Quantitative evaluation of the concepts of sum and count of thesaurus relations in terms network of Cab thesaurus

By: Dr. Jafar Mehrad, Maziar Amir Hosseini

Abstract:
In this article, for the purpose of quantitative evaluation of constructional features of terms network in Cab thesaurus, all types of thesaurus relations are taken into consideration and a notebook designed in Excel software for collecting the information about the sample population, consisting of 11,127 descriptors. Results show that a limited sum of descriptors has allocated the most count of thesaurus relations to themselves.

Keywords: Cab thesaurus, evaluation, terms network, thesaurus relations, broader term, narrower term, non-preferred terms, sum of relations, count of relations
Thesaurus

By: Narges Babaee

Abstract:

Thesaurus is a controlled vocabulary that illustrates hierarchical classification among concepts; it is used for indexing documents and retrieving information. Thesauri are of the most important tools for storage and retrieval of information. In this article, history, form, structure the system it works, and some samples are taken into consideration. Conclusion is the last part of the article.

Keywords: thesaurus, storage, information retrieval

A comparative study on “history class” in the Persian cultural thesaurus, Class DSR (history of Iran), and History expansion in Dewey decimal classification

By: Massumeh Farshchi

Abstract:

With due attention to science development, science specialization, and increased information, development of new vocabulary and search terms is necessary for better information retrieval. Using thesaurus for information retrieval shows a professional and scientific approach of researchers to knowledge resources. Regarding the effectiveness of using thesaurus, this research presents a comparative study on history section in the Persian cultural thesaurus (ASFA), Class DSR (history of Iran), and History expansion in Dewey decimal classification.

Keyword: Persian cultural thesaurus, Class DSR (history of Iran), Iranian history expansion in Dewey decimal classification, information
**Improvement in calculating method of entries in permuterm indexing**

*By: Kobra Sam Aram*

**Abstract:**

Increase of different fields of science, and following it increase in volume of information and documents, researchers’ need to access them, and the necessity to accelerate their accessibility to information caused more reception from index and indexing. One of the methods of indexing titles of documents is permuterm indexing. Up to the present time, number of entries were calculated through formula $n(n-1)$ and having number of accepted keywords. In this article a complementary method for calculating number of entries in each title, is presented. This method helps the indexer to calculate the number of entries, at the presence of semi-authorized terms, before writing them down.

**Keywords:** indexing, permuterm indexing, semi-authorized terms

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**Structured abstract and its role in compression of medical and health science information**

*By: Heidar Mokhtari*

**Abstract:**

Structured abstracts have been propounded a potential tools in digesting the content of scientific and research information sources. In this paper, pointing to functions of abstracts, structured abstracts have been defined, and their role in offering contents of medical and health science information sources have been explained. In addition to reviewing several researches performed on this subject, some more topics have been suggested on structured abstracts in medical and health sciences, specially in Persian language.

**Keywords:** abstracts, abstracting, medical and health sciences
Necessity of the revision in thesauri structures: a review of thesauri inefficiency in the new information environment and ontology abilities in comparison with them

By: Azam Sanatjoo

Abstract:
The purpose of this paper is to discuss the inefficiency of the existing thesauri for presenting conceptual content and implicit knowledge in a given domain to the users; in spite of abilities that information technology have been provided. Lacking in well defined relationships among terms into three limited relationships of Narrower term, Broader term and related terms, are among other, problems that have made existing thesauri inefficient in current information environment. These problems have been resulted in the emergence of ontologies. In this paper, ontology is defined. Its structure is compared and contrasted with thesaurus to provide a general understanding of it.

Keywords: thesaurus, ontology, concepts, semantic relevances, knowledge organization systems, information retrieval

Quality control of indexing process

By: Dr. Sirus Alidousti, Hassan Assareh, Zahra Kazempour

Abstract:
Statistical quality control includes techniques which define the quality of products based on data and samples gathered and try to maintain the output quality by using statistical tools. Indexing process is one of the areas in information science in which the application of statistical quality control is essential. In this regard, this paper outlines a system of quality control of indexing process. Initially it defines the concepts of indexing and quality control. Then it details the components of indexing worksheet developed for development plan reports and the way of their indexing from the quality control perspective. Finally the process of indexing quality control is provided.

Keywords: quality control, statistical process control, indexing, civil programs reports
Necessity for standardization of indexes with a glance to the book index according to the ISO standard no. 999-1996

By: Afssaneh Teymurikhani

Abstract:
This article reviews the necessity of creating indexing standards. It first discusses about library standards, generally, and then their advantages and disadvantages of standardization of indexes, specially, and in continuation introduces ISO standard no. 999-1996, briefly. Reviewing the rate of observance of indexing standards in book indexes is the last chapter.

Keywords: indexing standards, ISO standard no. 999-1996, indexes of books, library standards

A survey on textual, content-based, and Fuzzy indexing images: digital image retrieval system

By: Mohammad Bagher Dastghaib

Abstract:
World Wide Web is a heterogeneous collection of text, audio and image. Most of recent researches in information retrieval domain are about textual retrieval. Image retrieval has many applications, such as art, architecture, and medical science. There are 3 tera-byte public images on Internet that can be indexed. Image indexing can be done based on textual information, content based or Fuzzy. Original uncertainty of retrieval systems can be represented by Fuzzy logic very well.

Keywords: digital image retrieval, Fuzzy image retrieval, content-based indexing, textual indexing
An introduction to the evolution and transition in cataloging of old texts
By: Dr. Saber Emami

Abstract:
This article reviews formation of cataloging and indexing of book and inscription industry. Since the ancient times, authors in the role of the creators of the texts, and inscriptors and publishers at the status of those, who are responsible to make available these texts to users, were considered of guiding them to the content of the texts. In this article formation and evolution of cataloging is considered from past to the present, with citation to samples and old texts. Primitive techniques of indexing also can be seen in this article.

