SEMANTIC KNOWLEDGE BUILDING FOR IMAGE DATABASE BY ANALYZING WEB PAGE CONTENTS (FriPmOR2)

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Abstract:
In this paper, we present a method of semantic knowledge building for image database by analyzing semantic meanings of Web page contents. The novelty of our method is that it is able to effectively extract media with a high degree of relevancy to a specific topic by incorporating word similarity and ontologies. The method is implemented in our Web image crawler and analysis system (WICAS). The system downloads Web pages and media automatically and further analyzes the semantic meanings of page contents to build up semantic knowledge for media entities. Subsequently, our system accepts high-level query terms and returns relevant media efficiently. Our experiment results show that with this new method of high-level content abstraction, media retrieval accuracy can be improved tremendously over traditional methods.