

International Journal of Advanced Research in Computer and Communication Engineering Vol. 5, Issue 1, January 2016

Viability of Search Engine Optimization (SEO) Techniques

Harsha Sharma

Department of Computer Engineering, YMCA University of Science and Technology, Faridabad, Haryana, India

Abstract: Search Engine Optimization (SEO) Techniques often come under the scrutiny regarding their viability and ethical acceptance in the web community. Ever since internet marketing and web analytics became key components of marketing budget of a business, obtaining higher ranking in the Search Engine Result Pages (SERPs) has become highly competitive and consequently outsourced to professional firms. SEO is an evolving methodology which adapts itself to the latest algorithm used by the search engines. In this paper, we discuss the ever-changing SEO guidelines with reference to Google search engine. Current viability of old-school SEO techniques – keywords, backlinks and meta descriptions is examined with reference to regular search algorithm updates by Google. Black hat techniques targeting old-school SEO are also described.

Keywords: Keyword, backlinks, meta, google updates, black hat techniques.

INTRODUCTION

Search Engine Optimization (SEO) refers to optimizing a website for higher search rankings. According to latest comScore Report [1], Google dominates the search engine market with 63.9% search queries attributed to it. The dominance of Google in the search engine space ensues in subsequent change in the viable SEO strategies with every algorithm update.

SEO techniques can be divided into two categories: White Hat Techniques and Black Hat Techniques. White Hat includes SEO strategies which adhere to the guidelines provided by the search engines. They are user driven and intend to improve the user experience and consequently achieve higher rankings. Black Hat refers to the strategies which are search engine driven and are based around loopholes in the search algorithm.

From 2003, Google has updated its algorithm regularly and each of the update included complex metrics for ranking.

Fig 1[2] illustrates the history of Google updates since 2007.

| 2007 | | 2008 | 2009 | | 2010 | |
|--|---|--|--|---|---|--|
| MAY UNIVERSAL SEARCH Integration of traditional results with News, Video, Images, Local, etc. | JUNE BUFFY Update to single- word search results & other small changes. | APRIL DEWEY Unspecified update to the search index. | VINCE Big brands get a boost in search results. | DECEMBER REAL-TIME SEARCH Twitter feeds, Google News, & new content are integrated into real-time feed. | APRIL GOOGLE PLACE LBC rebranded "Places," is integrated mor closely with loc search results. | Crackdown on low-quality page e ranking for |
| | 2011 | | 2012 | | | |
| JUNE CAFFEINE Launch of new web indexing system, resulting in 50% fresher index. | FEBRUARY PANDA Crackdown on thin content, content farms, sites with high ad-to-content ratios. | NOVEMBER FRESHNESS UPDATE Greater emphasis put on recent content in search results. | JANUARY SEARCH+ YOUR WORLD Google+ data & user profiles included in search results, | FEBRUARY VENICE More localized results appear for broad queries. | APRIL PENGUIN Crackdown on Link schemes, keyword- stuffing, other black hat tactics. | MAY KNOWLEDGE GRAPH Relevant facts & images included alongside traditional results. |
| | 2013 | | 2014 | | | 2015 |
| SEPTEMBER EXACT MATCH Domain | AUGUST IN-DEPTH ARTICLES | AUGUST HUMMINGBIRD Google recognizes full-question searches, emphasizes high-quality content. | JULY PIGEON Change to how | AUGUST AUGUST HTTPS/SSL AUTHORSHIP UPDATE REMOVED | AUTHORSHIP | APRIL MOBILE-FRIENDLY Mobile-friendliness becomes a stronger ranking factor for mobile searches. (Haven't optimized your site for mobile yet? Do it now!) |
| Crackdown on low-quality sites that have search terms in their domain names. | New type of result, dedicated to more evergreen, long-form content. | | Google manages local search; closer ties established between Google's local & core algorithms. | Google starts giving preference to secure websites. Adding encryption to your site = a boost in rankings. | Authorship bylines disappear from Google's results pages. | |

Fig. 1 [2] History of Google updates

KEYWORD MATCHING

Keywords have been the main area of focus for SEO experts because matching keywords with the search query ensured a higher ranking in the search results.

This straightforward algorithm was thoroughly exploited by black hat techniques such as keyword stuffing, invisible text and doorway pages.

- **Keyword Stuffing** -Overusing a set of keywords in a webpage in order to increase its visibility in search results.
- **Invisible Text** -Filling the webpage with hidden text which is stuffed with keywords. Invisible text is hidden from the user but the search engines can read it. It is used to increase the search rankings without making the keywords visible to the user
- **Doorway Pages** –Doorway pages are used to boost the search listing of a website by redirecting the user to the webpage through another webpage (doorway). The doorway page contains hidden keywords which the search spider can detect.

A. Hummingbird Update (2013)

Google's Hummingbird algorithm focuses on the context of the question rather than the exact words in the search query. The search engine attempts to understand what the user is intending and modifies the query accordingly.

The semantic search technique employed by Hummingbird is an improvement over the exact match technique used earlier. With Hummingbird update the focus has shifted on long-tail keywords from exact and short tail keywords.

Long tail keywords are buyer specific. It targets the buyers who know exactly what they want. Let's take an examplekeyword 'camera' will generate more traffic than 'digital camera'. The user searching for 'camera' is looking for all sorts of camera but the user searching for 'digital camera' is a bit more specific about his query.



