

Seminar Report
On

Search Engine Optimisation

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Abstract

The internet technology has brought a revolutionary change in the field of technology and in the peoples life too, now the people can hardly imagine a life without the use of internet in their day to day life. Search Engine Optimization has millions of search results on web. SEO course is considered as the future course that is going to rule the web in dimension of getting visitors to a website or blog. Search engines use programs called spiders, or bots, to search the internet and document their findings as a list according to priority of web page and priority of content then spiders moves on to any pages that linked from the current page, this is how spiders find new pages on web. Important thing spiders or bots will know the beauty of web page by looking at the html code and structures it to make sense. Different types search engine are crawler-based search engine, human-powered directories and meta-search engines.

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Chapter 1

Introduction

A search engine is a long series and combination of codes which when activated, goes out and does three main things: Index, retrieve and rank. Those are the three major functions of a search engine. Nowadays, you don't necessarily have to submit your website to the search engines, they'll automatically come looking for you as they crawl the web. Crawling by the way is the term used when a search engine reads the codes of a website. Always keep in mind that all websites are made up of codes. What you see is only an end-product of those codes when read by an html browser.

Chapter 2

Search Engine

2.1 What is a search engine?

A search engine is a software system that is designed to search for information on the World Wide Web. The search results are generally presented in a line of results often referred to as search engine results pages (SERPs). The information may be a mix of web pages, images, and other types of files. Some search engines also mine data available in databases or open directories. Unlike web directories, which are maintained only by human editors, search engines also maintain real-time information by running an algorithm on a web crawl.

2.2 Types of Search Engine

The different types of search engines are as follows:

1. Crawler-based search engine
2. Human-powered directories
3. Meta-search engines

1. Crawler-based search engines: The crawler-based search engines are the search engines like Google, Alta vista, and All the web, these web-sites make the listings automatically by a soft-ware to crawl the web and then make a list of all the site that it has searched.

2. Human-power directories: The human powered directories are directories like yahoo directory, open directory and look smart, these depend on the human editors to make their listing.

3. Meta-search engine: The meta-search engines are the search engines like Dogpile and Metacrawler, these search engines send the user supplied keywords at the same time to many

individuals search engines for searching the re-quired theme.



Fig 2.1 Types of search engines

Chapter 3

Working Of A Search Engine

3.1 How Do Search Engines Work?

A search engine maintains the following pro-cesses in near real time and has three main func-tions:

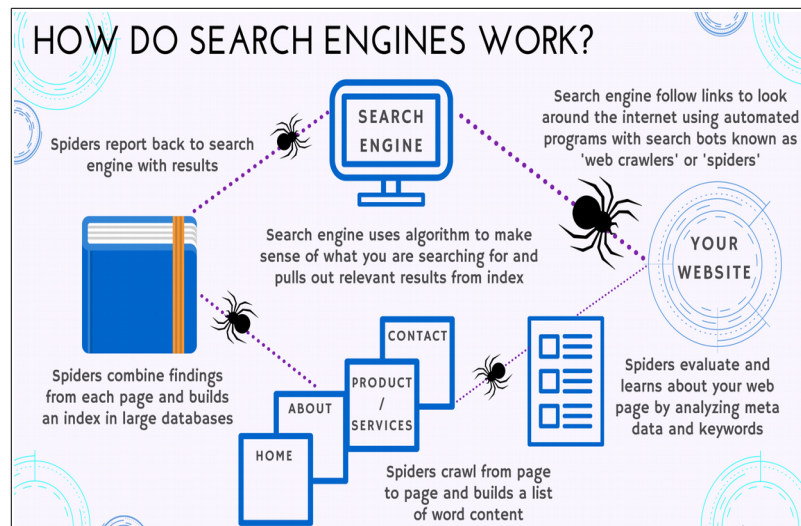


Fig 3.1 Working of a search engine

- 1.Crawling (to discover content)
- 2.Indexing (to track and store content)
- 3.Retrieval (to fetch relevant content when users query the search engine)

3.1.1 Crawling

Crawling is where it all begins: the acquisition of data about a website. This involves scanning sites and collecting details about each page: titles, images, keywords, other linked pages, etc. Different crawlers may also look for different details, like page layouts, where advertisements are placed, whether links are crammed in, etc. But how is a website crawled? An automated bot (called a spider) visits page after page as quickly as possible, using page links to find where to go next. Even in the earliest days, Googles spiders could read several hundred pages per second. Nowadays, its in the thousands. When a web crawler visits a page, it collects every link on the page and adds them to its list of

next pages to visit. It goes to the next page in its list, collects the links on that page, and repeats. Web crawlers also revisit past pages once in a while to see if any changes happened. This means any site that's linked from an indexed site will eventually be crawled.

