Research Grants Council 研究資助局

General Research Fund

SUBMIT INTERIM REPLY

You must submit an interim reply before submitting the external review of the subject proposal.

Proposal Information

Project Number :	522210	**Fund Requested (HK$) :**	750,600
Project Title :	Automatic extraction of fuzzy domain ontology for content management and information retrieval in e-publication systems		
PI Name :	Dr Liu, James Nga-kwok	**PI Institution :**	The Hong Kong Polytechnic University
Co-I Name :	Dr You, Jane J.	**Co-I Institution :**	The Hong Kong Polytechnic University
	Dr Lee, Raymond		IATOPIA Technology Ltd
Abstract :	The popularity of e-publication is growing rapidly for the past few years, which potentially contains a huge amount of knowledge. It is to be anticipated that the e-publication systems can provide useful knowledge and more appropriate and correct results for information search to their clients. However, in contrast to the exponential speed of the growth of data and information, the data and information processing capabilities do not keep up the pace. One major concern is the missing of an effective automated solution to transform data into meaningful information or knowledge. Although ontology, which enables advanced functionality in knowledge systems and forms the knowledge base for future innovations, can be used for developing content management system and intelligent search engine for e-publication, the engineering of the knowledge construct using relation tagging of concepts is very time consuming and expensive involving a large amount of human resources. It appears that human tagging is not a feasible way to build up the solution space, and it becomes the bottleneck of knowledge acquisition. We are basically dealing with this bottleneck, which is also a classical knowledge engineering problem. Overall, the automatic extraction of ontology is quite challenging due to the unstructured nature of information contents and inherent semantic ambiguities in natural language. To serve our specific domain of interest, the ontology should capture domain dependent information. A more scalable, systematic and automatic approach to ontology construction for fuzzy domain is to be developed. For this purpose, several essential problems are to be addressed, including concept learning, concept extraction, semantic formation, relation extraction, fuzzy representation, knowledge discovery, etc. In this project, we will mainly focus on: 1) exploiting ontology paradigm in support of information extraction and retrieval, and 2) investigating the formulation of concept learning from a selected domain. The application domain of this project is targeted on e-publication, due to its popularity and significance to sharing knowledge in our real life. Furthermore, we will also pay efforts to the issue of correctness and verification of the ontologies extracted automatically, by exploiting the integration of the ontology extractor with the Fuzzy Ontology Coloured Map (FOCM) to be extended from our previous approved CERG project on the problems of content management and recommendation. This will help the construction of correct		

	ontology for content management and information retrieval in the application systems.

View Proposal

Submit Interim Reply | Return to List of Proposals

FAQ

SCREEN ID: SCRUM00102