Abstract

The process of retrieval of relevant information from massive collection of documents, either multimedia or text documents is still a cumbersome task. Multimedia documents include various elements of different data types including visible and audible data types (text, images and video documents), structural elements as well as interactive elements. In this paper, we have proposed a statistical high level multimedia IR model that is unaware of the shortcomings caused by classical statistical model. It involves use of ontology and different statistical IR approaches (Extended Boolean Approach, Bayesian Network Model etc) for representation of extracted text-image terms or phrases. A typical IR system that delivers and stores information is affected by problem of matching between user query and available content on web. Use of Ontology represents the extracted terms in form of network graph consisting of nodes, edges, index terms etc. The above mentioned IR approaches provide relevance thus satisfying user’s query. The paper also emphasis on analyzing multimedia documents and performs calculation for extracted terms using different statistical formulas. The proposed model developed reduces semantic gap and satisfies user needs efficiently.
Improving Statistical Multimedia Information Retrieval (MIR) Model by using Ontology and Various Information Retrieval (IR) Approaches

- Grosky, W. I., Zhao, R.: Negotiating the semantic gap: From feature maps to semantic landscape; Lecture Notes in Computer Science 2234 (2001).
- M. Preethi, Dr. J. Akilan deswari.: Combining Retrieval with Ontology Browsing; International Journal of Internet Computing, Vol. 1, Issue-1; 2011
- Croft, W. B., Turtle, H. R., and Lewis, D. D.: The use of phrases and structured queries in information retrieval; In ACM SIGIR Conf. on research and development in information retrieval, Chicago, Illinois, United States 2004
- S. Vigneshwari, M. Aramudhan: An Ontological Approach for effective knowledge
Improving Statistical Multimedia Information Retrieval (MIR) Model by using Ontology and Various Information Retrieval (IR) Approaches


Index Terms

Computer Science

Information Sciences

Keywords

Information Retrieval (IR) OWL Statistical Approaches (BI model Extended Boolean Approach

Bayesian Network Model)

Query Expansion and Refinement.