rees, Joanne Luciano
- Towards a Nonmonotonic Extension to OWL
Yarden Katz, Bijan Parsia
- DLP isn't so bad after all
Pascal Hitzler, Peter Haase, Markus Krötzsch, York Sure, Rudi Studer
- A OWL-Based Semantic Web Service Discovery Framework
Xinqi Wang, Xueli Yu
- OWL FA: A Metamodeling Extension of OWL DL
Jeff Z. Pan, Ian Horrocks, Guus Schreiber
- Experiences with OWL-S, Directions for Service Composition: The Cashew Position
Barry Norton
- Building and Using an Ontology of Tasks
Fatma Mili, , Swapna Ghanekar
- Representing Qualitative Spatial Information in OWL-DL
Yarden Katz, Bernardo Cuenca Grau
- The Policy Argument, the Commercial Imperative and the Wow factor
Phil Archer
- Extending OWL with Maximal Subproperties
Stanislav Pokraev, Rogier Brussee
- Protein Ontology Development using OWL
AMANDEEP SIDHU, THARAM DILLON, ELIZABETH CHANG, BALDEV SINGH SIDHU