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**Search Engine Optimization**

And Its Importance for Business Visibility and Branding

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# ABSTRACT

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In the era of Information age, it is common for a business to have an online presence on the Internet. However, presence is not enough, the business has to be clearly visible on the Internet whenever people search for the product, service or resource provided by that business in order to survive and thrive in an increasingly competitive market. As a result, search engine marketing (SEM) in general and search engine optimization (SEO) in particular is an essential tool that can be applied to develop and improve the visibility of business's website and branding on the Internet.

The aim of this thesis is to study what search engine optimization is and how it can be implemented properly for commissioner's website Senstore to bring more traffic and potential customers to the website. Besides, other concepts and terms that are closely related to Search Engine Optimization are explored in order to have wider and deeper understanding of the topic. Furthermore, a Search Engine Optimization plan is also created with the intention to provide the commissioner a reference document to use in their future marketing campaign.

This thesis report is divided into three main parts. The first part is theoretical background about Search Engine Optimization and its related terms and concepts. Books, online blogs and articles from trusted sources in the filed are carefully selected as references for the background. The second part is the implementation of learning knowledge to optimize the commissioner's website. Programming and manipulating source code are main methods in this part. The final part is the result of the whole process. Google Analytics is used as a tool for analyzing and measuring the success of the optimization.

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Keywords: Search Engine Optimization, SEO, Search Engine Marketing, Google Analytics

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# 1   INTRODUCTION

## 1.1   Search Engine Marketing

According to a report conducted by eMarketer, the number of Internet users worldwide surpass three billion in 2015 which is accounted for 42.4% of the entire world's population (eMarketer 2014, citied 20.09.2016) and 93% of online experiences from Internet users begin with a search engine (Bianchini 2011, citied 20.09.2016). It is also important to highlight that about 55000 Google searches are performed every single second of everyday as reported by Internet Live Stats. (Internet Live Stats, citied 17.09.2016).  Those stats and figures prove that the need for searching information on the Internet has become a vital part in human society. This situation makes search engine is one of the best sources for business to increase traffic to a website or reach potential customers, either from organic unpaid search listings or paid advertising listings. However, search results are complex and not easy to exploit, they can vary from text, images, video, audio, etc. Besides, search engines do not simply include Google, Yahoo or Bing, they also include e-commerce sites such as eBay, Amazon, special search engines like YouTube, Vimeo for videos search or online business directories and others. Therefore, specific methods, techniques and strategies are needed in order to leverage the benefit contained within search engine. That is the concept behind search engine marketing.

In essence, search engine marketing is described as a set of procedures to promote a business's website by increasing its visibility in search engine results pages. Search engine marketing methods contain two important concepts:  search engine optimization (SEO) and paid search advertising. SEO focuses on improving a website's presence on unpaid organic search results by adjusting website content and architecture. Paid search advertising, on the contrary, gains visibility and traffic for a business by purchasing advertisements on search engines. In practice, search engine marketing often involves paid search advertising more than search engine optimization. There are two advertising models that usually used in paid search advertising:

> Cost-per-thousand advertising (CPM) is a standard model. It typically measures the total cost of displaying an advertisement. For instance, if it costs $10 for an ad to appears 1000 times, then every 1000 times an ad showed up, a change of $10 will be incurred.

Cost-per-click advertising (CPC), on the other hand, only charges advertisers when their ads on search engine results pages are clicked by searcher despite of the total number of ads that are viewed or served. "Charges per ad click-through are based on advertiser bids in hybrid ad space auctions and are influenced by competitor bids, competition for keywords and search engines' proprietary quality measures of advertiser ad and landing page content" (SEMPO, citied 21.09.2016).

In practice, search engine marketing usually focuses on paid search advertising rather than search engine optimization. However, paid search advertising is not feasible for small businesses or start-ups because of the increasing competitive marketplace that leads to high bid value for keyword. Therefore, instead of using limited budget on paid advertising, they can spend more effort to utilize SEO on their webpage as an alternative solution.

## 1.2   Senstore

The commissioner Senstore is an online shop in Oulu, Finland (senstore.fi). They provide accessories for mobile devices such as adapter, memory stick, case etc. Their major product is graphical case made by fabric and genuine leather for smartphone and tablet. Senstore differs itself from other companies in the filed by the unique laser engraved decoration on the skin and the commitment for the quality of every product they are selling. Besides available design, Senstore also allows customers to express creativity by engraving their text, image on the cover.