International Journal of Advanced Research in Computer and Communication Engineering Vol. 5, Issue 1, January 2016



Fig. 2[3] Comparison of Long Tail and Short Tail Keywords

The keyword 'sony digital camera' will generate less traffic than 'digital camera' but the user searching for 'sony digital camera' knows about the brand Sony signifies and has a higher chance of converting into actual sale for the company.

Apart from emphasizing the importance of long tail keywords, Hummingbird Update also underlined the significance of LSI (Latent Semantic Indexing). It is used to ensure that the content is relevant to the topic.LSI looks for synonyms related to the title of the page. For example if the title of the webpage is 'Pasta Recipe', the search engine would expect related words such as 'ingredients', 'method' and 'time'. The main purpose of LSI is avoid keyword stuffing and thin content.

BACKLINKS

Backlinks or Inbound links are hyperlinks directed towards a website. PageRank algorithm, developed by Larry Page and Sergey Brin, used the number of backlinks to a website as a numerical measure of its popularity. Backlinks were considered as a definitive measure of the relevance of a website in a topical community. But, blackhat techniques such as link farms, paid links and link exchanges defeated genuine websites in SERPs.

- Link Farms -Link farm is a website whose sole purpose is to increase the search visibility of another website by creating inbound links.
- Paid Links – Links which are not organic (characterized by irrelevant and poor quality backlinks). Paid links are detected by a sudden spike in the number of backlinks to a website.
- Reciprocal Linking -Reciprocal linking occurs when two webmasters agree to provide inbound links to each other's websites.
- Backlink Bombing –Backlink bombing refers to the presence of numerous links to the same website.

A. Penguin Update (2012)

Penguin update of Google algorithm emphasises the quality of backlinks over their quantity for search listings. A. Google announcement (2009) Google penalises the websites using backlinks from In 2009 Google announced that meta tags will no longer irrelevant and spammy sources to boost the number of be considered as a metric to rank search pages.

inbound links. Websites have been forced to remove or disavow low-quality backlinks in order to avoid ranking penalties.

Fig 3 [4]The number of backlinks to a website is not directly proportional to the organic searches i.e. visibility of the website. Quality of backlinks is equally important. Numerically less high quality backlinks will generate higher traffic than numerous low quality backlinks.







Fig. 4[5] Backlinks for sites penalized by Penguin

The effect of Penguin update on websites can be illustrated in Fig 4[5]. Websites relying on low quality and spammy backlinks were penalized and their rankings demoted.

META DESCRIPTION

Meta description refers to the snippet of text displayed below the website listing in a search result as shown in Fig. 5. If meta description is left blank then Google uses the content of the webpage to display the snippet in the search listings.



Fig. 5[6] Meta description in search results



International Journal of Advanced Research in Computer and Communication Engineering Vol. 5, Issue 1, January 2016

Though meta tags doesn't affect search listings but they have been proven to improve click through rates. Google allows 160 characters for writing the meta description and it is a good opportunity to tell the users what the webpage is about. Some other reasons for using meta descriptions despite their irrelevance in search rankings are [7]:

- **Keywords appear in bold** The well written meta description can encourage the user in clicking on the website.
- Social Networks use it Social networks such as Facebook and Google+ use the meta description whenever we share a page. If meta tag is not specified they use the first two lines of the text which is not always the best description.
- Social Bookmarking networks use it Social bookmarking networks such as Digg, BizSugar and My SEO Community use meta descriptions.

CONCLUSION

Traditional techniques such as keywords, meta description tags and backlinks are still relevant but their importance in SEO has been redefined. Regular Google updates have ensured the eradication of traditional black hat techniques such as keyword stuffing, doorway pages and invisible text. As the complexity of Google search algorithm increases, finding loopholes in it will become harder.Certain new SEO strategies have also started dominating the SEO market such as mobile friendliness and social networks.

Is SEO dying? Since Google launched its first update in 2013, the SEO community has been split over the efficacy of SEO strategies against ever-increasing complexity of Google search algorithms. While the potency of traditional blackhat SEO techniques has been nullified but the algorithm is far from watertight. In the coming years SEO strategies will continue to evolve wherein new strategies will surface and the relevance of traditional techniques will be reformulated.

REFERENCES

- [1] "ComScore Releases September 2015 U.S. Desktop Search Engine Rankings." *Http://www.comscore.com/*. N.p., 16 Oct. 2015. Web. 12 Dec. 2015.
- [2] Devaney, Erik. "A Visual History of Google Algorithm Updates [Infographic]." *Http://blog.hubspot.com/*. N.p., 12 May 2015. Web. 1 Dec. 2015.
- [3] VanDenabeele, Ryan. "Secrets of Using Long Tail Keywords." *Http://www.business2community.com/*. N.p., 12 Feb. 2015. Web. 10 Dec. 2015.
- [4] Joshi, Bhoomika. "Dimension Widening USE-CASE: Integrate Your Off-Page SEO Data Into Universal Analytics." *Http://www.tatvic.com/*. N.p., 11 June 2014. Web. 10 Dec. 2015
- [5] Cardinell, Alex. "Penguin 3.0: What Got Hurt, What Didn't, and 3 Things You Need to Know to Remain Relevant." N.p., 23 Oct. 2014. Web. 15 Dec. 2015
- [6] Patel, Neil. "The Ultimate Google Algorithm Cheat Sheet." The Ultimate Google Algorithm Cheat Sheet. N.p., 17 Feb. 2015. Web. 12 Dec. 2015.
- [7] Hines, Kristi, and Sean Work. "Meta Description Magic: Think Less about SEO & More about Click-Throughs." N.p., n.d. Web. 13 Dec. 2015.