

Search Engine Optimization for Improving Page Rank And Image Search Accuracy

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Abstract

Page Ranking plays a vital role in search engine optimization. When user searches on web via search engine, web page links are displayed on user screen according to their page rank. In this paper techniques to improve page rank and image search accuracy have been discussed. Number of web sites and web pages are increasing day by day. To display page links from most relevant to least relevant web pages, web pages are needed to be ranked properly to make searching easier and beneficial for the user. Images are provided to the user by using image search accuracy technique. Also various page ranking techniques have been compared with new page ranking technique discussed in this paper.

Keywords: count; keyword; page rank; image search; search engine.

I. Introduction

Page ranking is very important part of search engine optimization. Search engine optimization is a web marketing tool [1]. Whenever user searches on the web via search engine, then results in the form of web page links are displayed on the user screen [6].

Sometimes user faces the problem of not getting the desired information (links) [3]. It is because of web pages are not ranked properly [8]. In this paper some of the techniques implemented to improve the web page rank have been discussed. These techniques provide relevant search and improve the domain specific search engine database at the same time [5]

Second problem is of image search accuracy. When user searches for any particular image, it is difficult to the user to identify the image, that what is the image all about [3]. To improve the image search accuracy another technique has been discussed in this paper.

II. Page Ranking Techniques

Techniques to improve the page rank are -

i. Count of Keywords

Count of keywords is the relevant search technique in which the page rank of web pages is

decided on the basis of counting of occurrences of keywords used in the web pages. When user searches a word, then the number of occurrences of that keyword is counted among the relevant pages. The web pages containing more number of occurrences of that keyword are shown in the list according to most relevant to least relevant web pages.

In Figure -1 it can be seen that when user searches for the word computer by entering in the search space given, then the web page links related to the word computer are shown from most relevant to least relevant web pages by deciding their page rank on basis of counting number of occurrences of keyword 'computer'. Figure -2 represents working of this new technique has been represented in the form of flowchart.