Visibility of website on search engine is a crucial factor that determines the existence of every ecommerce business model and Senstore is obviously not an exception. However, when the author conducts a minor test by seeking the information about the company on Google search engine, Senstore's result appears in the first page of Google results only when users search the exact name of the company, otherwise the company is "invisible" to them regardless of using some keywords that have relation with products Senstore providing such as "smartphone leather cover", "smartphone case", "smartphone accessories", etc. Although the commissioner realizes the problem of their website's visibility, they cannot afford for large scale marketing campaign or expensive paid advertising to improve their rank due to limited of budget and resources. That is the reason why search engine optimization is proper solution for their current situation.

Based on the facts and problems provided by the commissioner, the author forms following research questions:

What is search engine optimization and how it can be implemented properly?

Whether search engine optimization is the best approach to solve the current situation of the commissioner or not?

If it is, what are the plan and strategy that they can follow in order to achieve the best result?

## 2    SEARCH ENGINE BASICS

The main purpose of search engine optimization process is improving websites' ranking in search engine results pages. Hence, it is essential for everyone who works in this field to have a fundamental knowledge about the concept of search engines as well as their core operations so as to maximize the optimization's results.

In theory, search engine can be divided into two elements: back-end and front-end. On the back-end, search engine is a software that collects information about websites. The information may include the URL of the page, keywords or phrases that can describe the contain of the page, links that point in and out of the page. After collecting the information, search engine will index and store them in enormous database centers located all over the world. On the other hand, regarding of the front end, search engine has a user interface where user can enter a search query in order to find specific information. After the query is sent, a search algorithm checks the information stored in the back-end database and retrieves links to web pages that appear to match the search query the user entered (Ledford 2008, 5).

### 2.1    The development of search engine throughout history

Back in 1990s, the Internet what we used to know was actually a collection of FTP (File Transfer Protocol) sites that users could connect to download or upload files. In attempt to find a specific file in that collection, users had to navigate through each file by themselves and they could only shorten the process if they knew the exact address of the file they were looking for on the FTP sever. At the beginning, there were roughly twenty web pages, thus, searching for a file was not too complicated. However, due to the number of increasingly web pages, the whole search process became difficult and time consuming for users. In order to resolve the problem, Alan Emtage, a student from McGill University of Montreal, introduced Archie as illustrated in Figure 1, a tool for indexing FPT files, which can be considered as the first search engine on the Internet in 1990. In general, Archie was a program that downloaded directory listings for all of the files that were stored on FTP sites network. Those listings were then embedded into searchable database of the website. Nevertheless, because of the limited resources, Archie only indexed the title of the file not the

content of itself. As a result, users had to enter the exact name of the file in order to know where to find it (Ledford 2008, 4).



*FIGURE 1. User interface of Archie (Search engine history, cited 24.09.2016)*

In 1991, Mark McCahill, a student from University of Minnesota, came up with a program to resolve the limitation of Archie. He created Gopher, a program that indexed the plain-text document from files. However, Gopher was just an index system, it needed a program that could find references within its database. Therefore, Veronica (Very Easy Rodent-Oriented Net-wide Index to Computerized Archives) and Jughead (Jonzy's Universal Gopher Hierarchy Excavation and Display) were created to search the files that were stored in the Gopher Index System. Veronica and Jughead have created a new era for search engine where users could search the information by keyword not just simply by the name of the file (Ledford 2008, 4).

In 1997, Google has changed the search engine industry operation by introducing PageRank algorithm. The purpose of the algorithm is to measure the importance of websites and rank them on Google search results pages in order to give users the most accurate and relevant information as possible. According to Wikipedia, "PageRank works by counting the number and quality of links to a page to determine a rough estimate of how important the website is. The underlying assumption is that more important websites are likely to receive more links from other websites" (Wikipedia, citied 28.09.2016).

Nowadays, search engines are sophisticated program, they allow users to search for all kind of files and documents using the same words and phrases that would be used in every day conversation. They also offer useful features such as search by image, search by voice, contextual results based on users' geological location and so on. Moreover, search engine can self-evolves

by collecting and learning from users' search behaviors in order to be able to bring up search results before they even finish typing keywords.

## 2.2    The operation of search engine

When performing a search on search engines' user interface, users are not actually searching a website on a World Wide Web, instead they are searching an index data of that page. The whole process can be divided into three tasks: crawling, indexing, retrieval and ranking. Although there are many search engines in the market and each of them are slightly different, they all include those tasks in their operation.

### 2.2.1    Crawling

Before search engine can retrieve answers for search queries from users, it has to discover all of pages on Word Wide Web in order to know where to find those answers. This process is called crawling. According to Google, there are 60 trillion individual pages on the Internet, and the number is constantly growing (Inside Search Engine, citied 29.09.2016). Therefore, in order to crawl all of that tremendous amount of web pages, search engine employs a special program called spiders or crawlers. Spiders or crawlers analyze the content of those pages as well as the the way they link to one another.

