

Search Engine Marketing: Key Factors in Design and Implementations

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ABSTRACT

This method is primarily focused on approaches & techniques to online promotion of electronic business models using special tools, including search engine Optimization, online advertisements & new methods of generating visitors to a website. Last decade observed the emergence of search engine marketing as one of the fastest growing industries. Search engine marketing has been categorized as: paid & non-paid. Paid marketing included Pay-per-Click (PPC), Survey Site, Focus Line & Paid Inclusion while non-paid marketing includes natural Search Engine Optimization & Link Popularity. This is still a relatively new market & most of the companies lack in the knowledge or the tools to manage their marketing strategies & maximize the return of their investments (ROI). It can be effectively applied to technical aspects in managing paid & non-paid search engine marketing required in the SOA (Service Oriented Architecture) dimension. In this paper following factors are analysed: online promotion techniques, search engine optimization, on-page optimization, paid & non paid search marketing & factors that affect SEO.

Keywords

Components; Search Engine Optimization; Pay per Click; Page Rank.

1. INTRODUCTION

Search Engine Optimization (SEO) is often considered the more technical part of Web marketing. Search Engine Optimization may be defined as the process of optimizing Web pages or whole sites in order to make them more search engine-friendly, thus getting higher positions in search results pages across a range of detailed combination of keywords or key-phrases entered by search engine users. Nothing is more important for improving company's web channel than making sure website is optimized for the search engines. Google has point out that its algorithms use more than 200 factors or signals in order to boost website position. In opposite of the positive ranking factors are negative factors & filters which are used by search engine[1],[7]. The major factors for good ranking positions in all the main search engines are:

1.1. On-Page Optimization

Matching web page content & key-phrases or keywords searched. The main factors to optimize web pages are keyword & key-phrases density,

keyword formatting, putting keywords in anchor text & the document meta-data (page title tags, Meta description tags,

Meta keyword tags etc). Each web page on some website should have different title tag, Meta tag description & Meta tag keywords.

The frequency of the key-phrase in the text of the web page is a key factor in determining the position for a key-phrase [7].

1.2. External Links (Backlinks, Backward Links) & Inbound Links

Google & other search engine counts link to a page from another website as vote for this page i.e. web pages & websites with more external links from other websites will be ranked more highly. The quality of external links is also very important factor, if they are from a website with a good reputation & with relevant content & key-phrases, then this is more valuable. Web focused companies should improve this aspect of search engine optimization & the process is named as external link building & internal link architecture. Web centered companies should always try to get links from web pages with the higher Page Rank (PR) i.e. with a PR rating at least four. Page Rank is a scale between 0 & 10 used by Google to determine the importance of websites according to the number & quality of inbound links & external links (backlinks). Incoming or external links to website should always come in natural textual form, rather than in graphic form (banner adds, images etc). Google & other search engines index or evaluate image links, but without textual links web companies won't increase website rank or popularity [8]. The Domain name maturity, Internal link structure, URL structure, Bounce rate etc. factors are very important for good ranking position in the search engine.

2. SEARCH ENGINE BACK-GROUND & DEFINITIONS

Search engine is an information retrieval tool that is used for the query of keywords to find relevant websites on the Internet. Figure 1 shows the different components of the search engine & how the components work together to deliver search results. The different components are:

Crawler – They regularly search the Internet to collect & categorize information about web pages. The result is stored in a central repository.

Page repository – It is storage place for complete web pages collected by crawlers. Web pages are then sent to the indexing module for processing.

Indexing module – Processing unit that extracts important information from web pages & provides the information in different indexes.

Indexes – Storage of the important information of each web page.

- Content index – It is based on keyword, title, & anchor text.
- Structured index – It is based on hyperlink structure.
- Special purpose indexes – It is based on images & PDF documents

Query module – It converts user’s natural language query to search query. The query module is used for different indexes to return a set of most related web pages.

Ranking module – Process the set of relevant web pages returned from Query module, & sort them in an order based on the sum of content score & popularity score (overall score) of the web page [12].

