

## Web 2 0 Semantic Web Alilee

This book constitutes the refereed proceedings of the 7th International Semantic Web Conference, ISWC 2008, held in Karlsruhe, Germany, during October 26-30, 2008. The volume contains 43 revised full research papers selected from a submissions, of which an additional 3 papers were referred to the semantic Web in-use track; 11 papers out of 26 submissions to the semantic Web in-use track, and 7 papers and 12 posters accepted out of 39 submissions to the doctor topics covered in the research track are ontology engineering; data management; software and service engineering; non-standard reasoning with ontologies; semantic retrieval; OWL; ontology alignment; description logics; user interfaces; Web knowledge; semantic Web services; semantic social networks; and rules and relatedness. The semantic Web in-use track covers knowledge management; business applications; applications from home to space; and services and infrastructure. Many challenges were identified in CSCW some thirty years ago, and some of these remain problematic today. However they are being progressively transformed and this edited volume contains contributions that demonstrate how these r being dealt with in a variety of ways, reflecting the balance of rigour and creativity that has always characterised the field. Originally presented at COOP '08 which took place in Carry-le-Rouet, France in 2008, the contributions to this vol substantially extended and revised. New technologies, new domains and new methods are described for supporting design and evaluation. Taking a progressive and critical stance, the authors cover a variety of themes including inter-organ non task-based environments, creativity, and the development of Web 2.0 (and even Web 3.0) applications, including new cooperative mechanisms and new classification possibilities.

The emergence of Web 2.0 is provoking challenging questions for developers: What products and services can our company provide to customers and employees using Rich Internet Applications, mash-ups, Web feeds or Ajax? Which business appropriate and how do we implement them? What are best practices and how do we apply them? If you need answers to these and related questions, you need Unleashing Web 2.0—a comprehensive and reliable resource that guides you and unstructured landscape that is Web 2.0. Gottfried Vossen is a professor of Information Systems and Computer Science at the University of Muenster in Germany. He is the European Editor-in-Chief of Elsevier's Information Systems—An Journal. Stephan Hagemann is a PhD. Student in Gottfried's research group focused on Web technologies. Presents a complete view of Web 2.0 including services and technologies Discusses potential new products and services and the tec programming ability needed to realize them Offers 'how to' basics presenting development frameworks and best practices Compares and contrasts Web 2.0 with the Semantic Web

by Roberto Cencioni At the Lisbon Summit in March 2000, European heads of state and government set a new goal for the European Union — to become the most competitive knowled- based society in the world by 2010. As part of this (information and communication technologies) services should become available for every citizen, and for all schools, homes and businesses. The book you have in front of you is about Semantic Web technology and law. Law is something o citizens — at some points in their lives — have to deal with it. In addition, law involves a large group of professionals, and is a mul- billion business world wide. Information technology is important because it that can improve citizens' inter well as improve legal professionals' work environment. Legal professionals dedicate a significant amount of their time to finding, reading, analyzing and synthesizing information in order to take decisions, and prepare advice and trials, among part of the "Semantic-Based Knowledge and Content Systems" Strategic Objective, the European Commission is funding projects to construct technology to make the Semantic Web vision come true. 1 The articles in this book are related to of the Strategic Objective : • Knowledge acquisition and modelling, capturing knowledge from raw information and multimedia content in webs and other distributed repositories to turn poorly structured information into machi- processable Web Squared: Web 2.0 Five Years On

Social Web Evolution: Integrating Semantic Applications and Web 2.0 Technologies

7th International Semantic Web Conference, ISWC 2008, Karlsruhe, Germany, October 26-30, 2008, Proceedings

6th European Semantic Web Conference, ESWC 2009 Heraklion, Crete, Greece, May 31– June 4, 2009 Proceedings

