Editorial

World Wide Web Conference 2004 – Semantic Web Track

From May 17–22, 2004, we experienced a week of excitement about the prospects of the Semantic Web, dealing with hot topics such as social networks, trust information and semantic peer-to-peer collaborations. What made the event very special was the level of excitement about the amount of solid work presented at the conference. Out of 99 submissions to the Semantic Web track, 18 carefully selected papers were presented at the WWW-2004 conference in New York City. Contributions demonstrated the benefits of semantic technologies for web services, search, annotation and end user applications. We invited the best papers to submit extended versions for further review for this special issue. From these we have selected the three high quality papers that we present here.

The Semantic Web track featured a whole session on distributed querying. An outstanding paper on this particular topic presented here showed methods to scale the Semantic Web in two dimensions: wide distributedness and, thus, also large size of the stored data. The fully elaborated paper by Min Cai, Martin Frank, Baoshi Yan, and Robert MacGregor is titled “A Subscribable Peer-to-Peer RDF Repository for Distributed Metadata Management.”

A different dimension in which to scale the Semantic Web involves the problem of multiple ontologies. Our second paper matures the state-of-the-art when mapping objects from a source to a target ontology by facilitating the integration of taxonomies by sophisticated machine learning techniques as described by Dell Zhang and Wee Sun Lee in “Learning to Integrate Web Taxonomies.”

In the long run, new types of well-founded applications that combine multiple theories—including semantics—in order to generate innovative application processes will be the most fruitful for the Semantic Web. An excellent example of this kind of application is given by Luke McDowell, Oren Etzioni, and Alon Halevy in their paper on “Semantic Email: Theory and Applications.”

You may now look forward to an exciting time reading through some of the best work on Semantic Web presented at WWW-2005. Have fun!

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