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A PATH FOR HORIZING YOUR INNOVATIVE WORK

A REVIEW ON SEARCH ENGINE OPTIMIZATION

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Abstract: This article introduces and discusses the concept of search engine optimization (SEO). SEO is a technique that comes under internet marketing and plays a vital role in making sure that the site is a success and it gets maximum number of views. SEO is a technique to take the web pages in top search results provided by search engines. Websites need to be optimized in order to attract audience and to sell products and services. This paper will give an overview of search engine optimization, its elements and tools used in the search engine optimization.

Keywords: Search Engine Optimization, Onpage Optimization, Offpage Optimization.

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INTRODUCTION

In today's life it is mostly difficult to work without the Internet, both for the users and advertisers. Internet is an interactive media, which allow an easy flow of information. Web pages are the best way of communication with the users. Users use search engines for most of their queries but they only prefer the results provided on first page and only 4-5% of users go on next pages, but if the page is on 3-4th or 5th page then the business which can be generated from that page has a less amount to return. If an organization aims to come on the first page or first row when user enter the keyword in the search engines then search engine marketing (SEM) techniques must use and one of the best is search engine optimization (SEO).

Search Engine Optimization refers to the collection of techniques and practices that allow a site to get more traffic from search engines. It refers to provide a website's link a higher ranking each time a when user searches any keyword. More a website is optimized better will be the chances of achieving a good traffic level, which in turn proves to be commercially beneficial for the site. So it can be said that a optimization is must for the sound economic health of any web site and its developers. Search Engine Optimization is the process of making web pages easy to find and categorize. From a webmaster perspective, SEO also involves to make those pages rank high for specific keywords.

SEO involves creating or modifying a Web site in a way that makes it easier for search engines to index. Webmasters usually do not need to worry about whether their site is indexed by a search engine, as long as any Web page is linked to an already indexed page, it will be crawled and indexed by search engines at some point.

Common Search Engine Principles

To understand SEO, it is needed to be aware of the architecture of search engines. They all contain the following main components:

Spider: A browser (like program that downloads web pages

Crawler: A program that automatically follows all of the links on each web page.

Indexer: A program that analyzes web pages downloaded by the spider and the crawler.

Database: Storage for downloaded and processed pages.

Results engine: Extracts search results from the database.

Web server: A server that is responsible for interaction between the user and other search engine components.

There are three classes of participants shaping search rankings.

- Search engine companies and programmers
- Webmasters and SEO practitioners
- Search engine users.

DESCRIPTION

Search engine optimization

It is the way of increasing the visibility of a page by natural means i.e., unpaid search results. In this process the website undergoes redevelopment to make our search terms effectively communicate with major search engines. This work is done by SEO (Search engine optimizers). They may require image search, academic search, local search, video search.



Optimizing a page involves editing contents & HTML codes in order to increase its relevance to specific keywords and proper indexing in search engines. The contents and coding are edited corresponding to the indexing pattern of the search engines which are done by a crawler named Googlebot in Google. It is the most powerful way to reach the customer as we meet them when they are in need.

Page Rank

It is an algorithm used by Google which assigns numerical weight to the URL of web documents to measure its relevance. The numerical weight that it assigns to any given element E is referred to as the PageRank of E and denoted by $PR(E)$.

Onpage optimization

It is the first step which every webmaster should concentrate, deals with the changes done in page in order to improve visibility and rank. On Page Optimization is optimizing your website in a way that it can rank better in search engines and improve visitor satisfaction. This optimization technique depends on nature and business of our website. It is advisable to update the contents of our website and optimize the content each time as these factors are directly related to the content and structure of the website. Ex. Modifying Title, Body text, Hyperlinks, URL. If proper Onpage optimization is done, results in drastic increase in the rank and readability of the website.

Offpage optimization

This is the work which is done apart from the website to improve the visibility & ranking of a page. Off page search engine optimization is supposedly the complement of Onpage Optimization. It mainly concentrates in creating backlinks & social media marketing. It is very novel practice to have links from a webpage which has good rank and visibility.

HOW TO OPTIMIZE A WEBSITE

An SEO strategy is made up of three major factors:

1. Keyword Research (Choosing the keywords potential clients are searching)
2. On-site Factors (Changes made to the actual website)
3. Off-site Factors (Efforts made to get other sites to link to our site and talk about us).