2.1 Non-Paid Search Engine Marketing Management

Popular search engines such as Google is based on their unique algorithms using the factors like quantity & quality of keywords & links to calculate its search result rankings. These components support six functionalities for managing non-paid advertisement. These functionalities are creating keyword list, analysing keyword density, analysing keyword proximity, validating outgoing links, calculating link popularity, & search for potential link partners. These functionalities are all necessary to promoting a website’s ranking in organic searches [10].

2.2 Paid Search Engine Marketing Management

Pay-Per-Click (PPC) advertising is the important form of paid search engine marketing. They are mainly attractive to advertisers because they only pay every time there is an action (click) occurred. Figure 2 outlines the flow of PPC advertising. PPC advertising is relatively easy to set up. It offers the flexibility for advertisers to choose their own budgets & decide the placements of their ads. There are currently three first tier search engines that provide Pay-Per-Click advertising: Google, Yahoo Overture, & MSN. The scope of this paper will only cover Google’s Search Engine due to its popularity & availability of web services APIs.

Pay-Per-Click advertising is a lot useful method than traditional advertising campaigns as seen on TV, radio, & other media. PPC advertising targets audiences who are most expected to be prospective customers. For example, when a user types in the word “Digital Camera” in the search engine, he or she is most likely allowing for purchasing a “Digital Camera”. Secondly, PPC ads are unobtrusive & easy to read. PPC ads for Google are placed to the top & right edge of the page. Each ad is short & concise, but closely relevant to the searched keywords. Also, the format of display of PPC advertisements does not necessarily promote competition [3]. The overall effectiveness of PPC ads is seen by a much higher conversion rate in PPC as compared to traditional ad

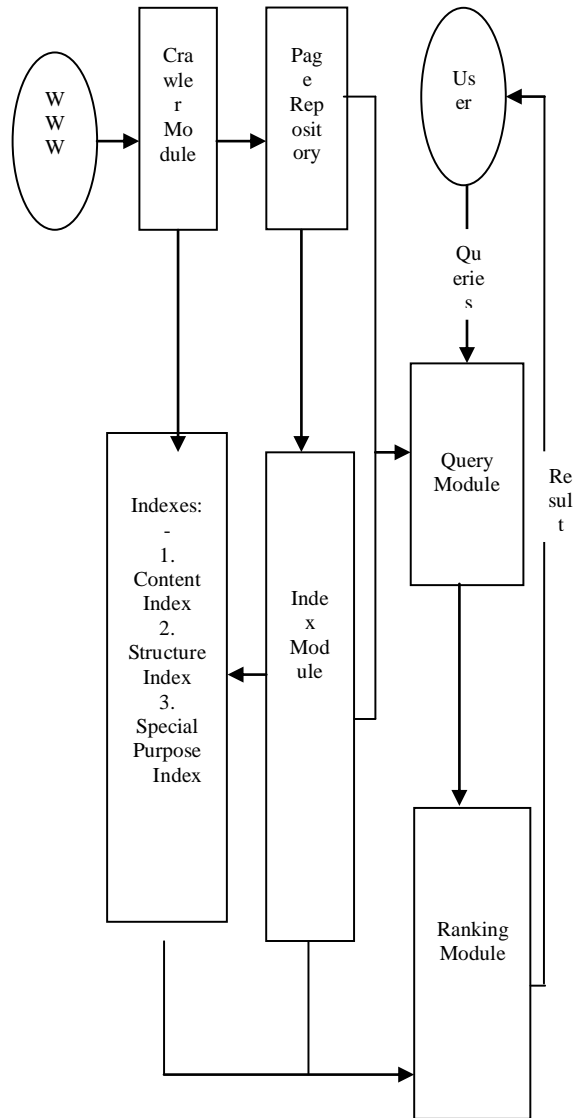


Figure 1: Search Engine Architecture

Campaigns. In addition, Google Search Engine captures a wide range of information that can help advertisers monitor & measure the success of their advertisements. This information can be used to generate the following statistics, which are supportive in analyzing web search engine marketing management data.

- Conversion ratio – no. of conversion actions / no. of clicks (i.e. conversion means converting a visitor to a customer).