3.1.2 Indexing

Indexing is the process of a search engine collecting, parsing and storing data for use by the search engine. The actual search engine index is the place where all the data the search engine has collected is stored. It is the search engine index that provides the results for search queries, and pages that are stored within the search engine index that appear on the search engine results page.

3.1.3 Retrieval

Retrieval is when the search engine processes your search query and returns the most rele-

vant pages that match your query. Most search engines differentiate themselves through their retrieval methods: they use different criteria to pick and choose which pages fit best with what you want to find. That's why search results vary between Google and Bing.

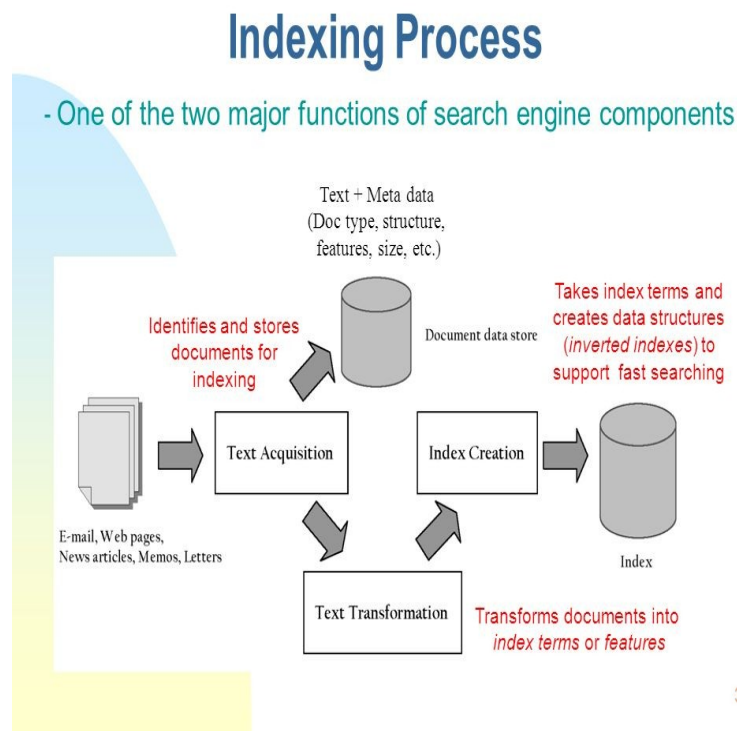


Fig 3.2 Indexing in a search engine

Chapter 4

Search Engine Optimisation

4.1 Introduction

SEO is the process of affecting the online visibility of a website or a web page in a web search engine's unpaid results often referred to as "natural", "organic", or "earned" results. In general, the earlier or higher ranked on the search results page, and more frequently a website appears in the search results list, the more visitors it will receive from the search engine's users.

SEO is a technique for:

1. Designing and developing a website to rank well in search engine results.
2. Improving the volume and quality of traffic to a website from search engines.

3.Improving rank by understanding how search algorithms work, and what human visitors might search.



Fig 4.1 SEO general view

4.2 SEO Types

SEO has three different types:

- 1.White Hat SEO
- 2.Black Hat SEO
- 3.Grey hat SEO

4.2.1 White Hat SEO

It is one of the most popular SEO technique and is one which utilizes methods and techniques to improve search engine rankings of a website which do not run afoul of search engine guidelines. Some of the techniques which white hat SEO makes use of include high quality content development, link acquisition campaigns supported by high quality content, website HTML optimization and restructuring and manual outreach and research. When you choose this method of SEO then you can expect a gradual yet steady but lasting growth in your rankings.

4.2.2 Black Hat SEO

Black hat SEO on the other hand is a type of a SEO technique which exploits the various weaknesses in the algorithms or search engines in order to get high rankings for websites. This type of a method of SEO is not in accordance with the SEO guidelines set by search engines and especially Google. The wholesomeness level is very low because of the fact that some of the black hat SEO techniques include keyword stuffing, link spam, hidden text, hidden link, cloaking. When you choose this method, you can expect unpredictable, quick but short lasting growth in ranking.

4.2.3 Grey hat SEO

This kind of a SEO is a kind of a SEO which is neither black nor white. This is a technique that does not fully use the black hat SEO and rather combines both. This is a transformation from black to white and from white to black. Whether it is due to pressure from the website

or company or to deliver better results, some SEO companies may practice Grey hat SEO to some extent. They may not cross the line to black hat SEO.

Chapter 5

Page And Rank Optimisation

5.1 Page Optimisation

Page optimization is the term used to describe a set of processes that aim in optimizing a website for search engines. Page optimisation is important not only for getting high quality visitors from search, but its also a way to improve the user-friendliness of your website and increase its credibility.

5.1.1 Off-Page SEO

Off page SEO refers to techniques that can be used to improve the position of a web site in the search engine results page (SERPs). Many people associate off-page SEO with link build-

ing but it is not only that. In general, off Page SEO has to do with promotion methods beyond website design for the purpose of ranking a website higher in the search results.