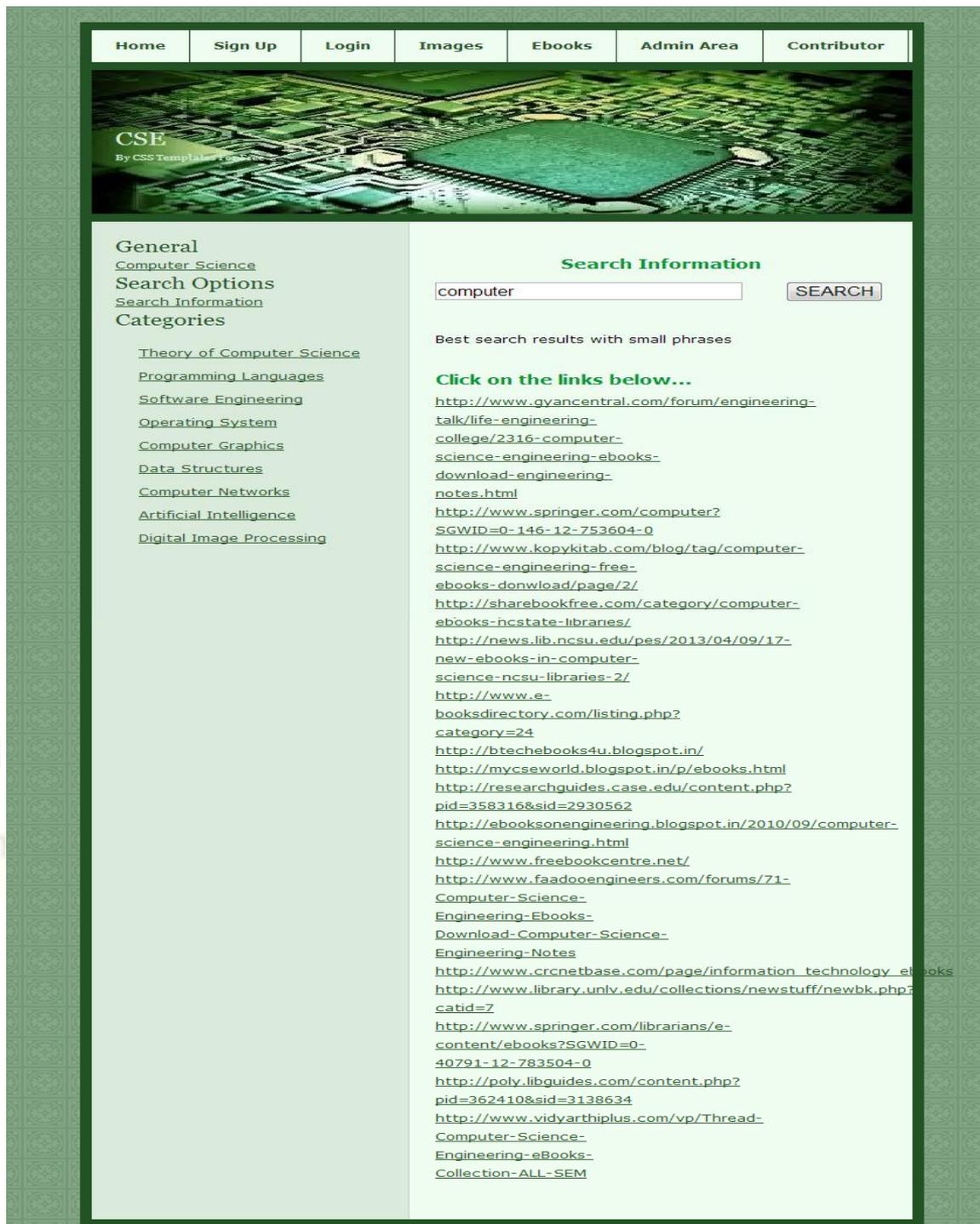


Figure -1 'Count of Keywords' Technique

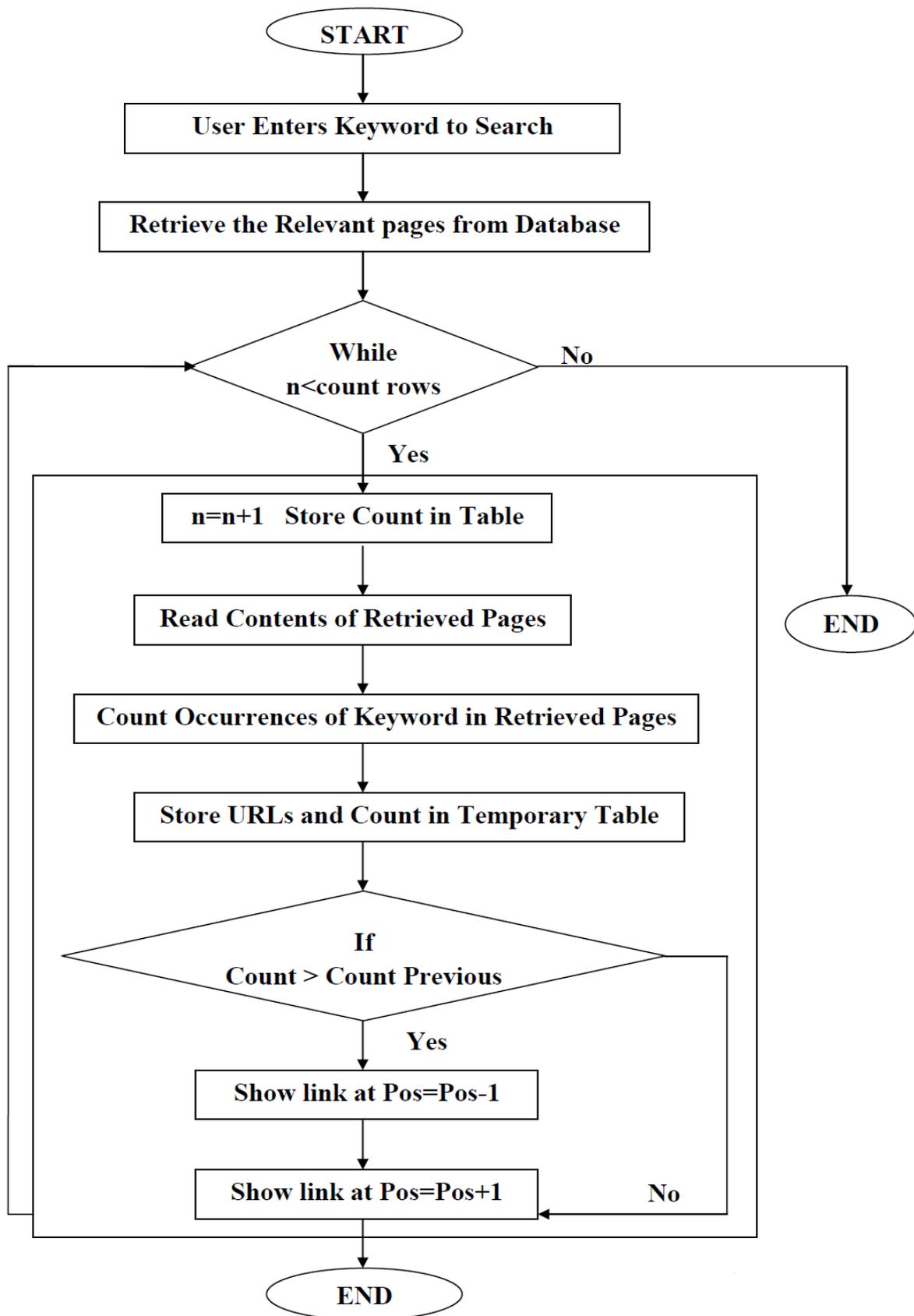


Figure 2 – Flowchart for working of 'Count of Keywords'

ii. Improving domain specific database search engine.

Improving database of a domain specific search engine is the technique used to remove the problem of 'No match Found' or 'No page Found' problem faced by the user. When user searches something on the web, sometimes, the user observes a message 'No results Found' that is no results (related to query of user) match with database records.

In this technique a list of words will be produced and displayed to the administrator; that is, the words which were searched by the user and the search was not successful that is 'No page Found' problem was faced by the user. These words can then be added to the search engine database, whenever the user searches for these words again, then 'No page Found' or 'No match Found' problem is resolved.

