Semantic Technology Conference
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San Francisco, California

Reported by Dave McComb, Semantic Arts, Inc.
and Tony Shaw, Wilshire Conferences

Nearly 300 people crowded into the Stanford Court Hotel in early March 2005 for the first annual Semantic Technology Conference. The crowd, consisting of a varied group of business executives, information systems professionals, and researchers, paid rapt attention to more than 40 presentations and made extensive use of the breaks to network with and interrogate each other. The level of participant interactivity seemed to have been born from a combination of the variety of backgrounds (half of the participants had little or no background in semantic technology; the other half was quite well steeped in it) and a congruity of interest (about a third of the participants had an information systems problem that they believed might be addressed by semantic technology, and another third had projects with semantic aspects on which they wished to get some feedback).

One of the most commonly heard comments from the participants and presenters was that this conference felt like a “watershed event.” The academic and research communities have been holding conferences and workshops for years, but, for the most part, mainstream commercial suppliers and users have not been fully engaged until now. It would appear that now it might be safe to get in the water.

One of the best indications of the commercialization of this technology came from Geoff Brown of Oracle Corporation, who took this opportunity to announce the inclusion of support for RDF triple store and inferencing capability in the next release of Oracle Database, version 10.2, going into beta this summer and due out later in the year. RDF (Resource Description Framework) is, of course, a key standard for the Semantic Web.

Another sign of commercialization of the technology was the adoption of Freedom by a major bank in order to comply with the Patriot Act. Freedom from Semagix, as explained by Amit Sheth in his review of real-world deployments of Semantic Web applications, is a Semantic Web
application development platform for large enterprises.

The conference presentations were broken into three tracks: Concepts, Marketplace, and Case Studies. The technology is still relatively new, and the concept track focused on some of the newer applications of this technology, including David Martin from SRI presenting OWL-S, which is semantic markup for Web services. This promises to be a key enabler for getting dynamic discovery of these shared, Internet-based services. Some of the other themes in the concept space included semantic search, by Brad Allen of Siderean Software and semantic brokers, as described by Zvi Schreiber of Unicorn Solutions and Fran Clark of Arpeggio Technology.

The Marketplace track featured products and observations from the vendor community. Mills Davis from TopQuadrant described research that his firm has been involved in, which underscored their belief that the marketplace for tools, infrastructure, and services, which is currently less than a $2 billion per year industry, is expected to grow at over 50% per year through 2010, at which time it is projected to be a $50 billion industry. Sun Microsystems, Silver Creek Systems, Network Inference, Infoshare, and Sandpiper Software were among other vendors presenting marketplace offerings.

The Case Study track included implementation reports as well as results of directed research. Mark Sharp from Merck Research Labs presented the challenges of a major pharmaceutical company adopting standards such as UMLS to be used in an ontologically driven suite of projects. Harry Ellis from the British Army reported on practical considerations, including how to remove technical bias from the process of constructing a Semantic Model. Jayne Dutra reviewed the work that NASA has done using ontologies for interoperability of structured and unstructured information at JPL.

The first keynote speaker was Eric Miller, the Semantic Web Activity Lead for the W3C. Eric’s answer to the rhetorical question, “When will the Semantic Web be here?” was with examples and statistics — “It’s already here.” Peter Norvig, Director of Search Quality for Google, presented “The Future of Search” for the second keynote. While there are semantics in Google’s future, it would appear that the company is going to take the route of inferring as many of them as they can from their vast reservoir of data. He showed us a number of interesting prototypes from their lab. The final keynote was by Doug Lenat, President of Cycorp. Doug reminded us that the inferencing we all take for granted (common sense) requires some pretty significant investments in Knowledge Engineering. Cycorp has devoted 20 calendar years and hundreds of person years in building what must be the world’s most comprehensive ontology, which now contains over one million assertions. Doug reported that the project has passed the point of acquiring new knowledge primarily through hand crafted construction of rules and has moved to a mode where much of its new knowledge can be gleaned directly from news feeds and other electronic sources.

Other plenary sessions included Dave McComb’s “Semantics 101” and Jim Hendler’s “Introduction to the Semantic Web.” There was a plenary Venture Panel session of VCs who either have or are seeking out investments in this space; these included Amanda Reed, Warren Weiss, Gordon Bell, Nicolas El Baze, and Rory O’Driscoll.
The conference was produced by Wilshire Conferences and Semantic Arts. More details on this conference as well as opportunities to participate in next year’s conference are available at www.semantic-conference.com