Fig 5.1 Off-page SEO

The most important Off-Page SEO tips are:

Search Engine Submission:

Search engines will eventually find your site on-line, but that can take a while. To speed ev-erything up, you should submit your website to the most popular search engines like Google, Yahoo, Bing, etc.

Article Submission :

If you write your articles yourself, then you can submit them to popular article directory sites like; Ezine, Go Articles, Now Public, etc. This can help drive traffic to your site.

Review:

Write reviews about others businesses or ask your friends/clients to write a review of your business in major business review sites like RateitAll, Shvoong, Kaboodle, Stylefeeder, etc. Photo Shar-
ing: If you have used any of your own photos or images on your site, then you can share then on many of the major photo sharing websites like Flickr, Picasa, Photo Bucket, etc. Other people

will be able to see them and comment on them, hopefully following a link to your site.

Answer Question :

You can actively participate in answering questions on sites like Yahoo Answers. By answering and asking relevant questions on your site niche, you help to build up your reputation as someone that is an expert in your chosen field. You can place a link to your website in the source section if necessary so that people can easily find your site.

Blog Directories:

something like yellow pages but each entry had a link pointing to a website.

Forum Signatures:

Many people were commenting on forums for the sole purpose of getting a link back to their website (they included the links in their signature).

Comment link:

The same concept as forum signatures where you would comment on some other website or blog in order to get a link back. Even worse, instead of using your real name you could use keywords so instead of writing comment.

Shared Content Directories:

Websites like hubpages and infobarrel allowed you to publish content and in return you could add a couple of links pointing to your websites.

Link exchange schemes:

Instead of trying to publish content you could get in touch with other webmasters and exchange links. In other words, I could link your website from mine and you could do the same. In some cases you could even do more complicated exchanges by doing a 3-way link: I link to your website from my website but you link to my website from a different website.

5.1.2 On-Page SEO

On Page SEO refers to settings you can apply on your website so that it is optimized for search engines. The most important On-Page SEO tips are having optimized titles and descriptions, proper URL structures, user friendly navigation such as breadcrumbs, user sitemaps and optimized internal links



Fig 5.2 On-page SEO

The most important On-Page SEO tips are:

Metatages and Description:

The Metatages and description of your site give search engines somewhat more knowledge into what truly matters to your page.

Image Name and ALT Tags:

If you utilize pictures on your site, you ought to consider befitting keywords for both the picture name and the alt tag. This aids search engines discover great pictures for their image-search for any specific keywords.

Internal Links:

Internal link building is not only the opposite of external links. You can influence web crawlers take in more about your site by internally con-necting to different pages on your site, via links within your own content.

Header Tags:

Generally, an SEO friendly blog entry uses three distinct levels of HTML header labels that help

break the content into different section and additionally let search engines find out about what really matters to each segment of a content. The labels encompass the post title there ought to just be one arrangement of tags for each page. The tags encompass subheadings on the page there can be numerous occasions of both. Utilizing header labels helps both site-visitors and web search engines separate your content.

5.1.3 Importance And Benefits

Why is Page Optimization important?

Search engines have been trying for decades to find a way to return the best results to the searcher. To achieve this, they take into account the on-site SEO factors, some other quality factors and off-page SEO.

A web site that is high quality and useful is more likely to have references (links) from other websites; it is more likely to have mentions on

social media (Facebook likes, tweets, Pins, +1s etc.) and it is more likely to be bookmarked and shared among communities of like-minded users.

What are the benefits of Page Optimisation to website owners?

A successful page optimisation SEO strategy will generate the following benefits to website owners:

1. Increase in rankings:

The website will rank higher in the SERPs and this also means more traffic.

2. Increase in PageRank:

Page rank is a number between 0 and 10 which indicates the importance of a website in the eyes of Google. It is the system invented by Larry Page and Sergey Brin (Google founders) and one of the reasons that Google was so success-ful in showing the most relevant results to the searcher. Page rank today is only one out of the 250 factors that Google is using to rank web-sites.

3. More exposure:

Higher rankings also means greater exposure because when a website ranks in the top positions: it gets more links, more visits and more social media mentions. Its like a never ending sequence of events where one thing leads to an-other and then to another etc.

4. Link Building:

Link building is the most popular and effective page optimisation SEO method. Basically by building external links to your website, you are trying to gather as many votes as you can, so that you can bypass your competitors and rank higher.

Chapter 6

Conclusion

In conclusion, Search Engine Optimization is constantly changing as new aspects come into play, and others go. Users are progressively more using mobiles to access the web and it is known to soon outpace web access through personal computers. Ranking for the key terms in a specific industry on mobile devices, allows a business to take control of users who are continuously searching on the go. Mobile search is the future of SEO and Google is paying attention to websites that are mobile friendly.

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