The Open Knowledge Society

The Semantic Web: Research and Applications

With the current changes driven by the expansion of the World Wide Web, this book uses a different approach from other books on the market: it applies ontologies to electronically available information to improve the quality of knowledge management in large and distributed organizations. Ontologies are formal theories supporting knowledge sharing and reuse. They can be used to explicitly represent semantics of semi-structured information. These enable sophisticated automatic support for acquiring, maintaining and accessing information. Methodology and tools are developed for intelligent access to large volumes of semi-structured and textual information sources in intra- and extra-, and internet-based environments to employ the full power of ontologies in supporting knowledge management from the information client perspective and the information provider. The aim of the book is to support efficient and effective knowledge management and focuses on weakly-structured online information sources. It is aimed primarily at researchers in the area of knowledge management and information retrieval and will also be a useful reference for students in computer science at the postgraduate level and for business managers who are aiming to increase the corporations' information infrastructure. The Semantic Web is a very important initiative affecting the future of the WWW that is currently generating huge interest. The book covers several highly significant contributions to the semantic web research effort, including a new language for defining ontologies, several novel software tools and a coherent methodology for the application of the tools for business advantage. It also provides 3 case studies which give examples of the real benefits to be derived from the adoption of semantic-web based ontologies in "real world" situations. As such, the book is an excellent mixture of theory, tools and applications in an important area of WWW research. \* Provides guidelines for introducing knowledge management concepts and tools into enterprises, to help knowledge providers present their knowledge efficiently and effectively. \* Introduces an intelligent search tool that supports users in accessing information and a tool environment for maintenance, conversion and acquisition of information sources. \* Discusses three large case studies which will help to develop the technology according to the actual needs of large and or virtual organisations and will provide a testbed for evaluating tools and methods. The book is aimed at people with at least a good understanding of existing WWW technology and some level of technical understanding of the underpinning technologies (XML/RDF). It will be of interest to graduate students, academic and industrial researchers in the field, and the many industrial personnel who are tracking WWW technology developments in order to understand the business implications. It could also be used to support undergraduate courses in the area but is not itself an introductory text.

An introduction to next-generation web technologies This is a comprehensive, candid introduction to Web 2.0 for every executive, strategist, technical professional, and marketer who needs to understand its implications. The authors illuminate the technologies that make Web 2.0 concepts accessible and systematically identify the business and technical best practices needed to make the most of it. You 'll gain a clear understanding of what 's really new about Web 2.0 and what isn 't. Most important, you 'll learn how Web 2.0 can help you enhance collaboration, decision-making, productivity, innovation, and your key enterprise initiatives. The authors cut through the hype that surrounds Web 2.0 and help you identify the specific innovations most likely to deliver value in your organization. Along the way, they help you assess, plan for, and profit from user-generated content, Rich Internet Applications (RIA), social networking, semantic web, content aggregation, cloud computing, the Mobile Web, and much more. This is the only book on Web 2.0 that: Covers Web 2.0 from the perspective of every participant and stakeholder, from consumers to product managers to technical professionals Provides a view of both the underlying technologies and the potential applications to bring you up to speed and spark creative ideas about how to apply Web 2.0 Introduces Web 2.0 business applications that work, as demonstrated by actual Cisco® case studies Offers detailed, expert insights into the technical infrastructure and development practices raised by Web 2.0 Previews tomorrow 's emerging innovations—including "Web 3.0," the Semantic Web Provides up-to-date references, links, and pointers for exploring Web 2.0 first-hand Krishna Sankar, Distinguished Engineer in the Software Group at Cisco, currently focuses on highly scalable Web architectures and frameworks, social and knowledge graphs, collaborative social networks, and intelligent inferences. Susan A. Bouchard is a senior manager with US-Canada Sales Planning and Operations at Cisco. She focuses on Web 2.0 technology as part of the US-Canada collaboration initiative. Understand Web 2.0 's foundational concepts and component technologies Discover today 's best business and technical practices for profiting from Web 2.0 and Rich Internet Applications (RIA) Leverage cloud computing, social networking, and user-generated content Understand the infrastructure scalability and development practices that must be address-ed for Web 2.0 to work Gain insight into how Web 2.0 technologies are deployed inside Cisco and their business value to employees, partners, and customers This book is part of the Cisco Press® Fundamentals Series. Books in this series introduce networking professionals to new networking technologies, covering network topologies, example deployment concepts, protocols, and management techniques. Category: General Networking Covers: Web 2.0

