Synonymous non-taxonomic relations extraction

ABSTRACT

Construction of ontology is a difficult task, expensive and time-consuming. Concept, taxonomy and non-taxonomic relations, are the three important components in the development of ontology. These three components are used to represent the whole domain texts. Currently, most of studies focused on extracting the concept, the taxonomic relationships and the non-taxonomic relationships within the scope of single sentence. In order to enrich the domain ontology, we introduced a method to extract the non-taxonomic relations by using the similarities of relations that exist in more than one sentence. The most appropriate predicate are used as a reference to relate between concepts that occur not only in the same sentence, but also in different sentences. Here, the proposed method was tested using a collection of domain texts that described electronic voting machine and are evaluated based on the standard information retrieval performance metrics, i.e. precision and recall.