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Article in *International Journal of Ambient Computing and Intelligence* · October 2011

DOI: 10.4018/jaci.2011100105 · Source: DBLP

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# The Core Aspects of Search Engine Optimisation Necessary to Move up the Ranking

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## ABSTRACT

*Search engine optimization (SEO) is the process of improving the visibility, volume and quality of traffic to website or a web page in search engines via the natural search results. SEO can also target other areas of a search, including image search and local search. SEO is one of many different strategies used for marketing a website but SEO has been proven the most effective. An Internet marketing campaign may drive organic search results to websites or web pages but can be involved with paid advertising on search engines. All search engines have a unique way of ranking the importance of a website. Some search engines focus on the content while others review Meta tags to identify who and what a web site's business is. Most engines use a combination of Meta tags, content, link popularity, click popularity and longevity to determine a sites ranking. To make it even more complicated, they change their ranking policies frequently. This paper provides an overview of search engine optimisation strategies and pitfalls.*

**Keywords:** *Page Ranking, Search Engine Optimisation (SEO), Search Engines, Website Optimisation, Website Traffic*

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## 1. INTRODUCTION

Search Engine Optimisation (SEO) is the technique by which we can optimize a website in accordance with search engine requirements (Agarwal, 2009). It has transformed into a highly controlled science, crucial to every website marketing plan as it targets website traffic. When SEO started in late 1990's it was easily manipulated and abused but search engines developed algorithms that would remove any factors that help influence a websites ranking,

this solution was links, but with this development came problems and so Search Engines had to develop Link Building. This eventually stopped people manipulating their website rankings. The evolution of SEO happened with the introduction of Authority, this process was measuring the Authority of a website instead of the popularity of incoming links a website received. The search engine industry is always changing, and as industry standards and trends change so does the methods of SEO. Statistics (Porter, 2011) show how crucial SEO is to a website and how important it is to get ranked as high as possible.

DOI: 10.4018/jaci.2011100105

- 42% of search users click the top-ranking link
- 8% click the second-ranking link
- 62% of search users click a link on the first page of search results
- 23% of searches progress to the second page
- 80% of unsuccessful searches are followed with keyword refinement
- 41% of searches unsuccessful *after the first page* choose to refine their keyword
- 77% of search users choose organic over paid listing when searching
- 67% choose organic search when purchasing
- 40% of SEO campaigns aware of their ROI achieve returns in excess of 500%

It is important to understand that search engines read and like pure HTML. Major keywords should therefore be placed in the <HEAD> area by using Meta tags and repeated again in the <BODY> area of the page. It is also recommended to emphasize targeted key phrases by putting them in <h1> or <h2> tags plus the early paragraphs on the page. Another useful approach is to place information into all the <ALT> tags associated with each photo/picture. This will then tell search engine robots what the graphic is depicting. Time should be spent deliberating over the actual text surrounding a link (or links from other sites to your site). This is given special precedence by the engines and care should be taken to avoid 'wasting' keyword 'points' on senseless text such as 'Click here to...'.

Search engines do not like Flash, JavaScript, Frames, words in graphics and (in many cases) dynamically produced pages (like .asp) which include symbols such as ? in the URL. These types of pages make it difficult to achieve good rankings. Static HTML pages are much more preferable for search engine listings. Spamming the engines is attempting to 'fool' the ranking system into presenting a 'spammed' site higher than it deserves to be in the results. All engines however are aware of spamming methods and there is a risk of becoming banned should a site be discovered to be using covert methods. Tricks that can get a site banned in-

clude repeating words over and over in tiny or invisible text, filling Meta tags with irrelevant terms, using competitor's names or trademarks and any other method of keyword 'stuffing'. Although meta tags are often ignored, search engines are aware that so-called 'experts' fill them with words to attract surfers so many now check to see if the words listed are actually on the web page, if they are not then a site could be downgraded or banned for spamming (Evans, 2007).

