

# Search Engine Optimization to Increase Website Visibility

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**Abstract:** Search engine optimization [SEO] is often about making modifications to parts of the website. When viewed individually, these changes might seem like incremental improvements, but when combined with optimization technique, they could have noticeable impact on website's user experience and performance in search results. SEO requires considerable time, professional communicators should progressively apply these lessons in sequence presented in this paper and should keep up to date with frequently changing ranking algorithms and with the associated changing practices of the search engine optimization professionals. Search engine rankings are shaped by three classes of key logic participants namely, 1.Business logic, 2.Professional communicators, 3.End user logic. By using these key logics the optimization technique makes it easier for the users to search their web contents. It focuses only on general web search engine and the deliver lesson that professional communication can readily implement without any specialized technique. The key concepts introduces a theoretical framework for this to search engine optimization, describes how the approach was used to implement the three classes of stakeholders to shape the whole framework because it is easier for the audiences to find their web-content and websites through search engines. Search engine users of course hold the attention economy's key commodity, their own attention, and confer it not only among the sites of contending web content creators but also among the search engine themselves, thereby compelling search engines to try to better accommodate users' interests that search engines serve up among their top results.

**Keywords:** organic (natural) search, search engine optimization, social media, websites, page rank.

## 1. Introduction

Most professional communication practitioners and researchers can point to some content on the web that they themselves have authored, such as on their employers' or clients' websites, or on sites they maintain for professional, personal, or community interests. As a simple experiment, they might try to find that content using only a general web search engine. It introduces a theoretical framework for the techniques' approach to search engine optimization, describes how it was selected, defines search-related terminology, and explains how three classes of participants shape search engine rankings. It delivers lessons that professional communicators can readily implement without specialized technical know-how and without a web marketing budget. By applying three key lessons, professional communicators can make it easier for audiences to find their web content through search engines.

Search engine optimization (SEO) is "the process of editing a web site's content and code in order to improve visibility within one or more search engines". We are already familiar with most of the topics listed here because they're essential ingredients for any web page, but we may not be making out the most of them. Even though this title contains the words "search engine", it would like to say that you should base your optimization decisions first and foremost on what's best for the visitors of your site. An important aspect of SEO is making your website easy for the users understand. SEO helps the engines figure out what each page is about, and how it may be useful for users. Successful SEO requires most considerable of time, and professional communicators should do progressively

apply these lessons in the sequence presented here and should keep up to date with frequently changing ranking algorithms and with the associated changing practices of search optimization professionals. Search engine want the web developers to create sites and content in accessible ways, so they provide a variety of tools, analytics and guidance. The optimization technique is used to increase the website's visibility to gain the most of user experience.

Many data intensive applications delivered over the Web suffer from performance and scalability issues. Content distribution networks solved the problem for static content using caches at the edge nodes of the networks. A dynamically generated web page is usually assembled using a number of static or dynamically generated fragments. The static fragments are served from the local caches whereas dynamic fragments are created either by using the cached data or by fetching the data items from the origin data sources. One important question for satisfying client requests through a network of nodes is how to select the best node(s) to satisfy the request. For static pages content requested, proximity to the client and load on the nodes are the parameters generally used to select the appropriate node. Techniques to efficiently serve fast changing data items with guaranteed incoherency bounds have been proposed in the literature.

## 2. Related Works

**Optimization of Ranking Measures:** Web page ranking requires the optimization of sophisticated performance measures. Current approaches only minimize measures

indirectly related to performance scores. We present a new approach which allows optimization of an upper bound of the appropriate loss function. This is achieved via structured estimation, where in our case the input corresponds to a set of documents and the output is a ranking. Training is efficient since computing the loss function can be done via a linear assignment problem. At test time, a sorting operation suffices, as our algorithm assigns a relevance score to every (document, query) pair. Moreover, we provide a general method for finding tighter non-convex relaxations of structured loss functions. Experiments show that the algorithm yields improved accuracies on several public and commercial ranking datasets.