The concept of "Web 2.0" began with a conference brainstorming session between O'Reilly and MediaLive International. Dale Dougherty, web pioneer and O'Reilly VP, noted that far from having "crashed", the web was more important than ever, with exciting new applications and sites popping up with surprising regularity. What's more, the companies that had survived the collapse seemed to have some things in common. Could it be that the dot-com collapse marked some kind of turning point for the web, such that a call to action such as "Web 2.0" might make sense? We agreed that it did, and so the Web 2.0 Conference was born. In the year and a half since, the term "Web 2.0" has clearly taken hold, with more than 9.5 million citations in Google. But there's still a huge amount of disagreement about just what Web 2.0 means, with some people decrying it as a meaningless marketing buzzword, and others accepting it as the new conventional wisdom. This article is an attempt to clarify just what we mean by Web 2.0. It is a great pleasure to share with you the Springer CCIS proceedings of the First World Summit on the Knowledge Society - WSKS 2008 that was organized by the Open Research Society, NGO, http://www.open-knowledge-society.org, and hosted by the American College of Greece, http://www.acg.gr, during September 24-27, 2008, in Athens, Greece. The World Summit on the Knowledge Society Series is an international attempt to promote a dialogue on the main aspects of a knowledge society toward a better world for all based on knowledge and learning. The WSKS Series brings together academics, people from industry, policy makers, politicians, government officers and active citizens to look at the impact of infor- tion technology, and the knowledge-based era it is creating, on key facets of today 's world: the state, business, society and culture. Six general pillars provide the constitutional elements of the WSKS series: • Social and Humanistic Computing for the Knowledge Society—Emerging Te- nologies and Systems for the Society and Humanity • Knowledge, Learning, Education, Learning Technologies and E-learning for the Knowledge Society • Information Technologies—Knowledge Management Systems—E-business and Enterprise Information Systems for the Knowledge Society • Culture and Cultural Heritage—Technology for Culture Management—Management of Tourism and Entertainment—Tourism Networks in the Knowledge Society • Government and Democracy for the Knowledge Society • Research and Sustainable Development in the Knowledge Society The summit provides a distinct, unique forum for cross-disciplinary fertilization of research, favoring the dissemination of research that is relevant to international re-

Developing Semantic Web Services

A Guide to the Future of XML, Web Services, and Knowledge Management

Semantic Web and Education

Geospatial Semantic Web

The Semantic Web - ISWC 2008

Foundations of Semantic Web Technologies

*Semantic Web for the Working Ontologist: Effective Modeling in RDFS and OWL, Second Edition, discusses the capabilities of Semantic Web modeling languages, such as RDFS (Resource Description Framework Schema) and OWL (Web Ontology Language). Organized into 16 chapters, the book provides examples to illustrate the use of Semantic Web technologies in solving common modeling problems. It uses the life and works of William Shakespeare to demonstrate some of the most basic capabilities of the Semantic Web. The book first provides an overview of the Semantic Web and aspects of the Web. It then discusses semantic modeling and how it can support the development from chaotic information gathering to one characterized by information sharing, cooperation, and collaboration. It also explains the use of RDF to implement the Semantic Web by allowing information to be distributed over the Web, along with the use of SPARQL to access RDF data. Moreover, the reader is introduced to components that make up a Semantic Web deployment and how they fit together, the concept of inferencing in the Semantic Web, and how RDFS differs from other schema languages. Finally, the book considers the use of SKOS (Simple Knowledge Organization System) to manage vocabularies by taking advantage of the inferencing structure of RDFS-Plus. This book is intended for the working ontologist who is trying to create a domain model on the Semantic Web. Updated with the latest developments and advances in Semantic Web technologies for organizing, querying, and processing information, including SPARQL, RDF and RDFS, OWL 2.0, and SKOS Detailed information on the ontologies used in today's key web applications, including ecommerce, social networking, data mining, using government data, and more Even more illustrative examples and case studies that demonstrate what semantic technologies are and how they work together to solve real-world problems*

