Book Reviews

DIETER FENSEL
Ontologies: A Silver Bullet for Knowledge Management and Electronic Commerce. Springer (2004), 2nd edn. ISBN 3-540-00302-9. £27.00/€37.40/$34.95. 162 pp. Hardbound.

Ontologies provide the ability to organize knowledge. In order to communicate, agents, human or otherwise, require agreement on the ontological concepts that they employ. Ontologies provide a taxonomy of those concepts, providing a way to categorize the world of concern. Ontologies provide vocabulary and definition for those concepts and categories.

This book provides an excellent introduction to ontologies. It lays the foundations for understanding ontologies and their applications. It has many examples illustrating to the reader the different characteristics of ontologies: Professor Fensel is methodical in his analysis. After introducing ontologies in Chapter 1, Chapter 2 addresses the basic concept of ontologies in a number of settings, reviewing some well-known applications. Chapter 3 analyzes different languages, starting with XML and reviews different ontology languages. Chapter 4 provides a survey of some ontology tools. Chapter 5, one of the larger chapters, focuses on applications of ontologies, including knowledge management, web commerce, electronic business and enterprise application integration. Chapter 6 briefly summarizes the book and looks ahead.

One of the strengths of the book is that it is presented in the context of the semantic web and the evolving concepts of web services. The book is a good blend of theory, applications and illustrations of ontologies. It provides a broad analysis of how ontologies are used, including a number of different screen shots. The book is not just speculative or academic, it is concerned with solving real-world problems.

The book also provides depth and insight into key problems of ontologies. For example, the 'Ontoprise Tool Suite' is examined in detail, including overall architecture, underlying axioms, requirement and ontology refinement and specification, and providing meta information for documents, in addition to its operationalization.

The revised edition of the book provides the reader with a large number of references. Those references also point the reader to work by other authors in the area of ontologies. The appendix provides a relatively comprehensive list of related standards.

If the book has a limitation, it probably is a bit biased toward Fensel's research, at the expense of other points of view. However, such a bias is almost inevitable. Taking into account the qualifications of the author, this may not be a shortcoming.

There are a wide range of materials already available on this topic. Unfortunately, those materials are not addressed or referenced.

In a few instances, the level of presentation is not clear. For example, 'Class Hierarchies' are explained, but then there is the off-hand comment that 'Semantically, the language for defining rules is the fragment of first order logic that can be transformed via Lloyd–Topor . . . transformations into Horn logic'.

In addition, some of the material is a bit dated, e.g. some web addresses do not work any longer. However, in the field of ontologies, where new findings are constantly generated, and on the web, where pages go up and then disappear, this is an inevitable consequence of generating a book in this topic area.

The second edition is longer than the original edition, with 162 pages. Many of the references are new, and it also has a very interesting 'Foreword' by Michael Brodie.

To summarize, this is an excellent book that allows the reader to address a number of questions: what are ontologies; what are the applications of ontologies; what languages and tools do ontologies use; what are the key standards in the area of ontologies; and what will be the future of ontologies?

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ZHANG YAOXUE AND FANG CUNHAO
Active Services: Concepts, Architecture and Implementation. Scientific Publishing Co. of China (2004). (English Version will be published by Thomson Learning in 2005). ISBN: 7-03-014576-3.

To say that this book is a work of great importance is an understatement. Authored by prominent researchers, Professor Yaoxue Zhang and Dr Fang Cunhao, it breaks new ground in active services and program mining and is likely to be viewed in retrospect as a milestone in its field.

The World Wide Web through the Internet has been a phenomenal success in enabling simple computer–human interactions across the world. A key factor in the success of HTTP and HTML used by today's web browsers is their relative simplicity—both HTTP and HTML are primarily text-based and can be implemented through a variety of operating systems and programming environments. Web services take many of the ideas and principles of the Web and apply them to computer–computer interactions.

Web services and the World Wide Web are similar in many ways. For example, both the World Wide Web and web services communicate using a set of foundation protocols that share a common architecture and are meant to be realized in a variety of independently developed and deployed systems. Both the World Wide Web and web services protocols use