

From Information to Knowledge Retrieval

Alfio Massimiliano Gliozzo

STLab - Semantic Technology LAB, ISTC - CNR, Rome

Abstract

Information retrieval has been the main business of the first generation web. Nowadays, the semantic web is connecting knowledge at a very big scale, suggesting a paradigm shift from information to knowledge retrieval, which is the problem of providing domain ontologies as an output of queries. Even if knowledge retrieval is still our vision, we are working on understanding its building blocks, focalizing on knowledge acquisition from texts. In the talk I'll present LMM, a semiotic data model bridging text and knowledge bases; the domain model, allowing us to deal with the notion of topicality; and the syntagmatic model, a WEB based lexical substitution method that can be used for abstraction. Applications in word sense disambiguation, ontology population, relation extraction, ontology pruning and multi-linguality show the value of our assumptions, achieving the state of the art.

Bio.

Alfio Massimiliano Gliozzo is research scientist at Semantic Technology Lab of the Italian National Research Council (STLab, ISTC-CNR, Rome) and senior researcher for Reinvent Technology Inc, Vancouver. He works in the area of semantic technologies, analyzing the connections between computational linguistics, information retrieval and knowledge representation. His scientific work includes the publication of more than forty scientific papers and books, the participation and direction of many international research projects and the organization of international conferences. His industrial work is mainly focalized in applying semantic technology to the web advertising industry.