

DISCREPANT COGNITION OF SEARCH ENGINE OPTIMIZATION

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ABSTRACT

The fast growth of network information, using search engines to search information has developed into an important part of one's life every day. In recent years, there is a research focus on the search engine optimization technologies used to rapidly publish business information onto the search engines by which higher rankings can be reserved. Each search engine uses unique algorithm to execute the queries in their perspective search engines. This paper establishes a comparative study on four different search engines which tries to optimize itself by individual unique algorithms. It also shows the pros and cons of the previous algorithm and refinement in the latest algorithm. The vivid search engines which are discussed are: GOOGLE, BING, YAHOO and ASK.

KEYWORDS: Click-Through-Rate, Expert-Rank, Humming-Bird Algorithm, Search Engine Optimization, Search Direct Algorithm, Yahoo-Slurp.

I. INTRODUCTION

SEO (Search Engine Optimization) is the development of subsequent the principle of the search engine such as site structure, webpage language and interaction diplomatic strategies for the balanced planning to improve the site search performance in the search engine and increasing the opportunity of customer discovery and access to the website.

SEO is a scientific development idea and methodology, which develops beside with the development of search engine, and promotes the development of search engines at the same time. Organic SEO (search engine optimization) is the phrase used to describe processes to obtain a natural placement on organic search engine results pages (SERPs). Search engine optimization is a methodology of strategies, techniques and tactics used to increase the amount of visitors to a website by obtaining a high-ranking placement in the search results page of a search engine (SERP) -- including Google, Bing, Yahoo and other search engines. SEO helps to ensure that a site is accessible to a search engine and improves the chances that the site will be found by the search engine. It is common practice for Internet users to not click through pages and pages of search results, so where a site ranks in a search is essential for directing more traffic toward the site. The higher a website naturally ranks in organic results of a search, the greater the chance that site will be visited by a user.



Fig.1 Search Engine Optimization

SEO is typically a set of "white hat" best practices that webmasters and Web content producers follow to help them achieve a better ranking in search engine results. In search engine optimization (SEO) terminology, White Hat SEO refers to the usage of SEO strategies, techniques and tactics that focus on a human audience opposed to search engines and completely follows search engine rules and policies. For example, a Web site that is SEO optimized, yet focuses on relevancy and organic ranking is considered to be optimized using White Hat SEO practices. Some examples of White Hat SEO techniques include using keywords and keyword analysis, back linking, link building to improve link popularity, and writing content for human readers White Hat SEO is more frequently used by those who intend to make a long-term investment on their Web site. Also called Ethical SEO.



Fig .2 White Hat SEO

II. DIVERSE SEARCH ENGINES

There are a lot of search engines which facilitate in serving users' needs and wants. A few of them is discussed with their mechanism of algorithm used and the optimization.

Google Search Engine

Google Search (or Google Web Search) is a web search engine owned by Google Inc. Google Search is the most-used search engine on the World Wide Web, handling more than three billion searches each day. The main purpose of Google Search is to hunt for text in publicly accessible documents offered by web servers, as opposed to other data, such as with Google Image Search. Google Search was originally developed by Larry Page and Sergey Brin in 1997. Google Search provides at least 22 special features beyond the original word-search capability. Google's rise to success was in large part due to a patented algorithm called PageRank that helps rank web pages that match a given search string.[14] When Google was a Stanford research project, it was nicknamed BackRub because the technology checks backlinks to determine a site's importance.

Google optimization

Because Google is the most popular search engine, many webmasters have become eager to influence their website's Google rankings. An industry of consultants has arisen to help websites increase their rankings on Google and on other search engines. This field, called search engine optimization, attempts to discern patterns in search engine listings, and then develop a methodology for improving rankings to draw more searchers to their client's sites. Search engine optimization encompasses both "on page" factors and Off Page Optimization factors (like anchor text and Page Rank).

Google's Secret of Optimization

The latest algorithm used by Google is Humming-bird algorithm. The Hummingbird is an entirely new algorithm. It approaches search engine queries in a brand new and intelligent way utilizing new technology combined with older features of the existing algorithms. It is named for the speed and accuracy of the tiny bird.

Hummingbird is a People Pleaser

If anyone has been paying attention, nearly every article on the Internet about Hummingbird says nothing about Google trying to please websites. Google is trying to get it right for people who type in questions looking for specific answers. If Google has the answer, why would anyone look any further?