### Web 2.0 Techniques for Search Engine Optimization:

Search engine optimization (SEO) is a process that seeks to achieve a high ranking in the search engine results for certain search words or phrases. This process typically involves making certain changes to a site, as well as acquiring links from other sites. One aspect of SEO that has begun to receive much attention by practitioners is the use of Web 2.0 sites and technologies. Knowledgeable practitioners are beginning to use Web 2.0 to achieve multiple high search engine rankings for a chosen word or phrase. The two case studies presented show that the use of Web 2.0 techniques can enable sites to rank well in the search engines. In addition, use of these methods may lead to multiple top listings on the search engines. Finally, the speed and flexibility of Web 2.0 sites and methods allows search engine marketers to promote seasonal or “hot” products.

### 2.1 Implications for Search Engine Marketing

The breadth and depth of online information affords a traveler an enormous amount of choices of potential destinations and accommodations. One of the key tools travelers rely upon to find information of value is search engines. As such, accommodation marketers, the primary target beneficiary of this research, would be well served by a greater understanding as to how travelers perform their searches within the search engine environment and of the types of keywords they use to navigate that search. Such knowledge would better inform their online marketing campaigns, and thus allow for more effective use of their limited marketing dollars. This study analyzed 701 Excite.com user queries of accommodation searches in order to identify trends of query formulation. Four types of analysis were conducted: types of query keywords; types of whole queries; sequence of query formulations; and associations of keyword types. The results suggest that travelers most often search for their accommodations simultaneously with their search for other aspects of their travel, such as destinations, attractions, transportations, and dining; and that they most often commence their search seeking specific hotels in conjunction with the city they are considering for a visit. A sequential analysis also revealed that many users engage in a switching behavior that swings between the broad and focused research tact. The marketing implications of these findings are discussed.

### 2.2 Structures in Search Engine Result Pages

We define what elements the most popular web search engines use on their results pages (e.g., organic results, advertisements, shortcuts) and to which degree they are used for popular vs. rare queries. Therefore, we send 500 queries of both types to the major search engines Google, Yahoo, Live.com and Ask. We count how often the different elements are used by the individual engines. In total, our study is based on 42,758 elements. Findings include that search engines use quite different approaches to results pages composition and therefore, the user gets to see quite different results sets depending on the search engine and search query used. Organic results still play the major role in the results pages, but different shortcuts are of some importance, too. Regarding the frequency of certain host within the results sets, we find that all search engines show Wikipedia results quite often. Since we used the .com interfaces of the search engines, results may not be valid for other country-specific interfaces.

### 2.3 Ranking Metrics and the Search Guidance for Learning Object Repositories

In line with the popularity of the Internet and the development of search engine, users request information through web-based services. Although general-purpose searching such as one provided by Google is powerful, searching mechanism for specific purposes could rely on metadata. In distance learning (or e-learning), SCORM provides an efficient metadata definition for learning objects to be searched and shared. To facilitate searching in a federated repository, CORDRA provides a common architecture for discovering and sharing Learning Objects. We followed SCORM and CORDRA specifications to develop a registry system, called the MINE Registry, for storing and sharing 20,738 Learning Objects created in the past five years. As a contribution, we propose the concept of “Reusability Tree” to represent the relationships among relevant Learning Objects and enhance CORDRA. We further collect relevant information, while users are utilizing Learning Objects, such as citations and time period persisted. The feedbacks from the user community are also considered as critical elements for evaluating significance degree of Learning Objects. Through these factors and rank Learning Objects in the MINE Registry, in addition to other external learning objects repositories. As a practical contribution, we provide a tool called “Search Guider” to assist users in finding relevant information in Learning Objects based on individual requirements.

### 3. Search Related Terminologies

This section introduces general search-related terminology that reappears throughout this system. More specialized terms are defined and/or described at points where they are introduced according to the Search Engine Marketers Professional Organization, the main American-based organization that represents practitioners in the field. The similar term search engine marketing (SEM) includes SEO plus various paid advertising options that involve search engines, options that are beyond the scope of this system. SEO is typically understood not to include or at least not to overly rely on these

paid options in its aim to achieve high rankings among search engines' organic ("natural") results.

