

[Deborah L. McGuinness](#) [1]

Submitted by superadmin on Sat, 2012-07-14 09:51 **Biography:**

Dr. Deborah McGuinness is a leading expert in knowledge representation and reasoning languages and systems and has worked in ontology creation and evolution environments for over 20 years. Most recently, Deborah is best known for her leadership role in semantic web research, and for her work on explanation, trust, and applications of semantic web technology, particularly for scientific applications. Deborah is co-editor of the Ontology Web Language which has emerged from web ontology working group of the World Wide Web (W3C) semantic web activity and has now achieved W3C Recommendation status. She helped start the web ontology working group out of work as a co-author of the DARPA Agent Markup Language program's DAML language. She helped form the Joint EU/US Agent Markup Language Committee which evolved the DAML language into the oil-reference DAML OIL description logic-based ontology language. She is a co-author of one of the more widely used long-lived description logic systems (CLASSIC) from Bell Laboratories. Her work on languages (including OWL, oil-reference.html DAML OIL, OIL, CLASSIC, etc.) is aimed at providing languages that enable the next generation of web applications moving from a web aimed at human consumption to the semantic web aimed at machine consumption in support of intelligent assistants and web agents. Deborah is a leader in ontology-based tools and applications. She is a co-author and technical leader of the Stanford KSL ontology evolution environment. She also consulted to help VerticalNet design and build its Ontobuilder/Ontoserver ontology evolution environment. She also provided technical leadership for the Stanford project to help Cisco systems form its ontology evolution plan for its meta data formation work.

Deborah's main research thrusts are in languages, tools, and environments for the semantic web. Deborah leads the Stanford Inference Web (IW) effort. IW provides a framework for increasing trust in answers from heterogeneous systems by explaining how the answers were derived and what they depended on. Inference Web supports this goal by providing infrastructure and an implemented web-based environment for storing, exchanging, combining, annotating, comparing, search for, validating, and rendering proofs and proof fragments provided by reasoners and query answering systems. Inference web is being used as an infrastructure for explanations in a number of DARPA, DTO, and NSF projects and in a few demonstration systems including the Explainable Semantic Discovery Service and the KSL wine agent. Deborah led the wine agent project as an early semantic web services demonstration system that integrates explanation (via Inference web), semantic web languages (via DAML OIL and OWL), semantic web query languages (via OWL-QL), and web services (via OWL-S).

Email: d1m@cs.rpi.edu [2]

Organization: [Rensselaer Polytechnic Institute](#) [3]

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