There are following steps which can help to optimize a website, i.e. increase the traffic:

1. Firstly, we have to create an approximate list of keywords and check their competition rate. Then evaluate chances against the competition and select words that are popular enough and have average competition rate.
2. Next, start composing text for site. Quality and attractiveness of the text is the most important attribute of a page. If the textual content is good, it will be easier to get inbound links and visitors.
3. In this step, we should start using the HTML Analyzer module to create the necessary keyword density. Each page is optimized for its own keyword phrase.
4. Then the site is submitted to various directories.
5. After these initial steps are completed, we should wait and check search engine indexation to make sure that various search engines is processing the site.
6. In this step, we can begin to check the positions of the site for our keywords. These positions will give some useful information to begin fine-tuning SEO work.
7. Then use the Link Popularity Checker module to track and work on increasing the link popularity.
8. Use the Log Analyzer module to analyze the number of visitors and work on increasing it. We should periodically repeat 6th & 8th steps.

SEO ELEMENTS:

Search engine optimization has many elements (over 200 hundred), some of the elements analyzed in this paper are:

☐ Clean URL

☐ Meta description

☐ Sitemap

☐ Title tag

1. Clean URL

Search engines are much more at ease with URLs that don't contain long query strings. URL like <http://www.example.com/4/basic.html> can be indexed much easier, whereas its dynamic form, <http://www.example.com/cgi-bin/gen.pl?id=4.can> confuse search engines and cause them to miss possibly important information contained in the URL, and thus preventing you from getting the expected ranking. With clean URLs, the search engines can distinguish folder names and can establish real links to keywords.

2. Meta description

Meta descriptions are HTML attributes that provide explanation of the contents of web pages. They are commonly used by search engines on search result pages to display preview snippets for a given page. There are three important ways that Meta descriptions are being used

☐ They can be used as the description (or part of the description) of the page if it shows up in the search results.

☐ They are often used as part of the descriptive information for pages when Google shows "extended sitelinks" for the site.

☐ They are often used as the default description in social media marketing links.

3. Sitemap

Sitemaps are map of a web site. Sitemaps make navigating websites easier. Sitemaps offer the opportunity to inform search engines immediately about any changes on your site. Sitemaps

can be used on websites of any size however if a website has more than 16 pages, implementing a sitemap becomes essential.

4. Title tag

Title tag is one of the most important elements in search engine optimization. It describes content of a web page. Title tag appears in three key places:

- ☐ Browser - Title Tags show up at the top of a browser and in applicable tabs.
- ☐ Search Result Pages - Title tags also show up in search engine results.
- ☐ External Websites - External websites will use the title of a web page as its link anchor text.

TOOLS USED

Google webmaster tool: It allows webmasters to check indexing status and optimize visibility of their websites.

Meta Tag analyzer tool: See how search engine robots analyze your or your competitor's website, receive tips on how to improve your Meta Tags

Link popularity check tool: This tool shows how many other sites are linking to the site

Sitemap submission tool: This tool is helpful in submitting sitemap to various search engines.

Keyword Traffic estimator: This tool shows us approximately how many daily searches our keywords would get.

SEO dictionary: It is the list of SEO related keywords with their definitions.

Page rank checker: This tool is used to check the rank of the page so that further actions can be taken to improve the rank of a page.

CONCLUSION

Search engine optimization process is a vital part of the broad and vast procedure of internet marketing. The process of internet marketing is incomplete without proper and

ample web site optimization. The main goal of any website is to attain a certain maximum level of user traffic and this is not possible unless and until that particular website has good visibility which is achieved only with the search engine optimization. This paper provides the strategy to optimize a website so that to improve its rank in search engine and thus to attain maximum of internet customers.

REFERENCES

1. John B. Killoran, "How to Use Search Engine Optimization Techniques to Increase Website Visibility", IEEE transactions on professional communication, vol. 56, no. 1, March 2013
2. Vinit Kumar Gunjan, Pooja, Monika Kumari, Dr Amit Kumar, Dr. Allam Apparao, "Search engine optimization with Google", IJCSI International Journal of Computer Science Issues, (ISSN: 1694-0814) Vol. 9, Issue 1, No 3, January 2012.
3. ReynerD'souza, Apurva Kulkarni, and Imran Ali Mirza, "Automatic Link Generation for Search Engine Optimization", International Journal of Information and Education Technology, Vol. 2, No. 4, August 2012.
4. Sachin Gupta, Ankit Aggarwal, "Study of Search Engine Optimization", IJREAS volume 2, issue 2 (February 2012)