For more than a decade, researchers and practitioners have been working to evolve the World Wide Web into a Web of Data—an information space in which data can be reused and recombined in new contexts and for new tasks with a far greater degree of automation than was previously possible. The various contributing communities have made a great deal of progress on the respective technical, social, and organizational challenges of that vision. However, it took until 2007 for the mainstream research communities to acknowledge that, eventually, the most limiting factors for realizing the Web of Data vision were (1) the amount of structured data available, and (2) the density of linkage between the data—in particular in the form of entity consolidation at the instance level and in terms of machine-processable alignments at the schema level. Therefore, the top priority on the agenda must be techniques and patterns of social interaction that foster the publication of data on the Web and the emergence of dense linkage between data items, as well as between schemata.

In the past two years, we have witnessed a large number of theoretical and practical contributions to the field, which is most obvious in the growth of Linked Data. This special issue is intended to document the most significant results from the various branches of research in the field, in the form of archival-quality articles. Following our call for papers, we received 13 complete submissions covering a broad range of topics. Through two rounds of peer review with up to four independent blind reviews per article, we selected three full research articles and one overview article for inclusion in the final issue.

At the invitation of Professor Amit Sheth, Editor-in-Chief of the International Journal on Semantic Web and Information Systems, Christian Bizer and Tom Heath have been joined by Sir Tim Berners-Lee, inventor of the World Wide Web and first to use the term “Linked Data” in this context, to produce the overview article Linked Data - The Story So Far. Several years after coining the term Semantic Web in his book Weaving the Web, Berners-Lee remarked that he wished he used the term “Data Web” to label what he had in mind. He further advocates this perspective with “Linked Data,” a term that refers both to a set of best practices for connecting structured data across the Web and to the rapidly growing fabric of data, interwoven with the Web itself, that is the application of these principles. If Wikipedia is the poster child for Web 2.0, it appears the Linked Data movement is, at least at this time in its evolution, the poster child for the Semantic Web. In their overview article, Bizer, Heath, and Berners-Lee review the emergence of this grassroots movement, survey the state of the art in applications that exploit this Web of Linked Data, and look ahead to challenges faced by the research community as adoption of Linked Data principles continues.
In their article, *Community-Driven Linked Data Authoring and Production of Consolidated Linked Data*, Aman Shakya, Hideaki Takeda, and Vilas Wuwongse introduce StYLiD, a system that opens up the Linked Data production process to communities of “ordinary” users, that is, those without specific technical skills in Linked Data publishing. A key element of their approach is the explicit recognition that concept schemas will vary between individuals, both within and between communities. Consequently StYLiD allows multiple conceptualisations, of varying degrees of mutual consistency, to be present within the system, and provides means for consolidation of these through mapping and linking at the schema level. This consolidation process is achieved semi-automatically, through a combination of schema alignment techniques and community input. Collectively these processes support the emergence of lightweight ontologies that may themselves enable further growth in the Web of Linked Data.

Linked Data search engines play a critical role in the Web of Data as they crawl Web data by following links between data sources and enable end-users as well as applications to ask expressive queries over aggregated data. In their article *Searching Linked Objects with Falcons: Approach, Implementation, and Evaluation*, Gong Cheng and Yuzhong Qu present Falcons, a end-user oriented Linked Data search engine. Falcons generates structured snippets for search results which combine data about the matching object with data about interlinked objects. The authors further demonstrate that by applying a simple trust heuristic it is possible to overcome inconsistencies in Web data and enable Web-scale class-inclusion reasoning.

In the article *A URI is worth a thousand tags: From tagging to Linked Data with MOAT*, Alexandre Passant, Philippe Laublet, John G. Breslin, and Stefan Decker present the MOAT—“Meaning Of A Tag” ontology and framework. Their work aims at overcoming common issues with free-tagging systems, like ambiguity (the same tag is used to denote different meanings) and heterogeneity of tags (many different lexical variants are used for the same meaning), and the lack of hierarchical organization and formal relationships between tags. They suggest to extend the usual tripartite model of tagging to a quadripartite model, in which each tagging activity is represented by a quadruple $(\langle \text{User} \rangle, \langle \text{Resource} \rangle, \langle \text{Tag} \rangle, \langle \text{MeaningURI} \rangle)$.

This promises to keep up the freedom of assigning tags of choice to a resource while using the huge amount of authoritative URIs from the Web of Data for narrowing down the intended meaning. Their prototype and evaluation suggests that MOAT can be an important contribution for weaving a Web of Linked Data.

The vision of a Web of Linked Data requires contributions from multiple fields, namely computer science, information systems, economics, and organization science. The *International Journal on Semantic Web and Information Systems*, as an ISI-indexed journal, is a unique venue for respective research findings. Our special thanks go to the Editor-in-Chief, Professor Amit Sheth, for making this special issue a reality. We would also like to extend our sincere thanks to the following reviewers who evaluated manuscripts for this special issue on Linked Data between January and April 2009. Their generous contribution of time and expertise benefits us all.

Harith Alani
Mathieu d’Aquin
Sören Auer
Paolo Bouquet
Gianluca Correndo
Richard Cyganiak
Celine Van Damme
Stefan Dietze
Sebastian Dietzold
Yihong Ding
Folke Eisterlehner
Leyla Jael Garcia-Castro
Hugh Glaser
Peter Haase
Harry Halpin
Oktie Hassanzadeh
Jordan Hatcher
Michael Hausenblas
Andreas Hotho
Renato Iannella
Georgi Kobilarov
Filippo Lanubile
Pieter De Leenheer
Tom Heath is a researcher in the Platform Division of Talis Information Ltd, a leading provider of Linked Data storage, management and publishing technologies, where he coordinates internal research focusing on collective intelligence and human-computer interaction in a Linked Data and Semantic Web context. He is a leading member of the Linking Open Data community project, and creator of the Linked Data-enabled reviewing and rating site Revyu.com, winner of the 2007 Semantic Web Challenge. Heath has a PhD in computer science from The Open University.

Martin Hepp is a professor of general management and e-business at Universität der Bundeswehr München in Germany, where he heads the e-business and Web Science Research Group. Hepp holds a master’s degree in business management and business information systems and a PhD in business information systems from the University of Würzburg (Germany). His key research interest is in using structured, linked data on a Web scale for e-business, in particular matchmaking and product data reuse. As part of his research, he developed the GoodRelations and eClassOWL ontologies, now widely used for describing offers on the Web. Also, Hepp was the organizer of more than fifteen workshops and conference tracks on conceptual modeling, Semantic Web topics, and information systems and member of more than sixty conference and workshop program committees, including ASWC, ESWC, IEEE CEC/EEE, and ECIS, and is an associate editor of IJSWIS.

Christian Bizer is the head of the Web-based Systems Group at Freie Universität Berlin. The group explores technical and economic questions concerning the development of global, decentralized information environments. The results of his work include the Named Graphs data model, which was adopted into the W3C SPARQL standard, the Fresnel display vocabulary implemented by several data browsers, and the D2RQ mapping language which is widely used for mapping relational databases to the Web of Data. He initialized the Linking Open Data community project and the DBpedia project.