

An Effective Engine for Answering Questions Based upon Chinese Semantic Extraction

I-Heng Meng

National Chiao-Tung University

R.O.C.

Wei-Pang Yang

National Chiao-Tung University

R.O.C.

Abstract

Most existing commercial applications of QA (Question and Answering) systems are restricted to dealing with some specific query domains and promoting precision is difficult. This study proposes a concept-based QA system with the understanding abilities, which combines several techniques such as FAQ corpus, text mining, concept space, and so on. The QA system can process the question statement in Chinese natural language fashion and find out the implicit intention of the user query. The question is split into four different terms, namely Subject term, Attribute term, Intention term and Interrogative term. These separate terms then are matched with the existing items in the FAQ corpus to get the proper or similar answers. The system interprets the document source to extract the semantic information for constructing Ontology, and this information is related to concepts such as human, event, time, place and entity. The system then contrasts the source documents with the question by heuristic rules and precisely retrieves passages that best fit the requirements of the users. This study collected 5000 Chinese News items from www.chinatimes.com and presented significant values on the precision and recall rate.

Keywords: FAQ Corpus, Ontology, Question Answering Engine, Text Mining.