*Web 2.0 and Beyond: Principles and Technologies draws on the author's iceberg model of Web 2.0, which places the social Web at the tip of the iceberg underpinned by a framework of technologies and ideas. The author incorporates research from a range of areas, including business, economics, information science, law, media studies, psychology, social informatics and sociology. This multidisciplinary perspective illustrates not only the wide implications of computing but also how other areas interpret what computer science is doing. After an introductory chapter, the book is divided into three sections. The first one discusses the underlying ideas and principles, including user-generated content, the architecture of participation, data on an epic scale, harnessing the power of the crowd, openness and the network effect and Web topology. The second section chronologically covers the main types of Web 2.0 services—blogs, wikis, social networks, media sharing sites, social bookmarking and microblogging. Each chapter in this section looks at how the service is used, how it was developed and the technology involved, important research themes and findings from the literature. The final section presents the technologies and standards that underpin the operation of Web 2.0 and goes beyond this to explore such topics as the Semantic Web, cloud computing and Web Science. Suitable for nonexperts, students and computer scientists, this book provides an accessible and engaging explanation of Web 2.0 and its wider context yet is still grounded in the rigour of computer science. It takes readers through all aspects of Web 2.0, from the development of technologies to current services.*

*Developing Semantic Web Services is "well-informed about work on WS [Web Services] and the SemWeb [Semantic Web], and in particular . . . understand[s] OWL-S . . . very well . . . Also, the book . . . fill[s] a need that, to my knowledge, hasn't been met at all." ---David Martin, editor OWL-S Coalition The inventor of the World Wide Web, Tim Berne*

*This book constitutes the refereed proceedings of the joint 6th International Semantic Web Conference, ISWC 2007, and the 2nd Asian Semantic Web Conference, ASWC 2007, held in Busan, Korea, in November 2007. The 50 revised full academic papers and 12 revised application papers presented together with 5 Semantic Web Challenge papers and 12 selected doctoral consortium articles were carefully reviewed and selected from a total of 257 submitted papers to the academic track and 29 to the applications track. The papers address all current issues in the field of the semantic Web, ranging from theoretical and foundational aspects to various applied topics such as management of semantic Web data, ontologies, semantic Web architecture, social semantic Web, as well as applications of the semantic Web. Short descriptions of the top five winning applications submitted to the Semantic Web Challenge competition conclude the volume.*

Web 2.0 and Beyond

Semantic Web: Concepts, Technologies and Applications

The Semantic Web Explained

6th International Semantic Web Conference, 2nd Asian Semantic Web Conference, ISWC 2007 + ASWC 2007, Busan, Korea, November 11-15, 2007, Proceedings

From CSCW to Web 2.0: European Developments in Collaborative Design

Semantic Web For Dummies

*According to the W3C Semantic Web Activity [1]: The Semantic Web provides a common framework that allows data to be shared and reused across appli- tion, enterprise, and community boundaries. This statement clearly explains that the Semantic Web is about data sharing. Currently, the Web uses hyperlinks to connect Web pages. The Semantic Web goes beyond that and focuses on data and envisions the creation of the web of data. On the Semantic Web, anyone can say anything about any resource on the Web. This is fully based on the concept of semantic - notations, where each resource on the Web can have an assigned meaning. This is done through the use of ontologies as a formal and explicit representation of domain concepts and their relationships [2]. Ontologies are formally based on description logics. This enables agents and applications to reason over the data when searching the Web, which has not previously been possible. Web 2. 0 has gradually evolved from letting the Web users play a more active role. Unlike the initial version of the Web, where the users mainly "consumed" content, users are now offered easy-to-use services for content production and publication. Mashups, blogs, wikis, feeds, interface remixes, and social networking/tagging s- tems are examples of these well-known services. The success and wide adoption of Web 2. 0 was in its reliance on social interactions as an inevitable characteristic of the use and life of the Web. In particular, Web 2.*

*Social Networks and the Semantic Web offers valuable information to practitioners developing social-semantic software for the Web. It provides two major case studies. The first case study shows the possibilities of tracking a research community over the Web. It reveals how social network mining from the web plays an important role for obtaining large scale, dynamic network data beyond the possibilities of survey methods. The second case study highlights the role of the social context in user-generated classifications in content, such as the tagging systems known as folksonomies.*

*The main purpose of this book is to sum up the vital and highly topical research issue of knowledge representation on the Web and to discuss novel solutions by combining benefits of folksonomies and Web 2.0 approaches with ontologies and semantic technologies. The book contains an overview of knowledge representation approaches in past, present and future, introduction to ontologies, Web indexing and in first case the novel approaches of developing ontologies.*