Improved results can be obtained by having the title of each page state clearly in 8-12 words what the page is about, ensuring also that the first 20-30 words of text on the page explain what service or product is being promoted, and making sure that there is also clearly written information about the subject and other sites linking back. Each site that links to a page is an extra vote of confidence in that site, but care has to be taken to ensure that the links are from a reputable third party or related web-site/portal. FFA (Free for All link page) sites and 'link-farms' (which contain links that no-one is likely to ever click on) can have the opposite effect and is now a day deemed as another method of trying to fool the search engines. Attempts should be made to copy the potential keywords that each surfer will attempt in their web session. It may be easy to get a top ranking for a company name or an obscure product but how many people will actually come to the site as a result of the obscure products or typing in a company name? Yes, selection of the proper phrases for each market is crucial. Targeting the wrong keywords will be a wasted effort and possibly an expensive mistake if Google AdWords (<https://adwords.google.com>) mechanism was been used. However, selection of the correct keywords could see traffic growth and sales increases beyond a marketing manager's wildest dream.

A good practice is to check out what people are searching for. To help with this, there are a number of free and inexpensive tools available to help such as wordtracker.com or Google Analytics service. Some keywords are always going to be much more competitive than others.

*Figure 1. Code snippet of where meta tag is inserted*


```

<html>
<head>
<title>Brandon's Baseball Cards - Buy Cards, Baseball News, Car
<meta name="description" content="Brandon's Baseball Cards prov
</head>
<body>
...

```

For example, ranking well on the single word “Digital” will be much more difficult than ranking in the top 10 for “Digital Prints.” In general, single keywords usually return the least targeted leads. Targeting multi-word keyword phrases can result in achieving the highest quality leads. A recent study showed that only 34% of Web site owners knew to include the appropriate words on their Web page. Adding words in the keywords tag is not enough. Many search engines ignore the keyword tag therefore the correct words have to be on the page. It makes simply makes sense (Weitzner, 2008).

There are a number of commonly used techniques to influence a page’s position within search results. These include indexing (registering a site and its pages with a search engine and creating an XML site map), on-site optimization techniques (changes made to the HTML code on the site itself) and off-site optimization (which are activities that occur on other sites to draw traffic to a particular site) (Jones, 2008; Frydenberg & Miko, 2011; Curran, 2004; Malaga, 2010).

## 2. ON PAGE SEO

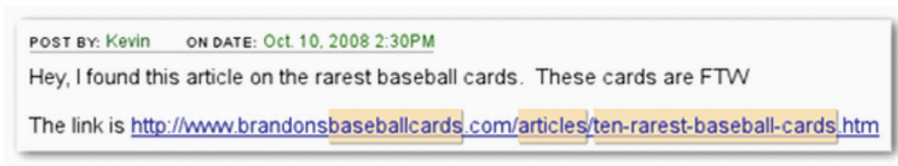
On Page SEO is involved with the areas of optimising the title, the keywords, the description and the content. The title is the most important aspect of On – Page SEO, the idea is to have a unique title for each page on the site, and if the titles on pages are similar they are treated as ‘duplicates’ by the search engines. To avoid using titles like ‘untitled’ or a title that isn’t relate to the pages’ content, the best way is to choose a title that communicates the content of

the page and allows the person to know exactly what’s on each that particular page. Also make sure that the title is short and isn’t too long as the search engine usually shows snippets in the search if this is the fact. The description Meta tag is another important element when it is getting indexed by the search engines (Figure 1). Sometimes search engines use this as a snippet of the page for the results on the search engine; this usually happens if it relates more to what the user query. Another way is if your site is listed within the Open Directory project, the Search Engine might use the description provided there. One can prevent them displaying ODP data by adding the following “<Meta name= “robots” content= “NOODP”>”.

Meta Tags should summarise the whole pages content, this should also avoid writing descriptions that are unrelated to the pages content. The description should only contain 160 characters this will increase the SEO. Meta tags should also be unique, the same as for each page of the site, using the same Meta Tag could make the search engine only show one instead of all of them and sending the rest to the supplement results index. Another factor is URLs structuring, this helps search engine crawl you website better and makes it look more appealing for people to link your content. User also use anchor text (Figure 2), the link show relevant words this helps the search engines and other users find the relevant content.

URLs are more likely to be better if words are used instead f numbers, Ids, and etc, but the words need to be kept to a minimum to allow full exposure to the search engines. Also only provide a single version of a URL to reach a

Figure 2. Example of link to website on a blog



document, this helps to prevent users link to one URL and other linking to a different version.

