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Book Reviews

Semantic Web Technologies: trends and research in ontology-based systems

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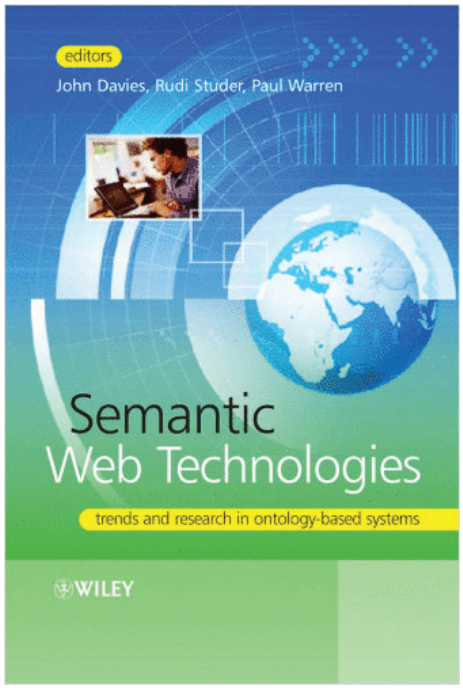
Most of the information currently available on the Internet is written in natural language, and can only be interpreted by human beings. This is clearly illustrated by the fact that the results of a web search force us to filter information that belongs to different contexts, even though we have clearly defined search parameters. Take the example of an educational search on trees – oaks, for instance. In addition to showing web pages concerning this particular type of tree, results will also show individuals whose last name is Oak, crane manufacturers, and law offices.

Tim Berners Lee, acclaimed as one of the inventors of the Web, contends that a Semantic Web will surface in the near future, making information available in a format suitable both for human understanding and automatic computer processing. According to Mr. Lee, "*the Semantic Web is an EXTENSION of the current one, in which information is given well-defined meaning, better enabling computers and people to work in cooperation*". (Berners-Lee, Hendler and Lassila). This new Web will allow computers to understand and process billions of pages worth of information.

This will be made possible by a combination of existing and emerging technologies. The book "Semantic Web Technologies" suggests a discussion on such technologies, and focuses on the lifecycle of ontologies: their creation, utilization, and management.

The fact that the book is a collection of articles organized in chapters is not immediately clear to read-



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ers, as the table of contents makes no mention to the authors' names.

Despite relying on a stellar group of acknowledged authors, the book has considerable variations in quality from one chapter to the next. One of its strengths is its discussions on finding data and inference in the presence of inconsistency. The chapter on ontology evolution is especially interesting and original, presenting a subject rarely found in literature. The chapter on semantic annotation also deserves mentioning, due to the quality and scope of the review undertaken in its writing. Despite its condensed data presentation, the updated bibliographical references it contains will make it highly valuable to those interested in the subject.

Other subjects, such as methodologies for ontology construction and mediation, ontology matching, and automatic ontology generation, have been exhaustively discussed in literature, and thus become redundant.

The final chapter presents studies in which some of the technologies discussed in the book were actually employed. There are three fields of application. The first and most obvious is digital libraries. The second presents an inexpressive ontology-based system prototype created to address issues related to the Spanish judicial system. The last chapter describes applications for semantic mediation in the telecommunications industry that are more interesting.

Personal experience has provided me with evidence that few books of the "article compilation" type offer solid contributions in every chapter. Although "Semantic Web Technologies" is no exception, it achieves a good overall score.