*Web 2.0 may be an elusive concept, but one thing is certain: using the Web as merely a means of retrieving and displaying information is history. Today's Web is immediate, interactive, innovative. It is user-controlled and community-driven. Organizations, marketers, application developers, and communicators must be ready to respond and to innovate or be left behind, and the experts featured on these pages are leading the charge. Their ideas are fresh, sometimes experimental, necessarily flexible, and always on the leading edge to prepare you for a Web where users rule.*

The Social Semantic Web

Towards the Semantic Web

Web 2.0 Heroes

Enabling Collaboration on Semiformal Mathematical Knowledge by Semantic Web Integration

The Technology and Mathematics behind Web 3.0

Interviews with 20 Web 2.0 Influencers

***This volume contains papers from the technical program of the 6th European Semantic Web Conference (ESWC 2009), held from May 31 to June 4, 2009, in Heraklion, Greece. ESWC 2009 presented the latest results in research and applications of Semantic Web technologies. In addition to the technical research track, ESWC 2009 featured a tutorial program, a PhD symposium, a system demo track, a poster track, a number of collocated workshops, and for the first time in the series a Semantic Web in-use track exploring the bene?ts of applying Semantic Web technology in real-life applications and contexts. Thetechnical researchpaper trackreceivedover250submissions.The review process was organized using a two-tiered system, where each submission was reviewed by at least three members of the Program Committee. Vice Program CommitteeChairsorganizedadiscussionbetweenreviewers,collectedadditional reviews when necessary and provided a metareview for each submission. During a physical Program Committee meeting, the Vice Program Committee Chairs together with the Program Chairs selected 45 research papers to be presented at the conference.***

***The Web is growing at an astounding pace surpassing the 8 billion page mark. However, most pages are still designed for human consumption and cannot be processed by machines. This book provides a well-paced introduction to the Semantic Web. It covers a wide range of topics, from new trends (ontologies, rules) to existing technologies (Web Services and software agents) to more formal aspects (logic and inference). It includes: real-world (and complete) examples of the application of Semantic Web concepts; how the technology presented and discussed throughout the book can be extended to other application areas.***

***The rapid advancement of semantic web technologies, along with the fact that they are at various levels of maturity, has left many practitioners confused about the current state of these technologies. Focusing on the most mature technologies, Applied Semantic Web Technologies integrates theory with case studies to illustrate the history, current st Mathematics is becoming increasingly collaborative, but software does not sufficiently support that: Social Web applications do not currently make mathematical knowledge accessible to automated agents that have a deeper understanding of mathematical structures. Such agents exist but focus on individual research tasks, such as authoring, publishing, peer-review, or verification, instead of complex collaboration workflows. This work effectively enables their integration by bridging the document-oriented perspective of mathematical authoring and publishing, and the network perspective of threaded discussions and Web information retrieval. This is achieved by giving existing representations of mathematical and relevant related knowledge about applications, projects and people a common Semantic Web foundation. Service integration is addressed from the two perspectives of enriching published documents by embedding assistive services, and translating between different knowledge representations inside knowledge bases. A usability evaluation of a semantic wiki that coherently integrates knowledge production and consumption services points out the remaining challenges in making such heterogeneously integrated environments support realistic workflows. The results of this thesis will soon also enable collaborative acquisition of new mathematical knowledge, as well as the contributions of existing knowledge collections of the Web of Data.***

**A Semantic Web Primer**

**Effective Modeling in RDFS and OWL**

**Semantic Web for the Working Ontologist**

**Legal Ontologies, Methodologies, Legal Information Retrieval, and Applications**

**Handbook of Research on Web 2.0, 3.0, and X.0: Technologies, Business, and Social Applications Applied Semantic Web Technologies**

"This book explores the potential of Web 2.0 and its synergies with the Semantic Web and provides state-of-the-art theoretical foundations and technological applications"--Provided by publisher.

