Abstract

By querying a search engine, a user probably can get what he or she wants. However, the average number of terms specified by a user in a query is generally two or three [23]. This often leads to several problems. To overcome such problems, various query expansion techniques have been developed. However, none of them are asserted to present the optimal solution, especially in Arabic language because its complex morphological structure. Thus, the main goal of this paper is to optimize Arabic queries using comprehensive combination of these expansion techniques that can be used to improve the expansion process and to get most of the relevant documents for the Arabic user’s query. The paper concluded that the developed system improved the recall and precision over couples of separated techniques. This approach takes advantages of both automatic and interactive query expansion techniques because query is expanded automatically and users are involved implicitly for query expansion.
- Grootjen F., Th. P. van der Weide, "Conceptual query expansion," Data &


**Index Terms**

Computer Science  
Information Sciences

**Keywords**

Information Retrieval  
Query Expansion  
Thesaurus  
Relevance Feedback  
Interactive Query Expansion