The main Concept introduces a theoretical framework for the approach to search engine optimization, describes how the literature was selected, defines search-related terminology, and explains how three classes of participants shape search engine rankings. This paper explores in concrete detail how each of these three classes of stakeholders contributes to influence search engine rankings in the three classes of participants shaping the search rankings section. More generally the theoretical framework, whose long-standing involvement with web search outcomes has led them to share their insight. The web-content audiences and the website's competitors implements the techniques analyze the keywords that their target audiences will use and targets the keywords that are competitive in the real world which aims to answer the general questions.

- a. What contributes to search engine ranking.
- b. What can web content creators and webmasters do on their website and the web in general to make their content in their sites easier to find by audiences using search engine.

### 3.1 Three Classes of Participants

This section draws on the literature to explain how search engine rankings are directly and indirectly shaped by the three classes of interdependent participants introduced in the process that described in the process:

- a. Search Engine Companies and Programmers.
- b. Webmasters and SEO Practitioners.
- c. Search Engine Users.

These classes of participants can be clearly mentioned as who involves in search engine optimization processes.

#### 3.1.1 Search Engine Companies and Programmers

Searchers using more than one search engine will likely have noticed that for a given query, the competing SERPs tend to show different rankings, and indeed often show different sites entirely, an observation confirmed by researchers. Each search engine company has wittingly or unwittingly programmed its own biases. One study observed that in comparison with their competitors, search engines tended to favor sites and services that their own companies owned, with Google's SERPs listing Google-owned YouTube more often than its competitors did, and Yahoo listing Yahoo Answers more often. Another study found that Google tended to return more commercial results among its top ten than did its erstwhile competitors like Yahoo, and MSN.

#### 3.1.2 Webmasters and SEO Practitioners

Complicating the efforts of search engines to serve what searchers are looking for is the work of webmasters not all of whom have the motivation, time, communication skills, or technical skills to optimally communicate their web content to search engines and of wily SEO practitioners, who are well motivated to devote their time, communication, and technical

skills to achieving rankings higher than their site content might otherwise merit. Perhaps revealingly, SERP rankings for commercially oriented queries the kind of queries for which companies would hire SEO specialists have been found to be more volatile over time than rankings for queries without a direct commercial intent.

#### 3.1.3 Search Engine Users

Finally, web users' search engine preferences and behaviors, in turn, influence web marketers' SEO strategies and search engines' rankings. For years, Web users have been favoring Google by wide margins over such competitors as Yahoo and, more recently, Bing. As well, as a result of a 2009 agreement between Yahoo and Microsoft, Yahoo's search results are now served by the Bing method. Accordingly, SEO industry professionals, following their users, optimize their sites primarily for Google's method and secondarily for Microsoft's Bing and others, and so this system to most other general web search engines. It also allows users to search the queries in the own format in which it enables them to ask or find answer question about the words that are used in the webpage. And mainly the user can track the keyword for the corresponding queries that are searched in the search engine. The users can able to search the information in the form of keywords that can be retrieved from the database.