The next major advance in the Web-Web 3.0-will be built on semantic Web technologies, which will allow data to be shared and reused across application, enterprise, and community boundaries. Written by a team of highly experienced Web developers, this book examines how this powerful new technology can unify and fully leverage the ever-growing data, information, and services that are available on the Internet. Helpful examples demonstrate how to use the semantic Web to solve practical, real-world problems while you take a look at the set of design principles, collaborative working groups, and technologies that form the semantic Web. The companion Web site features full code, as well as a reference section, a FAQ section, a discussion forum, and a semantic blog.

This book covers key issues related to Geospatial Semantic Web, including geospatial web services for spatial data interoperability; geospatial ontology for semantic interoperability; ontology creation, sharing, and integration; querying knowledge and information from heterogeneous data source; interfaces for Geospatial Semantic Web, VGI (Volunteered Geographic Information) and Geospatial Semantic Web; challenges of Geospatial Semantic Web; and development of Geospatial Semantic Web applications. This book also describes state-of-the-art technologies that attempt to solve these problems such as WFS, WMS, RDF, OWL and GeoSPARQL and demonstrates how to use the Geospatial Semantic Web technologies to solve practical real-world problems such as spatial data interoperability.

Web 2.0 & Semantic WebSpringer

Ontology-driven Knowledge Management

A Developer's Guide to the Semantic Web

Semantic Web Technologies for Enterprise 2.0

A Computer Science and Information Systems Manifesto

Web 2.0 & Semantic Web

Social Networks and the Semantic Web

In this book, we detail different theories, methods and implementations combining Web 2.0 paradigms and Semantic Web technologies in Enterprise environments. After introducing those terms, we present the current shortcomings of tools such as blogs and wikis as well as tagging practices in an Enterprise 2.0 context. We define the SemSLATES methodology and the global vision of a middleware architecture based on Semantic Web technologies and Linked Data principles (languages, models, tools and protocols) to solve these issues. Then, we detail the various ontologies that we build to achieve this goal. We present on the one hand the models dedicated to socio-structural meta-data, especially SIOC - Semantically-Interlinked Online Communities -, and on the other hands models extending public ontologies for representing domain knowledge. Moreover, we detail the MOAT - Meaning Of A Tag - ontology, providing a way to combine the flexibility of tagging and the power of ontology-based indexing. We also describe several software implementations related to these models, done in the industrial context of EDF R&D, and dedicated to easily produce and use semantic annotations to enrich original tools: semantic wikis, advanced visualization interfaces (faceted browsing, semantic mash-ups, etc.) combined with a semantic search engine. Several contributions described in this thesis have been published as public ontologies or open-source software, contributing more generally to this convergence between Web 2.0 and the Semantic Web, not only in enterprise but on the Web as a whole.

With this book, the promise of the Semantic Web -- in which machines can find, share, and combine data on the Web -- is not just a technical possibility, but a practical reality Programming the Semantic Web demonstrates several ways to implement semantic web applications, using current and emerging standards and technologies. You'll learn how to incorporate existing data sources into semantically aware applications and publish rich semantic data. Each chapter walks you through a single piece of semantic technology and explains how you can use it to solve real problems. Whether you're writing a simple mashup or maintaining a high-performance enterprise solution, Programming the Semantic Web provides a standard, flexible approach for integrating and future-proofing systems and data. This book will help you: Learn how the Semantic Web allows new and unexpected uses of data to emerge Understand how semantic technologies promote data portability with a simple, abstract model for knowledge representation Become familiar with semantic standards, such as the Resource Description Framework (RDF) and the Web Ontology Language (OWL) Make use of semantic programming techniques to both enrich and simplify current web applications

A new edition of the widely used guide to the key ideas, languages, and technologies of the Semantic Web The development of the Semantic Web, with machine-readable content, has the potential to revolutionize the World Wide Web and its uses. A Semantic Web Primer provides an introduction and guide to this continuously evolving field, describing its key ideas, languages, and technologies. Suitable for use as a textbook or for independent study by professionals, it concentrates on undergraduate-level fundamental concepts and techniques that will enable readers to proceed with building applications on their own and includes exercises, project descriptions, and annotated references to relevant online materials. The third edition of this widely used text has been thoroughly updated, with significant new material that reflects a rapidly developing field. Treatment of the different languages (OWL2, rules) expands the coverage of RDF and OWL, defining the data model independently of XML and including coverage of N3/Turtle and RDFa. A chapter is devoted to OWL2, the new W3C standard. This edition also features additional coverage of the query language SPARQL, the rule language RIF and the possibility of interaction between rules and ontology languages and applications. The chapter on Semantic Web applications reflects the rapid developments of the past few years. A new chapter offers ideas for term projects. Additional material, including updates on the technological trends and research directions, can be found at <http://www.semanticwebprimer.org>.

