Chapter 14
Search Engines and Meta Search Engines for Effective Information Retrieval and Scholarly Communication

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ABSTRACT
Search Engines (SEs) and Meta-Search Engines (MSEs) are the tools that allow people to find information on the World Wide Web. SEs and MSEs on internet have improved continually with application of new methodologies to satisfy their users by providing them with relevant information. Understanding and Utilization of SEs and MSEs are useful for information scientist, knowledge manager, librarians and most importantly for authors and researchers for effective information retrieval and scholarly communication. The paper explores on how Search Engines and Meta-Search Engines discover web pages, indexes content, and provide search results. The paper discusses about the technological evolution of SEs and MSEs, working process and different types of SEs and MSEs. Finally paper presents conclusions and suggestions for further research.

DOI: 10.4018/978-1-5225-1697-2.ch014
INTRODUCTION

The World Wide Web contains enormous amount of information, that is multiplying at a exponential rate. The web has plenty of useful resources, but its dynamic unstructured nature makes them difficult to locate, the quality of search in web pages. The explosive growth and the wide spread accessibility of the web information retrieval in the World Wide Web makes it difficult to get relevant results. Effective use of Search Engines is a challenging task for Library and Information Science Professionals. The main problem is displaying only important pages relevant to the keyword(s) typed by users. The importance of a web page can be judged based on the content specified in it or based on link information. Internet has become the most largest and important network which connects billions of people all around the world. World Wide Web has been growing rapidly and it attracts the librarians to access the web. The term ‘scholarly’ used in academic domain, especially in higher education. Scholarly communication is used to describe how research is communicated among peers and evaluated.

Search Engines can be used as a quick and direct reference to get any type of information all over the world. Librarians were the ultimate Search Engines before the web took over. Search Engines have changed the way to find information, as per the patrons needs, or conduct research. Behind every online destination, social network, cell phone, and online newspaper there is a Search Engine. There are many Search Engines available today, but retrieving relevant and meaningful information is very difficult. Perfect Search Engine as something that ‘understands exactly what you mean and gives you back exactly what you want’. Search Engines earlier were very primitive and they had rudimentary general search options, from general search options there was a trend of developing advanced search features and thus new Search Engines are came into existence.

Searching for information on the World Wide Web (WWW) is done in much the same way that you look for information in a library, using an on-line catalog system (the updated version of the old index card system). The difference-and the advantage-is that you can get information from all over the world, instead of from a single library collection. The term “search engine” is typically used to describe all of the different programs that allow people to search the WWW. Using SEs and an index is searched rather than entire web. A MSE (Multi Threaded SE) such as Mamma, Meta Crawler, Dogpile, Savvy search, is a search tool that sends a query simultaneously to several SEs and consolidates all results, thereby saving time. This paper gives an overview on working of SEs, MSEs, and their significance in information retrieval.
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