### 3. OFF PAGE SEO

Off-page SEO is performed outside the web page itself – primarily on other people’s web sites. Off – page SEO is the creation of inbound links that are optimised for the web pages’ keywords or keyword phrase. When search engines acknowledge that there is a lot of inbound links to your page that have similar topics to your pages’ theme, usually keywords, they will assume that your page is viewed by other web pages specialising in your chosen Keyword and to accomplish this there is many factors to take into account.

The objective is not to make your links appear natural; the objective is that your links are natural (Matt Cutts – mattcutts.com). Linking is one of the primary elements in links to your website and improving the ranking and optimisation of the website, the relationship between other websites is helped using back links and the overall goal is to get traffic to the site. The Quality of the back link is a key factor for the ranking of the site, the more back links there is the better for the site and the better the quality and location of the back links will help to dramatically make a difference with SEO. No matter how much you spend on SEO, a web site is invisible until somebody links to it (Eric Ward). Using other methods like blogs, forums and social networking are other ways in building significant and diverse amount of high quality back links to the site. The increase of popularity of people using social networks can help build

a higher presence among the users and results for your website. Some of the best methods in implementing back links are:

- Register the site with online directories
- Build a relationship and gain links to your site with other quality and on-topic websites
- Publishing press releases and articles online
- Develop a viral on the Web from a worthy link resource or tool

The age of the Domain is a factor that affects Optimisation. The older the domain is results in higher ranking points with regards optimisation. The thinking behind this is that if a domain has been in existence for years, then it can be assumed that it is an established site and less likely to be a spam site or host of malicious software. Not only is the Domain Name important but also the hosting, there is many factors that is important to help with SEO, you need to know where the hosting comes from if you are a U.K business get a UK host. Websites like ‘http://www.123-reg.co.uk/’ usually have hundreds of websites on one server. Make sure that your neighbour’s that are on the same server as you are not classified as spam; this will affect your SEO. The structure of your URL is also important make sure strings are not random and is clear to follow, this helps keep the optimisation process well. Visitor behaviour is the aspect of how a visitor behaves when they visit a site. This can have an impact on ranking, Bounce rate measures the people viewing your site. It can measure if a visitor does not stay on long. This could be easily avoidable if useful content is added with an intuitive and engaging

style. This will help lower the bounce rate and overall help the rank of the Website. Finding where the sources of the traffic come from is necessary, because it can affect ranking. We should aim for good sources and eliminate the bad sources. The building of a site is a gradual procedure and generally involves continually adding more pages and content with more links.

There are a number of basic Search Engine Optimisation key factors that if implemented on a website will immediately improve the search engine ranking. These are as follows.

## Meta Tags

Meta tags are snippets of code that are placed at the start of the HTML code that contains the information about the sites name and purpose. Other than title tags, these tags aren't visible to visitors on the site, but provide valuable information to the search engines. In the past they were the main criteria for search engines rankings, but after many arguments and discussion between the top webmaster, majority of people now believe that it is less important in optimising a website. The first Meta tag is Meta Description tag, this is the tag that is important because search engines use it for the sites SERP listing, and this is the perfect place to help entice traffic to your site, if the search engines cannot generate an abstract of the visible content within the site. This does not affect the ranking of the site but helps with the marketing. Another aspect of Meta Tags or Meta Keywords tags they are use for providing a list of keyword suggestions to search engines, this can help them then rank your page, although it is getting less important in ranking the site, it still get used by various search engines.

## Title Tag

This process involves creating a keyword rich 'Title Tag' which is embed at the head section of your HTML document or title section of your blog configuration. It is the single most influential piece of information on your site. Usually the Title Tag is shown in the search results. When

selecting a Title Tag it has to be highly relevant to the page, the title needs to be under the 70 characters limit and try to feature the keywords in the title tag as soon as possible. Naming your site with your chosen keywords is the best possible outcome for SEO. Title tags are currently considered the most important Meta tag from a search engine; it is a MUST to be successful in SEO. Title Tags are similar to Meta Tags because you place the most important keywords at the start and the less important at the end of the tag. Also when you are naming the pages and articles refer to you keywords and helps rank faster. When potential traffic looks at your link you want to make sure that when optimising the Title Tag you make it enticing for the visitors and not to make look like a spam site.

