Google Search Engine and its Usefulness to Library Professionals

Vivekanand Jain and Dr Sanjiv Saraf

Banaras Hindu University, Varanasi-221 005
E-mail: digodian@yahoo.com

ABSTRACT

Internet search engines are tools to retrieve the information from web. Google search engine is the most popular among all types of users, specially academic users. The librarians can play important role to manage the web resources and assist the users in getting right information. The article covers the developments of Google search engine from 1999 till date. It also includes features of Google scholar and books search on Google.

Keywords: Search engines, Google, five laws of web, Google scholar, book search, Web search

1. INTRODUCTION

Internet is a vast digital library. The role of a librarian in the internet era is to provide or assist the user in getting right information at the right time in right amount from plenty of information available on the net. A web search engine is an interactive tool to help users locate information available via the internet. Web search engines are actually databases that contain references to thousands of resources. Users interact with these databases putting a query that ask the database if it contains resources that match specific criteria. A web search engine provides an interface between the user and the database. The interface presents the user with an opportunity to type in a search string, which may be a word, a phrase, a date, or some other criterion, and a way to submit the request[1]. The web search engine runs the search string against the database, returns a list of resources that match the criteria, and displays the results for the user. Many web search engines use fill out forms as an interface, and support complex queries. Many also include instructions and tips to search the database effectively. Because web search engines can use hypertext, users are able to link directly to resources listed in the result display[2].

For information retrieval there are many search engines, web directories, indexes, that help during information retrieval. Google is one such search engine that is more popular among the users due to its various features. Google's founders Larry Page and Sergey

Brin developed a new approach to online search that quickly spread to information seekers around the globe. Google was founded in 1998 at the Stanford University. In February 1999, it moved from alpha test version to beta, and was officially launched on September 1999. It is now widely recognised as the world's largest search engine; an easy-to-use free service that usually returns relevant results quickly[3].

The mission of Google is to organise the world information and make it universally accessible and useful. The journey of Goggle in chronological order is given below[4]:

1998 Google founded by Larry Page and Sergey Brin

1999 Moved from alpha test version to beta

Officially launched on 21 September 1999.

2001 Google claimed access to 150 million web pages

2002 Google claimed accesse to 200 million web pages

2004 Google claimed access to 400 million web pages

Google Scholar launched

2005 Google claimed acceess to 800 million web pages

Google introduced maps feature

Google introduced books search

Google introduced translation facility

Google Newsletter for librarians

2006 Google introduced video store

Google Pack: A free collection of safe and useful software for improving the web experience

2. GOOGLE FEATURES

Google provides basic search, advanced search, local search, directory search, and various other facilities. Few basic features of Google are[5-7]:

✘ Word and phrase search facilities

✘ Simple and advanced search options

✘ A separate link for Google directory gives access to several browseable categories

✘ Searches can be limited by language, link and site; it also helps in finding pages that are related to a given web page

✘ It supports multilingual search. It provides access to a number of Indian languages like Hindi, Bengali, Marathi, Tamil, Telugu, etc.

✘ AND is used as default between two or more search terms; OR is used to join search terms; – sign is used to indicate that the succeeding term should not occur

✘ Phrase search: A phrase has to be entered within double quotes

✘ Stop words: Search is not provided with common words like in, is, and, etc., but searchers can use the + sign to include stop words in their search

✘ I am feeling lucky option: This option automatically takes the searcher directly to the first web page Google returned for a query

✘ Spell checker: If there is a mistake in spellings then system asks, "did you mean this." Clicking on the suggested spelling will launch a Google search for that term. Because Google's spell check is based on occurrences of all words on the internet, it is able to suggest common spellings for proper nouns (names and places) that might not appear in a standard spell check program or in a dictionary

✘ It ranks pages according to relevance, number of times sites are visited, etc.

✘ Google search facilities can easily be added to the user's web browser

✄ Local search facility is provided by Google. For India Google, local is available on www.google.co.in

✄ Search options from web, images, groups, news, etc., are available

✄ Search for books also available

In addition to providing easy access to more than eight billion web pages, Google has many special features. Few important features useful for the users are[8]:

Cached links: To view a snapshot of each page as it looked when indexed

Calculator: To evaluate mathematical expressions

Definitions: To get glossary definitions gathered from various online sources

File types: Search for non-HTML file formats including pdf documents and others

Images: To see relevant images in your regular web search results

News headlines: Enhances search results with the latest related news stories (www.news.google.com)

Q and A: To get quick answers to straightforward questions

Search by number: To access package tracking information, US patents, and a variety of online databases

Similar pages: To display pages that are related to a particular result

Site search: Restricts search to a specific site, and

Web page translation: Provides english speakers access to a variety of non-english web pages

2.1 Display Pattern of Search Results in Google

The information sought in Google is displayed in a number of ways. Some of these are:

