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## Seminar Report

on

# **Search Engine Optimization**

Submitted in partial fulfillment of the requirement for the award of degree of Computer Science

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**SUBMITTED** 

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#### **Preface**

I have made this report file on the topic **Search Engine Optimization**; I have tried my best to elucidate all the relevant detail to the topic to be included in the report. While in the beginning I have tried to give a general view about this topic.

My efforts and wholehearted co-corporation of each and everyone has ended on a successful m this topic. I thank him for providing me the reinforcement, confidence and most importantly the track for the topic whenever I needed it.

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### Introduction

Whenever you enter a query in a search engine and hit 'enter' you get a list of web results that contain that query term. Users normally tend to visit websites that are at the top of this list as they perceive those to be more relevant to the query. If you have ever wondered why some of these websites rank better than the others then you must know that it is because of a powerful web marketing technique called **Search Engine Optimization (SEO)**.

SEO is a technique which helps search engines find and rank your site higher than the millions of other sites in response to a search query. SEO thus helps you get traffic from search engines.

This SEO tutorial covers all the necessary information you need to know about Search Engine Optimization - what is it, how does it work and differences in the ranking criteria of major search engines.

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### **Brief History of SEO**

- 1995 Yahoo Launches its Web Directory
- 1998 Google Launches, DMOZ launches this same year
- 2000 Yahoo Drops AltaVista, Uses Google's Algorithm instead
- 2001 Page Rank is revealed to users through the toolbar
- 2005 No Follow Tag Introduced
- 2009 Google Introduces Caffeine Algorithm, a major shift in SEO.
- 2009 Bing and Yahoo Merge
- 2011 Panda Algorithm Update. A major step in the history of SEO

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• April 24th 2012 – Penguin Algorithm Update

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- September 27th 2012 EMD Update (Exact Match Domain)
- October 4th 2012 65 Pack Rollout

### **Search Engine Basics**

- **Processing queries:** When a request for information comes into the search engine, the engine retrieves from its index the entire document that match the query.
- Ranking results: Once the search engine has determined which results are a match for the query, the engine's algorithm (a mathematical equation commonly used for sorting) runs calculations on each of the results to determine which is most relevant to the given query.
- Directories: Human edited search indexes
  - Yahoo Directory!
  - DMOZ = The Open Directory Project
- Search Engine Results Pages (SERPs)
  - Organic: Results based on content and keyword relevancy (as per algorithm)
  - Paid Placement (PPC):
    - Google Ad Words
    - Yahoo! Search Marketing (YSM)

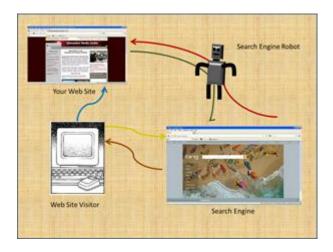
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### Why you should use SEO

- **Brand awareness** A web site having a high ranking means more people see the name of the company and become familiar with the company and its products, even if they haven't made a purchase.
- **Targeted traffic** Search engine optimization brings paying customers to your door step. The customers that SEO services bring you are long for your products/services as they have entered your websites keywords/phrases into the search engines.
- Your competitors Keeping ahead of your competition in the organic search results can help boost the perceived position of your company in your marketplace.

### **How it Works**

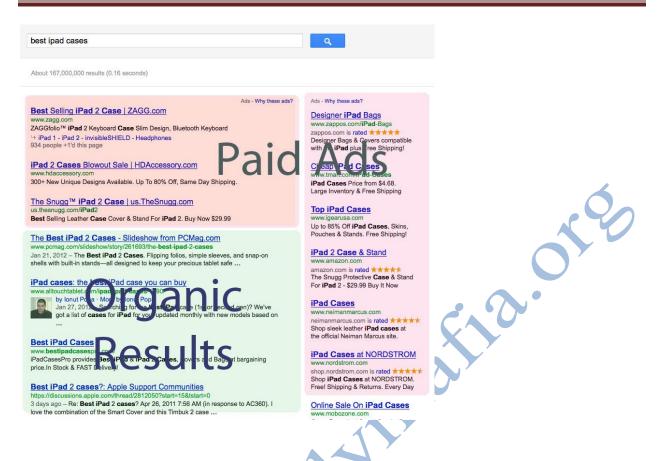
Search engines, such as Google, Yahoo!, and Bing, scour the World Wide Web. Their automated "robots" (also called "spiders") move from page to page and site to site by following links. Along the way the read the code for the pages they visit. The information from the page code is incorporated into the search engine's vast knowledge base.



When a visitor to a search engine enters a term or phrase into the search box the term or phrase is compared to the information in the engine's knowledge base. The results that are returned (called "organic results") are listed in order of how well they match the term or phrase that was used to initiate the search.

The comparison is accomplished by algorithms. The specifics of the algorithms are closely guarded secrets of the search engines. Apparently, the algorithms vary from search engine to search engine. However, the techniques that we discuss here are applicable to all the engines.

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The closer the Web site matches the search term, as determined by the algorithm, the higher it will appear in the list of organic results. The goal of search engine optimization is to help the Web site and its pages rank as high as possible in these organic results.