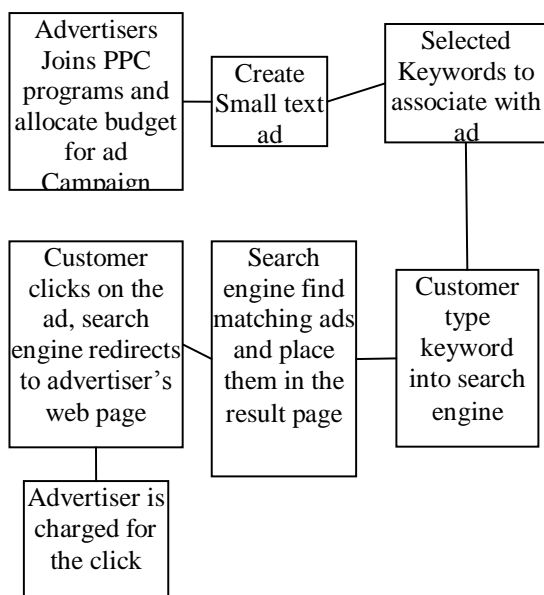


Figure2: Pay Per Click Process Flow

- Cost per sale – no. of clicks required to produce one sale * average click price.
- Click value – how much a click is worth paying for.
- Return of investment – net profit after subtracting PPC advertising costs.
- C. Web Metric Analysis - With the tools to manage both paid & non-paid search engine advertisements, the third component now focuses on web metrics that are used to monitor the effectiveness of the marketing campaigns. Search engines constantly update their algorithms to provide better search results. Therefore, it's imperative to consistently track the marketing results & make any important adjustments. The web search engine marketing metrics are presented in five different reports: keyword search engine ranking report, Alexa traffic ranking report, Google AdWords campaign performance report, return of investment report, & conversion rate report.

3. ADVANTAGES OF SEO

- Some of possible benefits of search engine include increase in motivated & interested customers to website which means increased sales for small business, club, school or association etc[1][6]. The crucial benefits of search engine optimization are:
- Improve competitive edge Increasing the likelihood of customer finding you online means they are less likely to find your competitors. The faster & easier your products & services can be found, the more likely you will keep your current customers & increase your online market share.
- Expand customer base & target audience - Search Engine Optimization makes your site easier to find & locate on the internet. It improves ranking, increases traffic & chances of making sales. By expanding your market online you are exposing your products & services to more motivated & interested customers.

3.1 Increase Your Return On Investment

Studies shows that customers are five times more likely to purchase your products & services after finding your web site through a Search Engine rather than online advertising. Better site ranking means an increase in customer visits significant to increase in sales opportunities. Search results get the highest conversion rates, turning your website visitors into clients.

3.2 Save Time & Money

Search Engine Optimization saves your time & money by utilizing free search engine services to promote your products & services. Once your web site is optimized & submitted it will going on to be crawled & indexed by search engines & is maintained with minimum effort. The more popular your site gets over time the higher your search engine ranking will become.

4. DISADVANTAGES OF SEO

In spite of the positive effects of SEO, low costs & targeted reach of online visitors, there are some disadvantages:

4.1 Too Many Website Visitors

Highly ranked websites obtain considerably more visitors than those which are invisible to the search engines. In our experience, increases in visitor numbers from 200% to a number of orders of magnitude are ordinary. Large websites with lots of images / Flash / downloads can find their hosting provision wants increasing [4]. This is usually only a problem with websites on very old host servers. Cost implications are least. It is possible that the amount of Spam received will also increase. This may be more of a nuisance.

4.2 Too Many Website Leads / Sales

This can be a major problem. There is a cost concerned in handling unwanted leads & Cornish Web Services think this is the major disadvantage of a highly search engine optimized website. With PPC (pay per click) advertising, if a business receives too may leads it is easy to pause the advertising & there will be an immediate drop in leads or sales. But it is not possible to quickly remove a highly ranked website from the search engines without causing long term damage to search engine ranking [6]. Sometimes ranking is intentionally allowed to slip of the website when sales enquiries are too high, but this is a very crude method & changes happen slowly.