Two features that are part of HTML specification are ALT and TITLE attributes, ALT is focused on images and TITLE is for links. ALT attributes provides a description of an image for the blind or those with images turned off their web browsers. The Title attribute provides a description of the linked to the page to give the browser more information before clicking the link. Both are prime places for the placement of keywords, this does not mean you want to stuff them with Keywords as this will affect you optimisation. A bad example of title attribute would be "Click for more information." This approach does not let the potential traffic know what the topic of the site is. The method you would use instead would be to use an image that is relevant to your site and including your keywords within the code.

An ALT attribute is used for a site logo a bad example of using ALT is to say "my logo." A Title Tag helps with your sites optimisation and it doesn't affect the ranking of the site but helps the site look more professional to potential traffic.

## Keyword Research

This process is very critical to get right for getting good rankings for your website. When researching for keywords the main objective is to find a keyword that best describes your subject on your website. There are many ways in research-



ing keywords, a popular choice is people use simple popularity metric, this is that you perform a search and look at the size of results returned, the problem with this process is that if you do include keywords on your doesn't mean that they are actively optimising keywords, words can just be common and may have no influence for SEO. There are many different approaches to this but once you have found your keyword you then need to test it on available sites online to find tail keywords which have high searches and low competing websites. This process is very time consuming but powerful in SEO. Minor Keywords are also important but can be very difficult to get ranked for them; it could make the difference of where you are positioned on the Website. These can be place at the footer of the site along with the copyright statement; this helps place minor keywords on every page of the site and overall helps the ranking.

### **Keyword Anchor Text**

Ensuring the keyword Anchor text is when the words that are used in your linking structure should be Keywords. They are called 'Anchor' text when they are used as the phrases that they are linked to and tell the search engine what the user is searching for based on the 'click' action. This is the key factor used for in search engine optimisation consulting.

### **Linking**

URL linking, this helps the webpage crawling programs to find all your webpage's in your website. Search engine crawling programs, sometimes called spiders, crawls your website's pages, indexing its content. If the content is hard to find behind badly formatted HTML, chances are that the search engines will not be able to access all of it or correctly index it. When creating a linking structure you have to ensure that all links are referenced using their full URL. The rule of the thumb is to build a website for users, not for spiders (Dave Naylor).

### **Creating Search Engine Accessible HTML**

The mark up on a site has to be clean, limited and as clear as possible, to test this you can pull open the source code of a page and check how it looks, if it is badly done, you can trim it down or switch to another mark up CSS. They could affect the density of the code and could potentially hurt the keyword density. One main rule to remember is that search engines are not search for grammar mistakes but having a clean, accessible, quick loading, validated mark up is a bonus as this will provide the user with a good experience and they may recommend the site. The less and cleaner the mark up, the faster the server is to upload.

### **Crawling Spiders**

The main goal of a Crawling Spider is to read all the source code and content, usually the top end gets more attention than the bottom half. They have limits to how much they read so it is important to prioritise the content on a site. Always ensure that the site structure code is at the top. This tends to be at various places within the code.

### **Content**

Content is critical to helping SEO. It needs to be SEO friendly as search engines are constantly being updated so when managing a website, one has to ensure that the content is also updated and based on more relevant keywords. When embedding keywords into the text at a high level, one has to make sure that the search engines knows what keywords are the important ones and that it is not 'over done' to avoid making the website look like spam. This could lead to a low ranking or even removal on a search engine. Gaining trust is the important factor of SEO. One should keep a long term focus as tricks and shortcuts are not the way to earn trust (Matt McGee). Figure 3 demonstrates what HTML code should look like.