This book introduces core natural language processing (NLP) technologies to non-experts in an easily accessible way, as a series of building blocks that lead the user to understand key technologies, why they are required, and how to integrate them into Semantic Web applications. Natural language processing and Semantic Web technologies have different, but complementary roles in data management. Combining these two technologies enables structured and unstructured data to merge seamlessly. Semantic Web technologies aim to convert unstructured data to meaningful representations, which benefit enormously from the use of NLP technologies, thereby enabling applications such as connecting text to Linked Open Data, connecting texts to each other, semantic searching, information visualization, and modeling of user behavior in online networks. The first half of this book describes the basic NLP processing tools: tokenization, part-of-speech tagging, and morphological analysis, in addition to the main tools required for an information extraction system (named entity recognition and relation extraction) which build on these components. The second half of the book explains how Semantic Web and NLP technologies can enhance each other, for example via semantic annotation, ontology linking, and population. These chapters also discuss sentiment analysis, a key component in making sense of textual data, and the difficulties of performing NLP on social media, as well as some proposed solutions. The book finishes by investigating some applications of these tools, focusing on semantic search and visualization, modeling user behavior, and an outlook on the future.

Unleashing Web 2.0

Natural Language Processing for the Semantic Web

Principles and Technologies

What is Web 2.0

Technologies, Business, and Social Applications

Knowledge Representation in the Social Semantic Web

Ontology Learning for the Semantic Web explores techniques for applying knowledge discovery techniques to different web data sources (such as HTML documents, dictionaries, etc.), in order to support the task of engineering and maintaining ontologies. The approach of ontology learning proposed in Ontology Learning for the Semantic Web includes a number of complementary disciplines that feed in different types of unstructured and semi-structured data. This data is necessary in order to support a semi-automatic ontology engineering process. Ontology Learning for the Semantic Web is designed for researchers and developers of semantic web applications. It also serves as an excellent supplemental reference to advanced level courses in ontologies and the semantic web.

The Social Web (including services such as MySpace, Flickr, last.fm, and WordPress) has captured the attention of millions of users as well as billions of dollars in investment and acquisition. Social websites, evolving around the connections between people and their objects of interest, are encountering boundaries in the areas of information integration, dissemination, reuse, portability, searchability, automation and demanding tasks like querying. The Semantic Web is an ideal platform for interlinking and performing operations on diverse person- and object-related data available from the Social Web, and has produced a variety of approaches to overcome the boundaries being experienced in Social Web application areas. After a short overview of both the Social Web and the Semantic Web, Breslin et al. describe some popular social media and social networking applications, list their strengths and limitations, and describe some applications of Semantic Web technology to address their current shortcomings by enhancing them with semantics. Across these social websites, they demonstrate a twofold approach for interconnecting the islands that are social websites with semantic technologies, and for powering semantic applications with rich community-created content. They conclude with observations on how the application of Semantic Web technologies to the Social Web is leading towards the "Social Semantic Web" (sometimes also called "Web 3.0"), forming a network of interlinked and semantically-rich content and knowledge. The book is intended for computer science professionals, researchers, and graduates interested in understanding the technologies and research issues involved in applying Semantic Web technologies to social software. Practitioners and developers interested in applications such as blogs, social networks or wikis will also learn about methods for increasing the levels of automation in these forms of Web communication.

Ever since we first introduced the term Web 2.0, people have been asking, What 's next? Assuming that Web 2.0 was meant to be a kind of software version number (rather than a statement about the second coming of the Web after the dotcom bust), we 're constantly asking about Web 3.0. Is it the semantic web? The sentient web? Is it the social web? The mobile web? Is it some form of virtual reality? It is all of those, and more. The Web is no longer a collection of static pages of HTML that describe something in the world. Increasingly, the Web is the world "everything and everyone in the world casts an information shadow,an aura of data which, when captured and processed intelligently, offers extraordinary opportunity and mindbending implications. Web Squared is our way of exploring this phenomenon and giving it a name.