✄ Statistics bar describes the search and indicates the number of results returned as well as the amount of time it took to complete the search
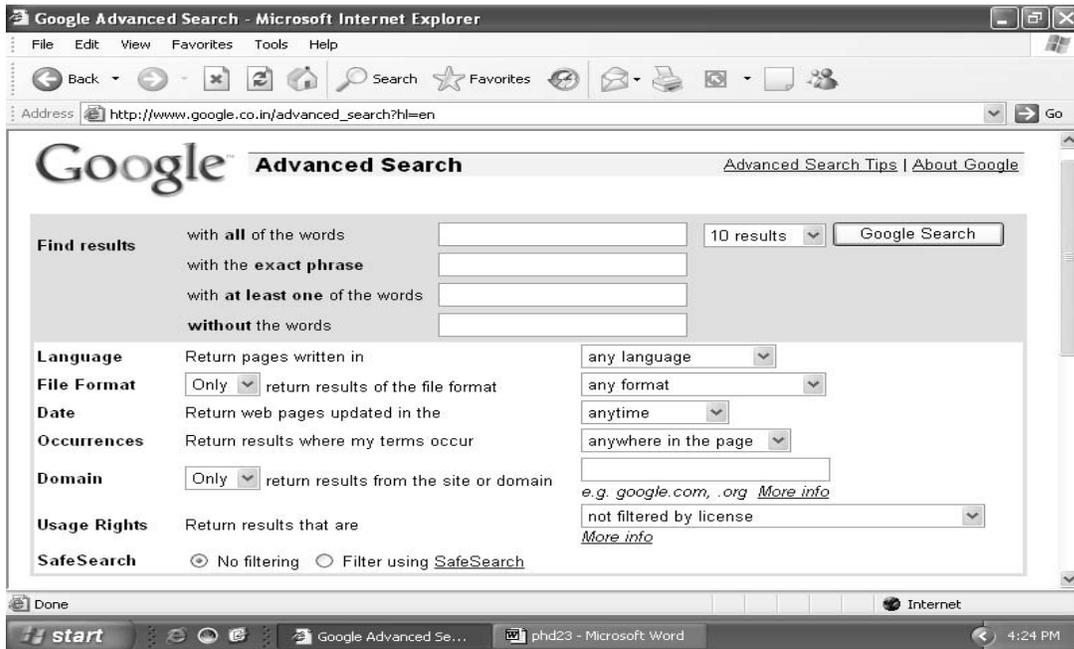
✄ Title with hyperlink

Figure 1. Advanced search facility in Google

- ✂ Brief description of metadata with highlighting the search terms

- ✂ Web address with size of webpage

- ✂ Sometimes date of last update mentioned

- ✂ Option of cached-similar pages available

- ✂ If output file is in pdf format than option to view as HTML available

2.2 Limitations

- ✂ Only indexes first 101 kB of a web page and about 120 kB of pdfs

- ✂ Google does not provide truncation facility in search terms

3. THE FIVE LAWS OF THE WEB & GOOGLE

The five laws of the web are inspired by the five laws of library science, which were the seed of all of Ranganathan's practice. These laws form the foundation for the web by defining its minimum requirements. The laws are:

1. Web resources are for use

2. Every user has his or her resource

3. Every web resource has its user

4. Save the time of the user

5. The web is a growing organism

These five laws are the foundation for any web user-friendly information system. Google fulfills these web laws up to some extent to take care of users' information needs. The web consists contributions from a number of contributors, and is designed to meet the human need to share information resources, knowledge, and experience[8]. The first law implies that the web is for using and learning, and information is there to be used. This law is very important because information serves no purpose if it is not utilised and at least available for people. The role of the web is to serve the individual, and community, and to maximise social utility in the communication process. Google has the biggest database of all types of information related to societies, communities and languages and makes these records available free to all.

4. USEFUL FEATURES FOR LIS PROFESSIONALS

Google search engine adds number of new features from time to time. Due to its simplicity and continuous updation (Fig. 2), it remains popular among the general and academic users. New research keeps on going with the support of library professionals and computer scientists/engineers to improve the features of Google and quality of search results with wider coverage. The new innovative ideas are incorporated regularly to improve it further[9]. Few important features of Google, which may be useful to library and information science professionals are:

4.1 Google Directory

Google is now providing directory service also. It is providing subject-wise classified information on various topics. The way of presentation in directory for India, is

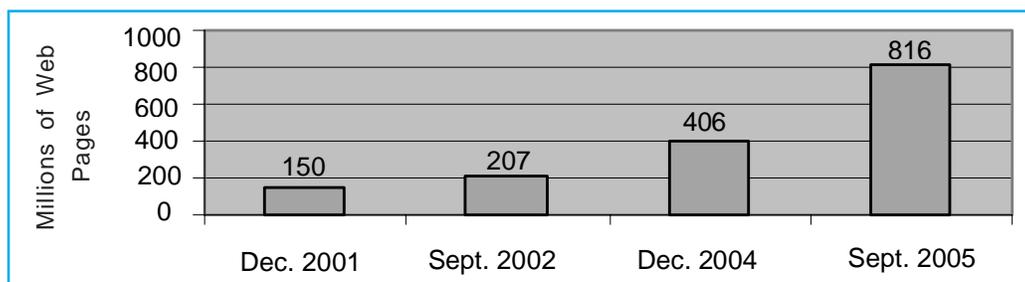Regional>Asia>Regions>South Asia
World>Hindi

