DESCRIPTION

The Semantic Web combines the descriptive languages RDF (Resource Description Framework) and OWL (Web Ontology Language), with the data-centric, customizable XML (eXtensible Mark-up Language) to provide descriptions of the content of Web documents. These machine-interpretable descriptions allow more intelligent software systems to be written, automating the analysis and exploitation of web-based information.

Software agents will be able to create automatically new services from already published services, with potentially huge implications for models of e-Business.

*Semantic Web Technologies* provides a comprehensive overview of key semantic knowledge technologies and research. The authors explain (semi-)automatic ontology generation and metadata extraction in depth, along with ontology management and mediation. Further chapters examine how Semantic Web technology is being applied in knowledge management (“Semantic Information Access”) and in the next generation of Web services.

*Semantic Web Technologies:*

- Provides a comprehensive exposition of the state-of-the-art in Semantic Web research and key technologies.
- Explains the use of ontologies and metadata to achieve machine-interpretability.
- Describes methods for ontology learning and metadata generation.
• Discusses ontology management and evolution, covering ontology change detection and propagation, ontology dependency and mediation.

• Illustrates the theoretical concepts with three case studies on industrial applications in digital libraries, the legal sector and the telecommunication industry.

Graduate and advanced undergraduate students, academic and industrial researchers in the field will all find *Semantic Web Technologies* an essential guide to the technologies of the Semantic Web.

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**ABOUT THE AUTHOR**

**Dr John Davies** leads the Next Generation Web research group at BT. Current interests focus on the application of semantic web technology to knowledge management and semantic web services. John is industrial chair of the Semantic Web Services Initiative, co-organiser of the European Semantic Web Conference series and Project Director of the SEKT EU integrated project (Semantically-Enabled Knowledge Technologies). He has written and edited many papers and books in related areas.

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