Because the link structure of the web severs binds all of the pages together, through links, spiders can reach trillions of interconnected documents easily. Usually, the crawling process starts with a popular and trusted site, spiders index words in its pages and then follow every links on each page of the site that point to other sites to discover new web pages. In reality, search engines do not try to crawl the entire Web. They may aware of pages that they decide not to crawl because those pages are not likely to be important enough to return in a search result. On the other hand, due to personal reasons, for instance several web sties have large source files that crawling them may overload the sever and consume search engine spiders' time indexing those files, some webmasters prefer using the robot exclusion protocol to prevent spiders from indexing specific page or following links in that page (Franklin, cited 29.09.2016).

When indexing a page, spiders take note of two things: the words within the page and where they are found. The place a word is found determine whether that word is a keyword or not. Hence, words found in title, subtitle, meta tags are noted for special consideration in the final process: retrieval and ranking. However, some webmasters abuse this phenomenon by using keywords that are irrelevant with the actual content of the page. To against that, spiders correlate keywords with page content, and will automatically reject to index those keywords if they cannot find the relation.

Although spiders or crawlers are extraordinarily powerful program that be able to crawl hundreds of pages per second, they have their limitations, they can understand only portions of most web pages' content. For instance, although spiders can detect the existence of images, videos or audio on web pages, it is not easy for them to understand what content of those images, videos or audio are about. Further more, spiders have difficulty to analyze pages that content Flash, JavaScript or AJAX files. Therefore, in search engine optimization, it is crucial to consider carefully when integrate those kinds of data into the content of webpages, in order not to interfere the crawling process (Enge, Spencer & Stricchiola 2015 ,47).

## 2.2.2   Indexing

After finishing collecting the data on web pages, search engines have to find a way to store the information in order to make it easy to retrieve whenever users enter search queries. This process is called building an index.

An index is a massive database that classifies and stores all of the significant terms on every page crawled by spiders into specific categories. Those terms can be words and places they are found, in this case are URLs, the number of times that words appear on a page and "weight" of each word. "Weight" is a special term used by some major search engines such as Google, Yahoo! or Bing. It indicates the importance and relevance of words in a web page. This value of a word increases as it appears near the top of the document, for example in heading, meta tag or page tile. Likewise, search engines record the map of all the pages that each page links to, the anchor text of those links, whether or not those links are considered as advertisement, etc (Franklin, cited 29.09.2016).

So as to accomplish the monumental task of holding and processing large quantities of data on trillions of pages that can be retrieved in a fraction of a second whenever user performs a search

query, search engines company have created thousands of vast data centers located all over the world. The whole process of crawling and indexing of spiders can be illustrated simply in the Figure 2.
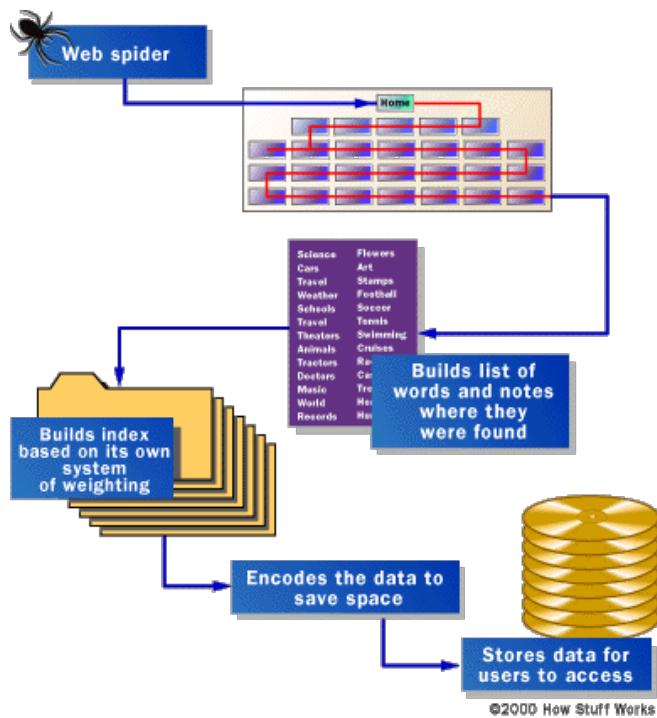


FIGURE 2. A diagram illustrates the crawling and indexing process of spiders (Franklin, cited 30.09.2016).

### 2.2.3 Retrieval and ranking

When users enter words or phrases into search engines' user interface, search engines will scour their corpus of trillions of documents and then return results that are related to the users' search queries. However, there are thousands of documents that have related search term, hence search engines need to sort them in order of importance so that they are able to give users the most satisfied answer. This important process is called results ranking.