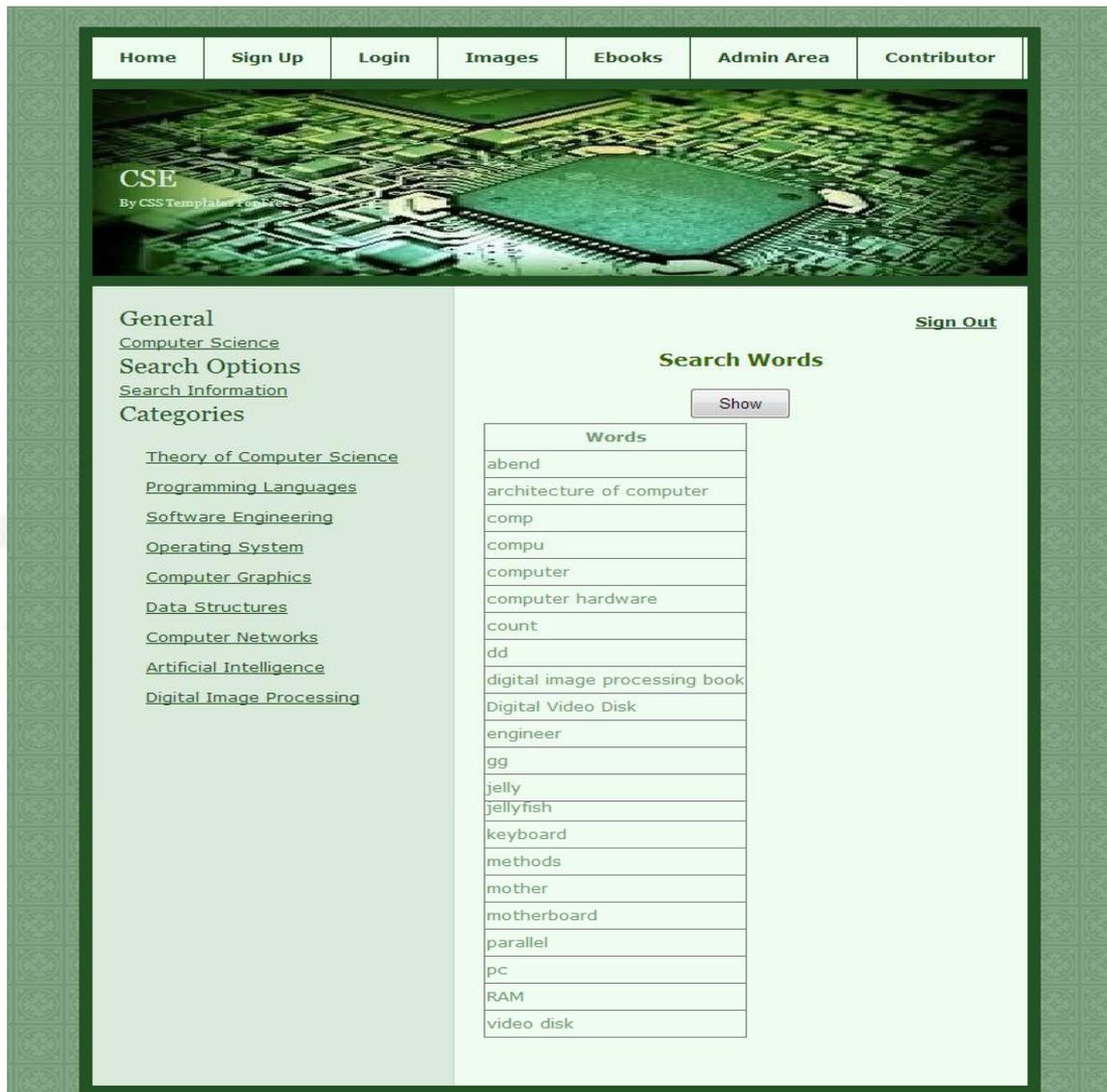


Figure 3 - List of unsuccessful search words

iii. Improving image search accuracy.

When user searches for images on the web then it is difficult for the user to identify the correct image relevant to his search. This technique involves image upload functionality that is the user enters the details of images such as image description, image name, and source of image. User can be agreed for this, by giving recognition to their contributions.

In image search accuracy technique when user searches for particular image then images are displayed from most relevant to least relevant results along with the image description, image name, user name and source of image as shown in Figure -4. User searches for image of RAM. Results for that are shown with image name that is RAM, user name by

whom image was uploaded, facebook id/ e-mail id of that user and source of image is displayed.



Figure – 4 Image Search Accuracy

If user wants to read more about the image then user can follow the links of sources given.

In Figure – 5 shows that user chooses an image to upload, enters description as digital video disk, source is pc, user name and e – mail id of the user.

With this other users can easily recognize the image and can link with other users by e –mail id or facebook id to get more information. With this, users uploading the images will get recognition for their work.

