Abstract

With the web getting bigger and assimilating knowledge about different concepts and domains, it is becoming very difficult for simple database driven applications to capture the data for a domain. Thus developers have come out with ontology based systems which can store large amount of information and can apply reasoning and produce timely information. Thus facilitating effective knowledge management. Though this approach has made our lives easier, but at the same time has given rise to another problem. Two different ontologies assimilating same knowledge tend to use different terms for the same concepts. This creates confusion among knowledge engineers and workers, as they do not know which is a better term then the other. Thus we need to merge ontologies working on same domain so that the engineers can develop a better application over it. This paper shows the development of one such matcher
Shiva++: An Enhanced Graph based Ontology Matcher

which merges the concepts available in two ontologies at two levels; 1) at string level and 2) at semantic level; thus producing better merged ontologies. We have used a graph matching technique which works at the core of the system. We have also evaluated the system and have tested its performance with its predecessor which works only on string matching. Thus current approach produces better results.

References


Index Terms

Computer Science
Information Sciences

Keywords
Ontology Matching
Graph Matching
Kuhn-Munkres Algorithm
String Similarity
Semantic Similarity.