

Expert bibliographic retrieval?

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This paper will examine the prospects for expert systems for retrieval from bibliographic databases. Traditional online bibliographic retrieval systems provide the user with access to databases consisting of document references. Such systems have tended to be based on either the Boolean or the vector-space model of retrieval where each document may be represented by a vector of keywords. Systems based on these models lack a deductive reasoning capability as the retrieval is determined by the occurrence in the document vectors of user-specified keywords and not on the relationships between concepts. PROBIB-2 is a prototype expert system for online bibliographic retrieval that provides enhanced retrieval capabilities through the application of logic programming. Implemented in Prolog, this system attempts to integrate the capabilities of a human search expert into a retrieval system that provides a deductive reasoning capability. Through a natural language interface, the user may retrieve information about the knowledge in the database as well as actual documents in response to a query. User profiles may be used to establish a query context or semantic environment to assist the system determine the information need of the user.

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