

# Preface

Today there is wide agreement that knowledge modeling and the semantic dimension of information play an increasingly central role in the networked economy. This is often characterized by a turbulent market in which entry barriers are reduced, new-comers appear in the market offering competitive products or services, companies innovate and propose customized services and products, and organizations continuously change business models in order to reduce costs, externalize processes, and network with others to remain competitive.

In this scenario, understanding market trends and competitors' strategies, learning faster than others, observing consumers behaviors, anticipating buyers' needs, negotiating and partnering with other organizations in the same or similar markets are considered fundamental and strategic actions for the sustainable management and effective operation of industrial enterprises. All these actions require complex, high-quality information as well as knowledge management, representation, and organization.

As a consequence, semantic-based applications may be used in real business settings to provide a framework for information and knowledge management, sharing, and exchange, which involves negotiation and coordination between distinct organizations or among units and members of the same organization.

In the last ten years, significant progress has been made in theoretical approaches, knowledge representation models, ontology creation, maintenance, ontology matching, and interoperability. However broad-ranging extensive industrial implementations in real-case studies are still to be achieved.

The FOMI 2015 Workshop aimed to establish an international forum where experts meet to analyze and discuss problems, solutions, perspectives, and research directions for both academic researchers in various fields (philosophy, computer science, engineering, management, knowledge management, etc.) and industrial practitioners of various sectors. The focus of the workshop was on issues related to methods, theories, tools, and applications targeted at real industrial problems but based on formal ontologies.

In particular the papers were focused on:

- Theoretical studies of formal ontologies committed to providing a sound basis for industrial applications and to allowing for formal representation of corporate knowledge
- Business experiences in case studies that single out concrete problems and possible solutions in the creation and deployment of formal ontologies

The papers in this volume cover a wide range of industrial application topics from very specific, focused domain issues to more general reference ontologies for broad areas of business. The progress being made in exploiting formal ontologies is discussed, as are the on-going requirements for industry and the many issues that remain

to be resolved. The workshop papers, in combination, provide valuable insight into the current state of progress in supporting industrial information and knowledge-sharing requirements through the development and use of formal ontologies.

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