ABSTRACT

According to our survey of the existing online travel guidance systems that provide travelers with attractions' information, they do not provide effective information retrieval because of the crisp data structure employed. This research proposes a new framework for fuzzy information retrieval that deals with human feeling. It is emphasized to apply in the online traveling guidance systems that recommends the attractions according to the requirements of the travelers, which are described as preference levels. The *Feature Matching Algorithm* (FMA), employed in this framework, extracts effectively the desired attractions based on the fuzzy input relation and fuzzy database relations. With the use of data structures constructed in form of fuzzy relations, human feelings/desires and features describing attractions can be expressed more naturally in qualitative terms. Moreover, a fuzzy relational product is an essential part in constructing an efficient and effective retrieval algorithm. Examining the existing fuzzy relational products and analyzing the results of their applications, a fuzzy relational product called *Triangle Product* is applied as *Soft Triangle Subproduct*. It is successfully applied in FMA.