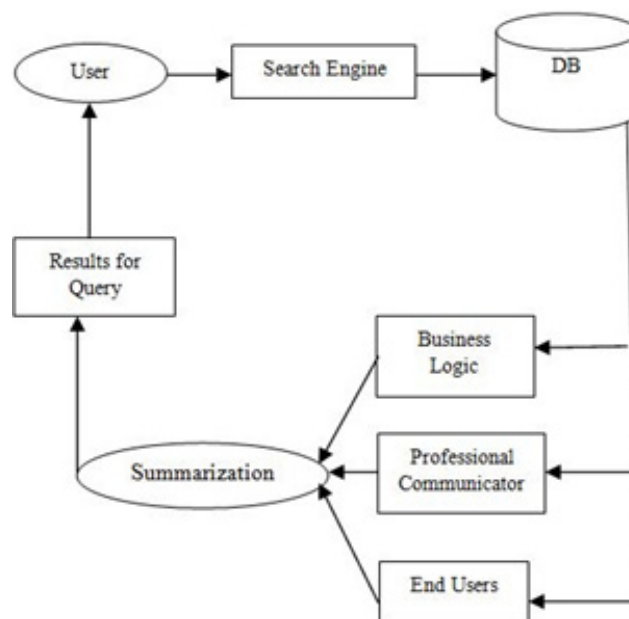


Figure 1: System Architecture

The systems architect establishes the basic structure of the system, defining the essential core design features and elements that provide the framework. The systems architect provides the architects view of the users' vision. In the below diagram user first search the query and then it process from various blocks to finalize the results, so that he will get visibility of website which satisfies. The Structural representation of this framework can be represented using the modular activities that are implemented in the optimization procedure. It also provides the whole structural view of the end users vision. Some of the following decisions should be made in order to optimize the search engine for the websites.

- 1) Analyze the keywords that their target audiences will use.
- 2) Target the long tail keywords that are competitive.
- 3) Name the web domains, directories and the files based on the key words that are used in the web pages.
- 4) Prioritize the keywords in the web page titles.
- 5) Earn the inbound links from other websites.
- 6) Develop a community following in the social media in need to update on the changes in the keywords that are maintained in the web pages.

To plan best and manage the long-term commitment, SEO practitioners typically recommend implementing an SEO strategy in the stages of the same general sequence as the process present. In this optimization process, by applying three key lessons the professional communicators can make easier for the users to find their desired website and its contents through the search engine, where it process the queries from the databases that contains the relevant information according to the keywords that are listed on their websites.

The top most activities have to be ensured while optimizing the search engine with involving the keywords on the website to improve the results. The processes can be listed as;

- 1) Consider the web content’s audiences and website’s competition when analyzing the keywords.
- 2) Insert the keywords into the web text that will appear on the search engine result pages.
- 3) Involve the web content and the websites with other web content creators to see the improvement in the rankings.

#### 4. Framework Modules

Most access control frameworks determine if a request to the system is permitted based on a set of static predefined rules. Access control frameworks have been extended to address complex workflows by accounting for team’s tasks and contextual cues. These frameworks assume the system is static and can be clearly modeled, but the dynamic nature of modern CIS makes it difficult to apply these principles in such a setting. Additionally, collaborative systems require a much broader definition of context, and the nature of collaboration cannot always be easily partitioned into tasks associated with usage counts.

**Query Processing:** Here query processing is a first module for search engine optimization technique. User gives the query in search engine in the string format. After getting the result are searched and retrieved from the database and give to the particular result for the user asked query and gives our website visibility in high while user searching.

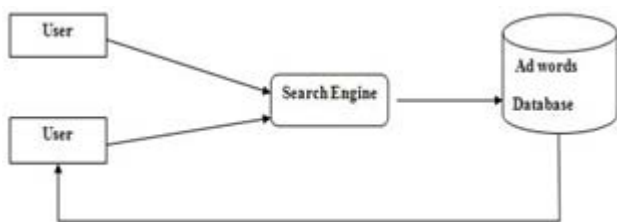


Figure 2: Query Processing

**Semantic-Role Analyzer:** In the semantic role analyzer module getting the query from the user and splitting into semantic role wise, taking into the database and matching the keyword, and also pre processing is used for splitting the keyword and matching the particular keyword and giving the result for the particular user for top result.

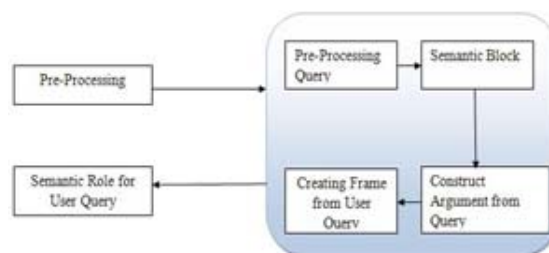


Figure 3: Semantic-role Analyzer

**Keyword Content Improver:** Here content improver tracks user query and analyze the particular query and conveys the website developer for the particular query, and ask to improve the keywords used in the website. So, when the user searches a query they get high priority to websites, contains high number keywords present in them. Mainly content improver gives advice to website creator to improve their website to giving high amount of keywords.