This seems almost like a slap in the face to websites that spend good money – and lots of it – on genuine web marketing trying to get traffic. If we have to compete with other websites for traffic, that is fine. Bring on your best stuff because I am bringing mine. However, if we have to compete with a giant like Google, what chance do we stand, and why should we even bother to try?

Optimizing for the Hummingbird

Google stated that the release of its Hummingbird could potentially go unnoticed. It also stated that SEO would remain unaffected. For the most part, this is true. Everything we were doing to optimize our websites should continue to be our focus with the exception of long tail keyword optimization.

It is a brave new world in internet marketing and Google is leading the charge slowly but surely toward a better way to search for what we need. If you have a website, now is the time to adapt and prepare your websites and blogs for whatever may be coming next. It is anyone's guess what the future holds. It may well be that we will have a better understanding of where Google is leading us upon the release of Hummingbird's rolling upgrades. Until then, content and long tail keywords are the order of the day.

Era of Google's algorithm

Prior to Page-layout algorithm, Google had implemented an algorithm called Google Penguin which was announced on 4th October, 2013. Google launched the Penguin Update in April 2012 to better catch sites deemed to be spamming its search results, in particular those doing so by buying links or obtaining them through link networks designed primarily to boost Google rankings. When a new Penguin Update is released, sites that have taken action to remove bad links and also to extract the results as the maximized way. The SEO is an adaptive technology and efficient to the network world.

Yahoo Search Engine

Yahoo Search is a web search engine, owned by Yahoo Inc., and was as of January 2014 the second largest search directory on the web by query volume, at 5.45%, after its competitor Google at 71.36%. Yahoo Search, originally referred to as Yahoo provided Search interface, would send queries to a searchable index of pages supplemented with its directory of sites. The results were presented to the user under the Yahoo brand.

Yahoo Optimization

The Yahoo search engine is facilitated by an algorithm called Search Direct. About 50 percent of the top queries on the web there is a "definite answer" and that Yahoo will strive to provide that within Search Direct. In other contexts it will provide a range of choices to users. Yahoo has an algorithm distinct from Microsoft's organic search algorithm.

Era of Yahoo's algorithm

In 2002, they bought Inktomi, a "behind the scenes" or OEM search engine provider, whose results are shown on other companies' websites and powered Yahoo in its earlier days. In 2003, they purchased Overture Services, Inc., which owned the AlltheWeb and AltaVista search engines.

Initially, even though Yahoo owned multiple search engines, they didn't use them on the main yahoo.com website, but kept using Google's search engine for its results.

Starting in 2003, Yahoo Search became its own web crawler-based search engine, with a reinvented crawler called *Yahoo Slurp*. Yahoo Search combined the capabilities of all the search engine companies they had acquired, with its existing research, and put them into a single search engine. The new search engine results were included in all of Yahoo's sites that had a web search function. Yahoo also started to sell the search engine results to other companies, to show on their own web sites. Their relationship with Google was terminated at that time, with the former partners becoming each other's main competitors.

In October 2007, Yahoo Search was updated with a more modern appearance in line with the redesigned Yahoo home page. In addition, Search Assist was added; which provides real-time query suggestions and related concepts as they are typed.

In July 2008, Yahoo Search announced the introduction of a new service called "Build Your Own Search Service," or BOSS. This service opens the doors for developers to use Yahoo's system for indexing information and images and create their own custom search engine.

In July 2009, Yahoo signed a deal with Microsoft, the result of which was that Yahoo Search would be powered by Bing. This is now in effect.

Bing Search Engine

Bing (known previously as Live Search, Windows Live Search, and MSN Search) is a web search engine (advertised as a "decision engine") from Microsoft. Bing was unveiled by Microsoft CEO Steve Ballmer on May 28, 2009. Notable changes include the listing of search suggestions while queries are entered and a list of related searches (called "Explore pane") based on semantic technology from Powerset, which Microsoft purchased in 2008. It uses the concept of click through rate. Click-through rate (CTR) is a way of measuring the success of an online advertising campaign for a particular website as well as the effectiveness of an email campaign by the number of users that clicked on a specific link.