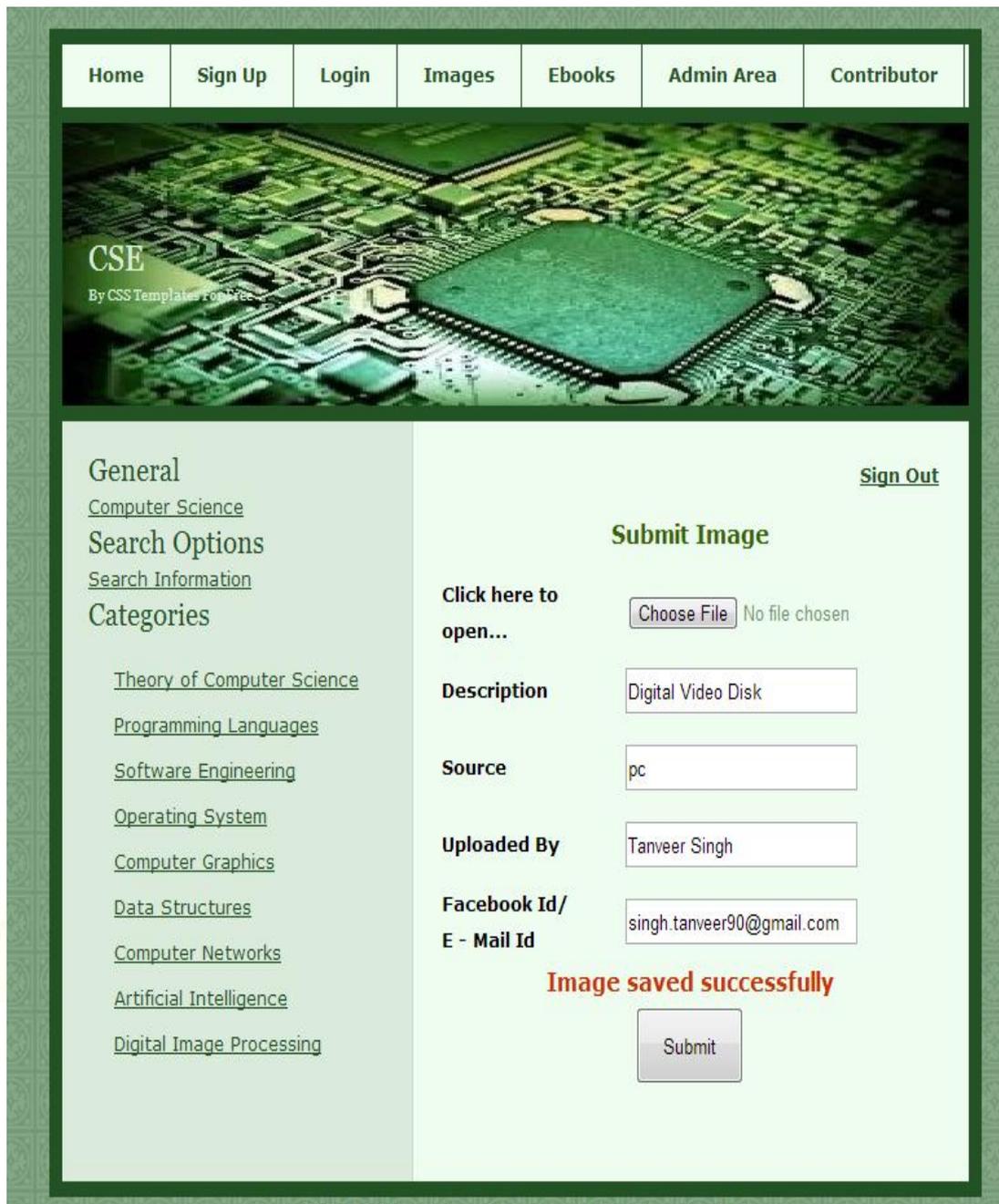


Figure 5 - Image Upload

III. Comparison of Various Page Ranking Techniques.

The comparison of this new technique discussed in this paper with previous page ranking techniques is given below.

i. Quality of Content

One of technique to improve page rank is good quality content. Sometimes pages which are not useful to the user are linked up with good quality content websites. Secondly, creating good content is very time consuming. Technique discussed in this paper concentrates on count of keywords used in web

page relevant to user search and it is not time consuming process.

ii. Structural mark up (Headings)

In this technique the headings are used. Headings are assigned to the content to make web site content meaningful. With headings, it is easier for the search engines and the users to find what content they are looking for. If content is not relevant to heading then relevant search criteria fails. This problem does not occur in this technique as it uses count of keywords.

iii. Titles

Assigning titles to web pages is must. Title of a web page accurately describes the page content. If titles created are not unique, accurate and are not relevant to the content of the web page then user will not get accurate results according to user query. The new technique discussed uses semantics for user's search queries, instead of title of pages.

iv. Inbound Links

The links from other web pages are inbound links. Inbound links contains links which are ranked highly by the search engines and are relevant to the users search. These are known as good links. Here the problem is of Bad links which are banned by the search engines and are not relevant to the content of user's search. In the new technique discussed, there is no problem of bad links; as the links used have been first reviewed by the administrator and re-checked during process of count of keywords.

v. Use of Keywords

Single words are not most effective; multi words must be used to make users like to visit the web site. Keywords must be used throughout the web site. But users can not know about keywords used in the web pages until users open web pages. This new technique count the numbers of keywords used in the web pages and rank them accordingly.

vi. Cloaking

Cloaking is the technique to display the content of web pages differently from that of assigned content to search engines. The content delivered to search engines is not displayed to the user. This technique may lead to wastage of time of user if content displayed is not relevant to the user search. This new technique helps the user to achieve relevant results by arranging web pages in descending order of count from most relevant to least relevant web sites or web pages.

IV. Conclusion

With tremendous increase in number of web sites or web pages, page ranking of web pages is required in order to make searching easier for the user on world wide web. Sometimes useful links are not displayed first in the list, to the user. This is due to improper ranking of web pages. To overcome this problem of page ranking, a technique of relevant search has been implemented and discussed in this paper. This technique ranks the web pages based on count of keywords (searched by user). As the web page with more number of occurrences of a keyword, is more relevant to the user search keyword. The web page containing more number of counts of keyword searched by the user is more relevant and displayed first in the list of web page links on the user screen. This is how this technique ranks the web pages from

most relevant to least relevant web sites or web pages.

When user searches on the web, sometimes user faces the problem of 'No match Found' or 'No page Found'. No results relevant to user search query are shown. To overcome this problem a technique of improving database of a domain specific search engine has been implemented and discussed in this paper. This technique shows that, when user searches a word, if not found then a list of words of unsuccessful search words get maintained and can be accessed by the administrator. Then, information about those keywords can be added to the search engine database by the administrator. When user again searches for any of these words then 'No match Found' or 'No page Found' problem get resolved. This is how this technique resolves 'No Match Found' problem.

Whenever user searches an image on the web, identifying the relevant image to the user search query is difficult task for the user. To overcome this problem a technique of image search accuracy has been implemented and discussed in this paper. In this technique when user search any image then name of image, image description, user name by whom image was uploaded and facebook id or e-mail id of the user will get displayed along with the image on the user screen. These details can be filled up by the user at the time of uploading the image. With this, image can be easily identifiable by the user and recognition of the user among other users also increases. With image source given along with the image description, user can visit if he/she wants more information about the image. This is how the image search accuracy is increased to get relevant image search results to the user search query.

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