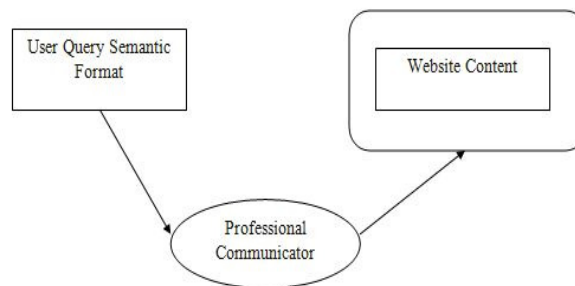


Figure 4: Keyword Content Improver

**Top Ranking:** The top ranking for the website based on user visits and end user gives feedback for particular website. Keyword based giving search, search engine provide high priority for the end user, based on the professional communicator give advice to website creators and then top ranking for the particular website.

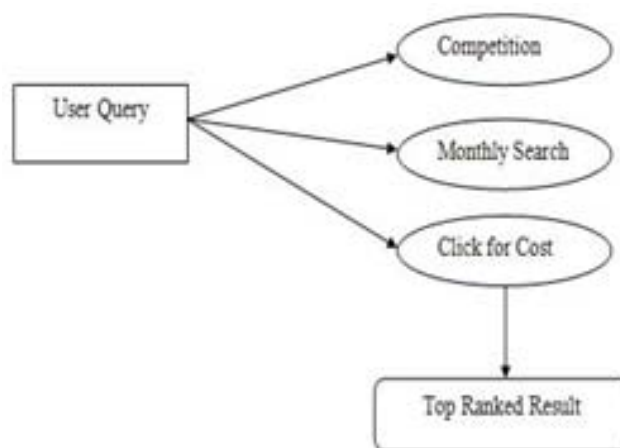


Figure 5: Top Ranking



**Summarization Block:** Summarization is an important to analyze and giving for user searching result. We getting information from the business people, Professional Communicators, and End Users each thing summarization taking from all output, and giving result for user query. User gets the high and quality website for searching the keyword.

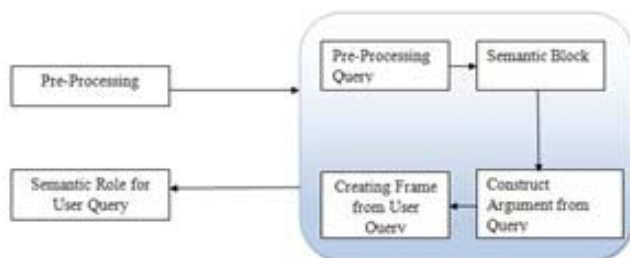


Figure 6: Summarization Block

## 5. Future Works

Accordingly, some content creators orient their sites not just too directly attracting and maintaining the attention of their prospective human audiences but to accommodating and even taking advantage of search engines and their ranking rules, to the extent that orienting a site to search engines has become a professional specialty: search engine optimization (SEO).

## 6. Conclusion

To ensure that their audiences can continue to easily find their work through search engines, web developers should expect to keep up to date with the evolving search algorithms, SEO practices, their website's traffic, and their competition. Along with some of the sources cited in this tutorial, web developers can keep up to date by regularly drawing on the dynamic SEO resources featured in an annotated list in online. In response, search engines conceal the competition's rules and frequently redefine them in order to prevent agonistic content creators and their SEO specialists from gaming in the system and thereby undermining search engines exclusive logistic roles. Search engine users of course hold the attention economy's key commodity, their own attention, and confer it not only among the sites of contending web content creators but also among search engines themselves, thereby compelling search engines to try to better accommodate users' interests.

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