Keywords: figure of speech, abstract, catalog, marginal note-making,

Latent semantic indexing

By: Rassoul Zavareghi

Abstract:
This article is representing and describing latent semantic indexing method, that is one of the modern automatic indexing methods. This article, points to indexing and its challenges in a brief introduction. Then in the second chapter, vector space models, which latent semantic indexing is one of its extensions, is described. In next chapter along with explaining the concept of the latent semantic indexing, its application and usage is stated and then its mathematical base that is statistical method of analyzing individual amounts explained through an example. In next chapter latent semantic indexing process is explained through an example and eventually projects and plans running in this field are introduced and some of technological advances in improvement of latent semantic indexing function are pointed out.

Keywords: latent indexing, semantic indexing, information retrieval, individual amounts analysis
From thesauri to ontologies: a short case study in the food safety area in how ontologies are more powerful than thesauri, from thesauri to RDFS to OWL

By: Boris Lauser
Translated by: Narges Ghadimi

Abstract:
This short case study will show on the basis of a simple example taken from the food safety area, how ontologies differ from thesauri. The example will start with showing an extract from the AGROVOC thesaurus and exploring the information that can be extracted from here. We will then develop this example further in order to show growing functionality and expressive power first in RDFS and finally in OWL ontologies.

Keywords: thesauri, ontologies, RDFS, OWL, Kaon, protégé

Towards conceptual indexing using automatic assignment of descriptors

By: Arturo Montejo Raez
Translated by: Hassan Ashrafi Rizi

Abstract:
Indexing techniques have reached a well maturated state. Digital libraries and other digital collections make an intense use of these algorithms to store and retrieve documents. In the other side, we have browsing techniques, which lets the user to gather the information. Current approaches are not yet advanced enough in order to satisfy the user. At CERN we are working in an indexer based on thesaurus descriptors. With a collection of documents related to thesaurus, user can manipulate them in a more conceptual way. Here we describe the core of this system, the automatic descriptor assigner.

Keywords: conceptual indexing, indexer of physics with high energy, full-text search, automatic descriptor assigner
The development and structure of Chinese thesaurus for subject indexing
By: Wenxian Zhang
Translated by: Amir Reza Asnafi, Farshid Danesh

Abstract:
In the information age, a thesaurus still remains as an important retrieval tool. The purposes of this article are to review the development and nature of the Chinese Thesaurus (CT), and to examine its organizational structure and functions in Chinese information indexing. As the largest, and most comprehensive indexing retrieval devices for Chinese language, the Chinese thesaurus and later the Chinese classified thesaurus (CCT) have played key roles in the standardization of Chinese retrieval language, and contributed greatly to the modern development of knowledge organization and information processing in China.

Keywords: thesaurus, Chinese thesaurus, information storage and retrieval, Chinese language, Chinese classified thesaurus, subject indexing

Abstracting keywords from hypertext documents
By: Ben Choi & Baolin Li
Translated by: Farshid Danesh

Abstract:
This paper presents a process for abstracting keywords from hypertext or text documents. The abstracted keywords, like keywords listed in a paper, identify the contents of a document. Our proposed process can be used, for example, to identify the contents of HTML documents returned from a search engine, to allow users to quickly find their needed information. The proposed process not only considers the occurrence frequency of a word in a document, like other related works, but also considers the occurrence of its synonyms. It also considers key phrases consisting of two or three words. To increase the accuracy
of frequency count of words, a stemming algorithm is used to remove suffixes. Our tests show that the stemming algorithm consumed on average 56.7% of the total computation time, and that the proposed process can on average abstract 52% of the keywords provided by the authors of the tested documents.

Keywords: Web mining, keyword extraction, information retrieval, hypertext

probabilistic or weighted indexing

By: Harold Borko
Translated by: Dr. Mansoureh Bagheri

Abstract:
Weighted indexing designed in order to decrease semantic noises in information retrieval. Therefore, when indexing, a suitable weigh should be assigned for any keyword in accordance with the rate of its relevance with document’s content. Additionally, probabilistic indexing implies that the probable relevance of a document to a given request can be computed and that the output of the search can be presented to the user in a ranked order of probable relevance rather than in a random order.

Keywords: probabilistic indexing, weighted indexing, relevance, information retrieval, retrieval effectiveness

Semantic indexing: a case study

By: Stephen Rhind-Tutt
Translated by: Ali Akbar Khasse

Abstract:
Semantic indexing is a way of coding digital texts and images to present their associated abstract meanings in database form. Databases encoded in this way enable users to answer
complex questions and provide multiple, organized, summary views of their contents. In this article, the author discusses the techniques used in creating a semantically indexed database and provides examples of the utility thereby gained. The author examines the differences between traditional indexing and semantic indexing, and provides insight into the methodology of semantic indexing, using examples.

**Keywords:** indexing, Web, semantic indexing, semantic Web

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**Ontologies and semantic Web**

*By: Elin K. Jacob*

*Translated by: Fatemeh Sheikh Shoaei*

**Abstract:**

Ontology is a branch of philosophy that studies the nature of existence and the structure of reality, but on the semantic Web domain ontology “investigates the categories of things that exist or may exist” in a particular domain and products a catalog that details the types of things – and the relations between those types – that are relevant for that domain. This catalog of types is an ontology. In this article, various definitions of ontology, the reasons of our need to ontologies, a sample of an ontology and the role of RDF and RDFS are presented.

**Keywords:** ontology, semantic Web, R.D.F., R.D.F.S., organizing Web resources