

Here, our interests are logic based knowledge representation formalisms with applications to conceptual data modeling, ontology design, web information systems, P2P and information integration, including languages related to logic programming, nonmonotonic reasoning, description logics and temporal modal logics. For example, we are currently involved in the study of languages for the integration of description logics and rules in the context of the Semantic Web. These studies involve merging artificial intelligence and database technologies, offering promising formalisms for solving practical problems. Therefore, we are interested not only in formal properties of these languages, but also on their applications. In these sense, we are collaborating with the Free University of Bozen/Bolzano in RTD projects like SEWASIE and ICOM. SEWASIE (<http://www.sewasie.org>) is a research project funded by the European Commission that aims to design and implement an advanced search engine enabling intelligent access to heterogeneous data sources on the web via semantic enrichment to provide the basis of structured secure web-based communication. Within this project our work focused on the agent infrastructure for solving the queries. ICOM (<http://www.inf.unibz.it/~franconi/icom>) is an advanced CASE tool which allows the user to design multiple extended Entity-Relationship diagrams with inter- and intra-schema constraints. Complete logical reasoning is employed by the tool to verify the specification, infer implicit facts, devise stricter constraints, and manifest any inconsistency.

A Multi-Agent System for Querying Heterogeneous Data Sources with Ontologies. P. Dongilli, P. R. Fillottrani, E. Franconi, S. Tessaris, SEBD 2005, pp. 75-86.

The SEWASIE Multi-agent System. S. Bergamaschi, P. R. Fillottrani, G. Gelati, AP2PC 2004, pp. 120-131.

The Multi-agent System Architecture in SEWASIE. P. Fillottrani, Journal of Computer Science & Technology, Vol. 5, No 4, 2005, pp. 225-231.