Figure 3. Example of the layout of HTML code

## What Beautiful HTML Code Looks Like

**DOCTYPE Properly Declared**  
It looks like a lot of gibberish, but DOCTYPEs are important. They not only allow your code to validate, but they tell browsers things about how to render your page. Simple <html> tags don't cut it.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

**Body IDed**  
Putting an ID on your body allows you to create CSS properties that are unique to that page. For instance, you may want your <h2> tags to look different on the homepage. In your CSS you can write: #home h2 {} to accomplish this and not affect <h2> tags elsewhere.

```
<body id="home">
```

**Main DIV for all Page Content**  
Putting all the content of your page into one main "wrap" DIV gives you lots of control right off the bat. There is where you can set the width of your page for a fixed width site or maximums and minimums for a fluid width site.

```
<div id="page-wrap">
```

**Common Content INCLUDED**  
A lot of web content is common from page to page. Think menu bars, sidebars, footers, "boxes", etc. This kind of content should be dynamically loaded. Either from a database or with simple PHP include statements.

```
<!--include_once("menu.html") -->
```

**Proper Ending Tags**  
You started strong, now end strong. Don't be lazy and exclude closing tags for any element, even if the page renders OK without them.

```
</div>
```

**Content, Content, Content**  
This is where your content belongs, so go nuts. Remember to keep your paragraphs distinct and in <p> tags. Use lists where appropriate. Use codes like <code> for © symbols. Don't go overboard with <br /> tags, that's sloppy formatting.

```
</body>
```

**Tidy Head Section**  
This is set. Character set declared. Stylesheets linked (including a print stylesheet). Scripts linked and NOT included in full. External files have their own related folders (e.g. "CSS" & "Scripts")

```
<html xmlns="http://www.w3.org/1999/xhtml">
```

**Semantically Clean Menu**

```
<div id="menu">
```

**Important Content First**  
It is best if your most important content, like news and events, can be listed first in the HTML. If your sidebar is just navigation or less important content, it is best if it comes last in the HTML.

**Code is Tabbed into Sections**  
If each section of code is tabbed in once, the structure of the code is much more understandable. Code that is all left-justified is horrific to read and understand.

**Hierarchy of Header Tags**  
Use header tags as they were designed, to create titles for sections and signify their position in the content hierarchy.

**No Styling!**  
Your HTML should be focused on structure and content, not styling! Keep all of your styling in your CSS; there should be no deprecated <font> tags in site.

## Unpopular Methods of SEO

HTML frames are no longer as powerful but are still used. They were used when the connection speed was at 9600 baud, and this overcame the problem with reloading the header and menu every time the user went to another page. Although the increase in bandwidth is positive this has also lead to the decrease of Frames being used. The unpopularity of frames is also caused by the search engines problem of crawling them; this makes them undesirable and useless now. Another decrease has been seen in JavaScript and DHTML with the highly popular use of HTML and CSS. The problems associated with Java Script and DHTML is that with the change in Search engines algorithms, crawling programs can't crawl through Java Script and DHTML coding which then affects SEO.

Flash is unpopular but is now being re-designed so crawling programs can crawl the necessary information to help rank the site. This is because flash sites tend to be graphic based. If the homepage is flash, this will dramatically decrease the chances of a high ranking website. To avoid this, offer people the option of viewing the flash, but make the default site CSS and HTML. You can then detect Flash with JavaScript and open a new window to play it. Search engines do not support Forms but these are necessary to allow browsers to interact with web pages. A search engine will not submit a form on a site. If this is the only way to reach a website then the search engine will not reach the content. This can be an advantage as if there is a link that you do not want a search engine to access, and then one could design the page as a form.



## Heading Tags, Fonts and Sizes

Heading tags, specifically h1 tags, are important to denote content on your site, but similar to title tags you need to do research and find the best possible tags. H1 tags are used for on page title (e.g., article title at top of page), H2 is for secondary content sections, and H3 for tertiary ones and so on down the line. CSS can be used to change the appearance of the tags but does not affect the ranking of the site; the content doesn't have to be big font but as long as is used with good keyword density. Search engines also weigh up the content contained in bold or strong tags or tags that indicate emphasis but is now as the algorithms change so does the search engines priority and it is now steering away from these areas but it is still important to use these appropriately.

## 4. CONCLUSION

Search Engine Optimisation (SEO) has many factors that affect the performance of a website ranking within the Search Engines. It is important to tailor a strategy for each search engine you wish to get high rankings in. Researching keywords is important in declaring to the search engines what type of website you own. There are a number of approaches that can be taken to optimise a website. The factors that help rank a site are important to understand when building a site. Strong factors to SEO are Relationships and communication with other websites. To increase traffic to a site, build more links online. SEM is also a powerful way in promoting a website but

SEO is free and a 'natural' method in achieving high rankings within search engines.

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