Figure 2. Database growth of Google search engine

4.2 Google Scholar

Google scholar (beta version) is a new development in the quality of information for academicians by Google. It provides a simple way for broad search for scholarly literature. From one place, users can search across many disciplines and sources: peer-reviewed papers, theses, books, abstracts and articles, from academic publishers, professional societies, preprint repositories, universities and other scholarly organisations. Google scholar helps to identify the most relevant scholarly research across the world.

Salient Features

✄ Search diverse sources from one convenient place

✄ Find papers, abstracts and citations

✄ Locate the full text through your library or on the web

✄ Learn about key papers in any area of research

Advance search facility is available to search Google Scholar. Users can increase the accuracy and effectiveness using operators. The search field may be author, publication, date, etc. Google Scholar provides special facility to campus/university library users to access resources of its own library through Google Scholar. This service is based on IP address authentication.

4.3 Book Search on Google

Google launched book search facility to help users get the world's information online by publishing books online. If users' search query matches with books in Google print index, links to those books under book results are highlighted on the screen. There is also provision for online procurement[11].

4.4 Web Page Translation

Google has removed the language barrier with its translation feature. Using machine translation technology, Google provides free translation facility to english speakers from various non-english web pages. This feature is currently available for pages published in Italian, French, Spanish, German, and Portugese[12-13].

This service is very useful for library professionals. It helps in identification of subjects and classification of documents. Classifier can get online abstract of non-english document in english language. It may help the librarians to review books before procuring.

5. CONCLUSION

Google is a dynamic search engine. It is regularly adding new features on the basis of research. It adopts library search techniques in its advanced search. To keep in touch with library professionals, Google started its monthly newsletter for librarians[14] from December 2005.

Google tries to maintain recall with high precision. Ranking of web pages and display of results are satisfying the users needs most of the time. Due to this reason it is most popular among general users as well as scholars.

Nowadays, internet-based services are the main features of most of the libraries all over the world. Google features like book search, translation service, directory search, basic search for general queries, advanced search for specific queries, etc. all are helpful for LIS professionals to provide best service to users.

ACKNOWLEDGEMENT

REFERENCES

1. What is a web search engine? Available at http://www.columbia.edu/acis/fifteen/search/search/sld02

2. Chowdhury, G G. Introduction to modern information retrieval. Library Association, London, 1999.

3. Brin, Sergey & Page, Lawrence. The anatomy of a large scale hypertextual web search engine. Available at http://www7.scu.edu.au/programme/fullpapers/1921/com1921.htm

4. Sullivan, D. SearchEngineWatch.com. Available at http://www.searchenginewatch.com

5. Review of Google. Available at www.searchengine/showdown.com

6. Coslon analytical profile: Metadata, engines,directories. Available at http://www.caslon.com.au/metadataprofile12.htm

7. Bradley, P. Google and Search: Some of the latest developments. Ariadne.2005, 44. Available at http://www.ariadne.ac.uk/issue44/search-engines/intro.html

8. Noruzi, A. Application of Ranganathan's Laws to the Web. *Webology*, 2004, **1**(2), Article 8. Available at http://www.webology.ir/2004/v1n2/a8.html

9. Google Search Engine features. Available at www.google.com

10. Google Scholar. Available at www.scholar.google.com

11. Google Book Search. Available at www.books.google.com/googlebooks/about.htm

12. Google Translation Service. Available at www.google.com/language_tools

13. Google Translator: The universal language. Available at http://blog.outer_court.com

14. Google's Newsletter for Librarians. Available at http://www.Google.com/GoogleLibrarian

Contributors

Shri Vivekanand Jain is working in the Central Library, Banaras Hindu University since last ten years. Before joining BHU, he also served in Tropical Forest Research Institute, Jabalpur, and National Informatics Centre, New Delhi. He has published 12 research papers. He is a life member of various societies including ILA, IASLIC, and SIS. He is also Assistant Editor of *Gyan Sanchar*, the journal of library and information science, and *Manu Scriptology*, both published from Central Library, BHU. His area of interest is IT and its applications to library services.

Dr Sanjiv Saraf is working as Deputy Librarian in the Central Library, Banaras Hindu University since last one year. Before joining BHU,, he was college librarian in Sagar (MP). He has also served at National Soyabean Research Centre (ICAR), Indore. He has to his credit above 15 research papers. He is a life member of various societies. He is Editor of *Gyan Sanchar*, the journal of library and information science, and *Manu Scriptology*, both published from Central Library, BHU.