5. MAIN FACTORS THAT AFFECT THE SEO

Ranking high on the search engines is the purpose of any search engine optimization efforts to get found. Local search, personalized search, live search, mobile search & location search ... the way that people search has been changed & the search engines have to match quality, relevant results with queries to boost user experience. Google continues to rule the search volume, while Bing is leisurely gaining some volume, particularly with the recent Bing-Yahoo marriage. It used to be optimizing for Google & you will rank & get establish but at this time with Bing stepping in & ranking pages utilizing different criteria, it is important to identify the SEO factors that affect page rank across both search engines [13]. While the algorithms remain under lock & key, some insight has been gained into how they rank & the factors that affect rankings.

5.1 External Link Anchor Text

Sites linking in utilizing keywords that match your content is one of the biggest factors in ranking for Bing & Google. Google seems to put more weight on the quality of the link where Bing likes to see

content matching content. We cannot control what terms will be used when our content is linked however content that remains on topic & industry relevant will not give the author many choices.

5.2 Title Tags with Keywords

Keywords in the title tag is a given however the placement seems to be a topic for discussion. The location of the keyword in the title tag does not seem to influence the rankings a whole lot, it is always best to have the keywords at the beginning to let readers & the spiders know what the page is about.

5.3 Recent/Fresh Content

New, fresh content weights highly when looking for rankings for popular queries. The search engines like new content as it gives a lot of authority to sites that are updated frequently however new content is not going to increase your rankings in the long term unless there are backlinks. It is always best to have new content especially with a blog as the content is searched more often providing more chances to rank even if the higher ranking is short lived.

5.4 XML Sitemap

Sitemaps do not affect the rankings by their mere existence but they do become a factor when the site is crawled. Site maps identify broken links that need to be fixed. Broken links not only stop the site from being crawled, they send a message to users that the site is not well maintained.

5.5 Niche Directories

Niche directories hone in on specific topics & not a one directory fits all industries. Niche directories have a lower number of links in each category as most companies register with the general directories. These are crawled the same way as the general directories so there is opportunity to rank from these directories. These are a really good way to increase your ranking locally.

5.6 Contextual Links

Contextual links via article marketing, squidoo's & Hub pages. The content is matched to the page with the importance being the content matching the topic.

5.7 No Follow Links

These are not a huge factor unless there is an overabundance. No follow links were created by Google to prevent sites from receiving links just to get links (ex: do follow links from blog comments). While they are indexed & quantified, they are not qualified. Too many no follow links will not necessarily lower your rankings especially if you have quality follow links however if there is not a balance between the follow-no follow links, the rankings will be lower.

5.8 Social Media Platforms/ Tools

Social media sites will not increase your rankings just for having a profile but the promotion & the links count.

6. CONCLUSION

Website managers & designers need to understand how SEO & other kind of search engine marketing are helping to making importance. To get better search engine position, company should integrate online & offline marketing techniques. For starting the implementation of search engine optimization, companies should examine a competitor in order to find related keywords to promote online. When a website is submitted to search engine listing, the search engine crawler will sort out & index the website based on

keywords in the contents. The key to search engine optimization is to make search engine friendly content that attracts visitors. Managing a successful search engine marketing campaign is a not easy task. Search engine marketing is a long term project that requires essential commitments to monitor the search engine behaviors & to make the right adjustments. So website designers should be smart about choosing the right keywords for website content. In the search engine natural listings, Search engine optimization should improve position of a website. Search engine position & value of web focused companies are dependent on how search engine optimization is implemented. Although every search engine has its own algorithm for website evaluation & ranking, fortunately there common factors in the match between search terms entered & occurrence of the words on the web page. To improve website position in natural search engine listings is very important to all online business models. On-page optimization is not enough for companies which are mainly focused on online business. The number & the quality of external links are still recognized as the major ranking factor. To understand the advantages & disadvantages of search engine marketing is the key to successful online business model. Internet marketing implementation & search engine marketing could have most important impacts on online company growth & innovation.

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