It is important to remember that search engines sell advertising on their sites. Which ads appear on the results page are also determined by sophisticated algorithms, and are based on the comparisons with the search terms. Your organic result placement will compete with these ads. The better your search engine optimization, the better your placement in the overall results.

### Architecture of seo



### **Types of SEO**

#### White Hat SEO

White hat SEO is ethical SEO. It's SEO techniques that search engines accept. White hat SEO techniques are beneficial for site visitors as well as for search engines. The goal of white hat SEO is to improve search engine result positions via methods that won't cause search engines to penalize the site.

Successful white hat SEO is slower than black hat SEO and is an ongoing process.



Black hat SEO is the use of techniques that are unacceptable to search engines to boost a page's position in search results. These techniques are intended to trick search engines into giving pages higher positions in search results, and they have no benefit to site visitors. The goal is to improve search engine result positions no matter what it takes to do it.

Black hat SEO techniques are used for two reasons:

- They work until search engines find out about them and they don't work.
- Some people don't understand that black hat SEO techniques can get their sites penalized by or banned from search engines.

Even if search engines can't detect the black hat SEO techniques, competitors of sites that employ black hat SEO techniques can spot them and do report them to search engines.



Gray hat SEO

Gray hat SEO is SEO techniques that take more risks than white hat SEO techniques but aren't likely to get your site banned from search engines (although a search engine penality could result). They're questionable SEO techniques but not in the same category as black hat SEO techniques. However, what's considered gray hat SEO today might be black hat SEO next year.



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If you would like to improve your Serp Ranking than follow:-

#### 1> On Page 2> Off Page

#### **On Page Optimization:**

a> Content Optimization
b> Title Optimization
c> Site Loading Page time optimization
d> Meta keyword optimization
e> Internal Linking
f> URL Optimization
g> XML sitemap.robot.txt ,canonicalization etc

#### **Off Page Optimization:**

- a) Press Release Submission
- b) Article Directory Submission
- c) Web 2.0 posting
- d) Social Bookmarking
- e) Directory Submission etc.

### **Fundamental Principles of Off-site SEO**

#### The Principle of Search Engagement

The optimizer must choose which search engine(s) for which content will be optimized.

#### The Principle of Resource Engagement

The optimizer must leverage links by providing them with context, recognition, and an active framework in which people find the links to be part of useful resources.

#### The Principle of Message Engagement

The optimizer must take responsibility for shaping the message that people see about a given site on other Websites.

#### The Principle of Link Engagement

The optimizer must take responsibility for the relevance, context, and neighborhood of a given link.

### Advantage

1. it's cost-effective. You don't have to pay the search engine to be "advertised". At this point in time is when you have to pay for almost everything; it's good to know that there are still some things which are free. The best part is that you can use this to your benefits, such as the simulative effect of the sale of your business.

2. If well ranked, has your company greater chance at becoming visible around the world, while you stay at home. Internet is an effective marketing tool. It is actually the marketplace itself with numerous potential clienteles. However, there is no guarantee that your business will boom immediately but it sure will, little by little.

3. Once your website gets a good place, you somehow your reputation as one of the best. This implies that somehow you are properly valued in the SEO community. In reality, which ranked first in their field are perceived to be really good. They are even considered to be one of the largest. Same thing in the virtual world. If you are the highest rank, people will think that the product that you sell is a must have.

4. Need the money for search engine optimization is established, regardless of the number of hits you get. This saves you some money. Plus, you don't get confused with the accounting part. Another thing, you don't worry about the money that you need to shell out for the case you a bulk of hits.

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### Disadvantage

1. Your position in the search engine is unpredictable. Everything depends on the algorithm. As a result, you know not when the return of the investment will happen. You don't have the total control over everything, even if you have your website; you maintain that you and the owner of the company.

2. This is time consuming. It takes a long time before you see your standing improve a notch. Sometimes you have to wait for months or even a year to be in the spotlight. You might ask yourself, "How can my business flourish?"

3. Participants can make use of the black hat tactics. These unfair practices hinder the tree of your company. You control not about other people's heads. They can choose for unethical strategies and you, your company could affect credibility and negative.

4. It may mean the end of it all for entrepreneurs whose website are located on the last few pages of the search engine.

### **Key Concepts**

#### **Target audience**

- Keyword choices •
- Directory submission
- Accessibility
  - Flash
  - JavaScript •

  - www.studynation.

### Conclusion

While nobody can guarantee top level positioning in search engine organic results, proper search engine optimization can help. Because the search engines, such as Google, Yahoo!, and Bing, are so important today it is necessary to make each page in a Web site conform to the principles of good SEO as much as possible.

To do this it is necessary to:

- Understand the basics of how search engines rate sites
- Use proper keywords and phrases throughout the Web site
- Avoid giving the appearance of spamming the search engines

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- Write all text for real people, not just for search engines
- Use well-formed alternate attributes on images
- Make sure that the necessary meta tags (and title tag) are installed in the head of each Web page
- Have good incoming links to establish popularity
- Make sure the Web site is regularly updated so that the content is fresh