

Exhibit 23

CHAPTER

Query Fuzzification for Internet Information Retrieval

Henrik Legind Larsen

Computer Science dept., Roskilde University, P.O. Box 260, DK-4000 Roskilde

Ronald R. Yager

Machine Intelligence Institute, Iona College, New Rochelle, NY 10801

Abstract

After outlining the basic structure of an information retrieval system, we discuss the process of softening user queries based on the use of fuzzy subsets, and introduce the concept of importance modification. We then describe the construction of a crisp query, a so-called envelope, applied to retrieve the potentially relevant items, as characterized by the softened query, using a traditional information base management system. The process of criteria aggregation based on MOM and MAM operators is investigated. We discuss the use of a MAM operator to provide a ranking of the relevant items in the information base. Finally, we present for illustration snapshots from the user interface of a test application based on the approach.