Which Factors Make a Site Rank Well With Bing:

Bing is hardly the first time when there is no agreement in the SEO community about the intricacies of the algorithm but if we can summarize, here are some factors, which are (or at least are strongly believed to be) of importance when Bing optimization is concerned:

Backlinks are of less importance: If you compare the first 10 results in Bing and Google, it is noticeable that all equal, the winners in Bing have less backlinks than the winners in Google. It is unclear if nofollow matters with Bing.

Inbound anchor text matters more: The quantity of quality inbound links might be of less importance for Bing but the anchor text certainly matters more. Actually, since anchor text is one of the measurements of the quality of inbound links, it isn't much different. Get quality anchor text and you will do well in both Bing and Google.

Link spamming won't do much for you on Bing: Since the quantity of backlinks seems to be of less importance to Bing, link spamming will be even less effective than with Google.

Onpage factors matter more than with Google: This is one of the most controversial points. Many SEO experts disagree but many also think that onpage factors matter more with Bing than with Google. Still, it has nothing to do with the 90s, when onpage factors were definitive.

Bing pays more attention to the authority of the site: If this is true, this is bad news for bloggers and small sites because it means that search results are distorted in favor of older sites and/or sites of authoritative organizations. Age of domain is also very important with Bing – even more than with Google.

PR matters less: When you perform a search for a competitive keyword and you see a couple of PR2 or even PR1 sites among the top 10 results, this might make you wonder. On Google this is hardly possible but on Bing it looks quite normal.

Fresh content matters less: Bing looks a bit conservative – or maybe it just can't index sites that quickly – but it seems that fresh content is not so vital as with Google. This is related to the age of domain specifics and as a result you will see ancient pages rank high (but these ancient pages are relevant to the search query). Bing is more Flash-friendly. Optimizing a Flash site for Google is a bit

of a SEO nightmare. It is too early to say but it looks like Bing is more Flash-friendly, which is good news to all sites where Flash is (still) heavily employed.

Ask Search Engine

Ask was originally created as Ask Jeeves. It was a natural query processing engine that used editors to match common search queries, and backfilled the search results via a meta-search engine that searched other popular engines. As the web scaled and other search technologies improved Ask Jeeves tried using other technologies, such as Direct Hit (which roughly based popularity on page views until it was spammed to death), and then in 2001 they acquired Teoma, which is the core search technology they still use today. In March of 2005 InterActive Corp. announced they were buying Ask Jeeves, and by March of 2006 they dumped Jeeves, changing the brand to Ask.

Change in algorithm:

Teoma, was an Internet search engine founded in 2000. Teoma was unique because of its link popularity algorithm. Unlike Google's PageRank, Teoma's technology (Subject-Specific Popularity) analyzed links in context to rank a web page's importance within its specific subject. For instance, a web page about "baseball" would rank higher if other web pages about "baseball" link to it. The Teoma algorithm is now referred to by Ask.com as the ExpertRank algorithm.

The ExpertRank algorithm:

Expert Rank is an expert-finding technique for online forums. The computer program uses an algorithm to evaluate the expertise of users within a specific knowledge community based on both the expert's authored documents and social status within the knowledge community.

The three objectives of the Expert Rank computer algorithm are to:

Apply the technique of evaluating document-based relevance as well as social importance to online knowledge communities which, compared with organizational or enterprise knowledge repositories, do not have a knowledge ontology, have low information quality, and are rich in social media.

Dynamically rank experts in the area specified by a search query. Use both document content and social network based characteristics as expertise indicators.

According to researchers on the project, Expert Rank "could be easily extended or modified to [already existing] data to help build expert databases or organizational memory systems that facilitate knowledge exchange among employees."

III. CONCLUSION

With the context of various search engines as reference, it is concluded that Google search engine is the most optimized and deals with the better algorithm to throw out nearing results expected by users. Google is the undisputed king of 'spartan searching'. While it doesn't offer all the shopping center features of Yahoo!, Google is fast, relevant, and the largest single catalogue of Web pages available today. The comparative study is elaborated in the table 1. The Google search engine is beneficial in Superior search relevancy, Advanced search features, including searching for videos and audio content as well as PDF, .doc and .ppt files; Easy and powerful search administration, Easy integration into web sites, Ad-free results, Ability to create advanced Custom Searches, Search indexing and relevancy feedback can be used to improve Google's central index, providing better search results from google.com, New features added to Google Custom Search will immediately be present in the Stanford Google Custom Search, Excellent quality for free.

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