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Book Reviews

A Business Perspective on the Semantic Web

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Adaptive Information: Improving Business through Semantic Interoperability, Grid Computing, and Enterprise Integration

By Jeffrey T. Pollock and Ralph Hodgson

440 Pages

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A*Adaptive Information: Improving Business through Semantic Interoperability, Grid Computing, and Enterprise Integration* by Jeffrey T. Pollock and Ralph Hodgson is an essential read for all Semantic Web practitioners—from CIOs to CTOs and architects to managers. The book also adds a business perspective to semantic technology, which makes it a must-read for upper management. It includes background information, definitions, recommendations, alternative solutions, and product suggestions along with complete case studies. Pollock and Hodgson talk about information solutions leveraging the technical advances in the field over the past decade, using thought-provoking methods to convey the information. The presentation is simple enough for managers, with just enough technical detail for developers or architects to design a semantic system.

Infostructure

An infrastructure is an organization's underlying foundation or basic framework, consisting primarily of hardware. Similarly, infostructure is the underlying foundation of available information. The book focuses mainly on infostructure and the data-gathering technology that has been brewing for about a decade and a half and is now ready for primetime.

As with all infrastructures, a set of technology standards is required for simultaneous development and implementation. The book provides the information to understand the development of such technology standards to ensure that Web services support all new essential capabilities.

Adaptive Information

Adaptive Information's first part is primarily for technical project decision-makers, managers, and novices, accurately portraying the importance of knowledge and information sharing.

Humans, by nature, are prone to error. Automation enhances software agility by removing as much human interference as possible. The Semantic Web promises frictionless transfer of information—a promise yet to be fulfilled. This section sets the tone for the rest of the book.

In the next section, on Semantics 101, the authors spotlight the basics of the semantic definition and architecture. They present a comprehensive study of the most essential part of semantics: communication between applications. Their examples are appropriate in explaining their points. The chapter's metadata information, however, could have been more detailed. Metadata plays a big role in organizing data for semantic uses and makes data access easy and user-recognizable. The ontology chapter, on the other hand, does justice to the topic. The explanations are better than those in most comparable books on related topics. The last chapter in the section provides a good transition to the book's third and most critical part: the adoption of semantic technology.

The third section talks about implementing the ideas and case studies in the previous two sections. The authors cover interesting topics including skill assessment for staffing, envisioning project solutions, and so on. The best part of the book, I believe, is when the authors talk about different methodologies and ontology life cycles. This discussion proves that semantic technology can move from labs to real-world applications. The authors subtly conclude the book by summarizing the various ideas presented throughout.

The book could have been more detailed on many topics, such as metadata and e-business infrastructures, that Pollock and Hodgson merely skimmed through. Given the subject domain, I hope they're are planning a sequel.

Information sharing gives all companies a competitive edge in today's world, but available information integration approaches are neither adequate nor powerful enough to provide this edge. The yardstick is the speed and efficiency of information sharing.

Adaptive Information by Jeffrey T. Pollock and Ralph Hodgson provides a good overview of many Semantic Web technologies and possible architecture designs. Pollock and Hodgson don't focus on a specific technology or solution, which makes their ideas and opinions credible. I think their business-related backgrounds (they're both business executives) bring a great perspective when talking about semantic technology.

Technology is a thing of beauty. However, without a business model backing its development, sometimes the technology has difficulty evolving. The Semantic Web has been evolving for years now. The need for information sharing wasn't felt before as strongly as it has been of late. The recent need for data management and knowledge use has been the stepmother for semantic interoperability's reinvention.

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