Foreword

Since the dawn of the Semantic Web, we have been working on developing techniques that use the data, metadata, and links available on the World Wide Web (WWW) for inferring additional services. These services aim at supporting our work and lives with technologies such as the resource description framework (RDF) and, most recently, the Web ontology language (OWL). Several of these technologies enable or use semantic data and also enable further technologies that exploit the wealth of information on the WWW.

This book, edited by Jörg Rech, Eric Ras, and Björn Decker, deals with another interesting and important problem, namely, integrating semantic technologies into work environments. It looks at ways of creating semantically richer applications that intelligently assist the user with additional information. A richer representation enables new services for people and enables further technologies that exploit this semantic information.

Today, semantic technologies increasingly find their way into collaborative tools such as Wikis, Desktops, or Web-based platforms. In the context of corporate settings, these semantic-based collaborative applications represent enhanced tools that intelligently and autonomously support the knowledge worker with relevant information on time. Semantic work environments such as Semantic Wikis, Semantic Desktops, or Web-based semantic platforms are information systems that use semantic technologies to enhance the content in these systems for presentation, querying, reporting, or analysis purposes. Besides the information available on the WWW, these environments raise and exploit the more specific information available throughout company networks that is ripe to be integrated into new services. Furthermore, most employees of these companies like to share their knowledge and use these systems for documenting, storing, and disseminating their knowledge.

To integrate the data into company networks, several systems have been developed that integrate semantic technologies—many of them are presented in this book. The first part of this book (sections one and two) is an interesting collection of chapters dealing with integrating semantic technologies and metadata into work environments. While the first three chapters investigate how semantic collaboration can be enabled and fostered, the other chapters describe real-world semantic work environments such as:

- **SWiM:** A Semantic Wiki for collaboratively building, editing, and browsing mathematical knowledge in order to support knowledge management for mathematicians.
- **CoolWikNews:** A Semantic Wiki devoted to news publishing in order to support knowledge management for journalists.
- **AKSIO:** An active socio-technical system for knowledge transfer between drilling projects, using documented experiences, best practices, and expert references.
- **Opas:** A semi-automatic annotation and authoring tool to support librarians via specialized help desk services.
- **SweetWiki:** A Semantic Wiki that integrates several semantic technologies to provide a Semantic Web application platform for everyone.

- **SemperWiki:** A Semantic Wiki that is targeted to support personal knowledge management with semantic technologies.
- **DeepaMehta:** A platform designed to provide knowledge workers with additional information that supports their work, thoughts, and collaborations with colleagues.
- **Ylvi:** A Semantic Wiki that enables and supports the creation of semantic information during normal project work.
- **OntoWiki:** A Semantic Wiki aimed to support the social and semantic collaboration.

In order to enable and keep these semantic work environments alive, we need several technologies and methodologies. Standard data modeling formats and methods are necessary for promoting interoperability and for integrating users into these systems. This issue of using techniques and methods for semantic work environments is addressed in the second part (sections three and four) of this book. The six chapters address the following questions:

- How can we integrate people into semantic work environments and show them the added value these systems offer?
- How can we enable and foster learning during work activities and on demand in semantic work environments?
- How can we automatically acquire semantic information from previously existing sources for semantic work environments?
- How can we integrate the various existing technologies for semantic work environments to support project-driven work?
- How can we model the data, metadata, and relations used in semantic work environments?

In summary, the editors have selected a very interesting collection of chapters that present the current state of the art in semantic work environments. The primary objective of this book is to mobilize researchers and practitioners to develop and improve today's work environments using semantic technologies. It raises the awareness in the research community for the great potential of SWE research. All in all, this book is a significant collection of contributions on the progress in semantic work environments and its use in various application domains. These contributions constitute a remarkable reference for researchers on new topics on the design and operation as well as on technical, managerial, behavioral, and organizational aspects of semantic work environments.

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