The Semantic Web represents a vision for how to make the huge amount of information on the Web automatically processable by machines on a large scale. For this purpose, a whole suite of standards, technologies and related tools have been specified and developed over the last couple of years and they have now become the foundation for numerous new applications. A Developer's Guide to the Semantic Web helps the reader to learn the core standards, key components and underlying concepts. It provides in-depth coverage of both the what-is and how-to aspects of the Semantic Web. From Yu's presentation, the reader will obtain not only a solid understanding about the Semantic Web, but also learn how to combine all the pieces to build new applications on the Semantic Web. The second edition of this book not only adds detailed coverage of the latest W3C standards such as SPARQL 1.1 and RDB2RDF, it also updates the readers by following recent developments. More specifically, it includes five new chapters on schema.org and semantic markup, on Semantic Web technologies used in social networks and on new applications and projects such as data.gov and Wikidata and it also provides a complete coding example of building a search engine that supports Rich Snippets. Software developers in industry and students specializing in Web development or Semantic Web technologies will find in this book the most complete guide to this exciting field available today. Based on the step-by-step presentation of real-world projects, where the technologies and standards are applied, they will acquire the knowledge needed to design and implement state-of-the-art applications.

The Semantic Web

Enterprise Web 2.0 Fundamentals

Semantic Web Programming

From Concepts to Creativity

Programming the Semantic Web

"This book provides a comprehensive reference source on next generation Web technologies and their applications"--Provided by publisher.

With more substantial funding from research organizations and industry, numerous large-scale applications, and recently developed technologies, the Semantic Web is quickly emerging as a well-recognized and important area of computer science. While Semantic Web technologies are still rapidly evolving, Foundations of Semantic Web Technologies focuses

Semantic Web technology is already changing how we interact with data on the Web. By connecting random information on the Internet in new ways, Web 3.0, as it is sometimes called, represents an exciting online evolution. Whether you're a consumer doing research online, a business owner who wants to offer your customers the most useful Web site, or an IT manager eager to understand Semantic Web solutions, Semantic Web For Dummies is the place to start! It will help you: Know how the typical Internet user will recognize the effects of the Semantic Web Explore all the benefits the data Web offers to businesses and decide whether it's right for your business Make sense of the technology and identify applications for it See how the Semantic Web is about data while the "old" Internet was about documents Tour the architectures, strategies, and standards involved in Semantic Web technology Learn a bit about the languages that make it all work: Resource Description Framework (RDF) and Web Ontology Language (OWL) Discover the variety of information-based jobs that could become available in a data-driven economy You'll also find a quick primer on tech specifications, some key priorities for CIOs, and tools to help you sort the hype from the reality. There are case studies of early Semantic Web successes and a list of common myths you may encounter. Whether you're incorporating the Semantic Web in the workplace or using it at home, Semantic Web For Dummies will help you define, develop, implement, and use Web 3.0.

"The Semantic Web is a new area of research and development in the field of computer science that aims to make it easier for computers to process the huge amount of information on the Web, and indeed other large databases, by enabling them not only to read, but also to understand the information. Based on successful courses taught by the authors, and liberally sprinkled with examples and exercises, this comprehensive textbook describes not only the theoretical issues underlying the Semantic Web, but also algorithms, optimisation ideas and implementation details. The book will therefore be valuable to practitioners as well as students, indeed to anyone who is interested in Internet technology, knowledge engineering or description logics. Supplementary materials available online include the source code of program examples and solutions to selected exercises"--

Build Flexible Applications with Graph Data

Integrating Semantic Applications and Web 2.0 Technologies

Selected Papers from COOP08

Ontology Learning for the Semantic Web

Law and the Semantic Web

Web 2.0 for Newbies

This is the first book treatment on two "hot button" topics in Information Systems, Computer Science and Education: the application of web technology for educational use. The result is a thorough and highly useful presentation on the confluence of the technical aspects of the Semantic Web and the field of Education or the art of teaching. The book will interest researchers and students in the fields of Information Systems, Computer Science, and Education.