Results ranking method is slightly different for each search engines, that is the reason why a search for a word or phrase will return different results from different search engines. Yet they take into account some similar factors to determine the ranking of a website:

Relevance is an element used to point out whether the content of the pages returned in a search matches the user's search query or not. The relevance of a website increases if the

page contains terms relevant to the word or phrase entered by the user, or if links to the page come from relevant pages and use relevant anchor text (Ledford 2008, 9.)

The location of keywords or phrases on a webpage effect how a page is ranked in search results. The higher those words appear on the page (in the URL, the heading, the title, or the meta tag), the higher the rank might be. For instance, a website that contains keywords in the title or meta tag, tends to have higher rank in comparison with the similar site but does not contain keywords in meta tag, regardless of the same search terms entered by searchers (Ledford 2008, 9.)

The keyword frequency which is the number of times a keyword appears on a page may also affect the website's ranking. In the early time of search engines, when frequency was one of the main factor to rank a website, some webmasters abused this element by using hidden keywords in headings, titles or meta tags as much as possible in attempt to boost their webpage ranking. As a consequence, this technique which is called keyword spamming or keyword stuffing caused SERPs (Search Engine Results Pages) to flood with spamming and useless websites. To protect against this, most search engines are able to recognize websites that used keyword spamming or keyword stuffing and ignore or even ban those websites to appear on SERPs (Ledford 2008, 9.)

The type and number of links on a webpage are taken into consideration when search engines rank a website as well. Those links include links that lead out of the website, links that come into the website and links within the website. However, it does not mean that the more links a website have on its page or lead to its page the higher its rank would be. In fact, "the number of relevant links coming into one page, versus the number of relevant links within the page, versus the number of relevant links leading off the page will have a bearing on the rank that page gets in the search results" (Ledford 2008, 10.)

Search engines also calculate and index the total time when users leave the SERPs (Search Engine Results Pages) to visit a retrieval website and when they hit the back arrow key to return the initial SERPs. If users spend too little time on webpages, search engines will assume that those webpages have poor content or bad user interface and they do not meet users' desires or intentions. As a result, the more users that spend little time on a webpage, the lower rank it would be.

Page ranking is an important element to differentiate a good search engine from a bad one. It is yet an ultimate goal that search engine optimization process spends the most time and effort trying to achieve.

## 2.3    Market share of search engines

The Figure 3 illustrates the total market share of some major search engine companies in 2015. According to the data collected from the chart, Google dominates other competitors by accounting for 75.2% of the search engine market share, leaves far behind three giant internet companies Bing (8.4%), Baidu (7.69%) and Yahoo! (6.88%). Despite of being dominant search engines the global market, Google has to hand over its top position to other search engines in certain markets, for instance, Baidu is the leading search engine in China, Naver dominates in Korean market and Yandex in Russia as well (Return On Now, citied 01.10.2016).
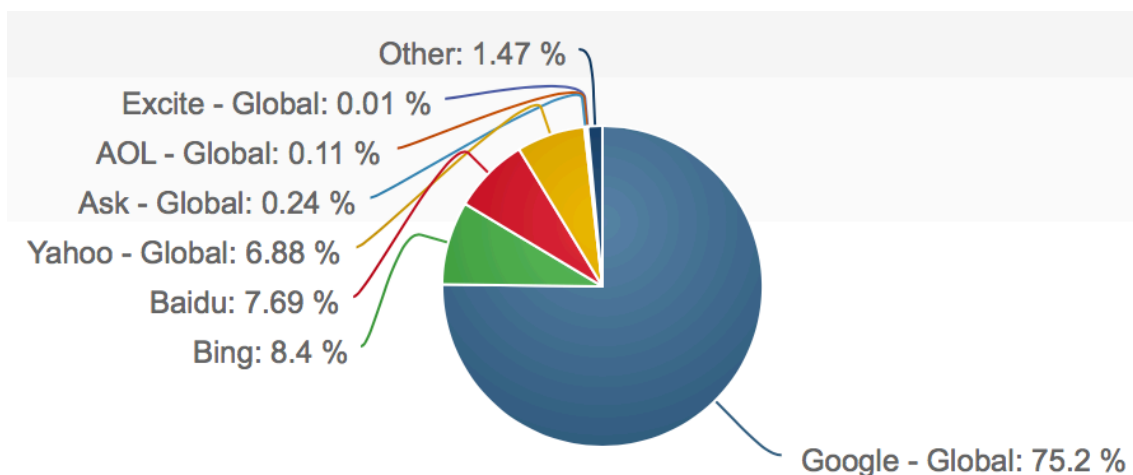


*FIGURE 3. Search Engine Market share 2015 (Net Market Share, cited 01.10.2016).*

Focusing on user experience is the strength and top priority at Google. It is also the core of Google's business model and operation, ranges from friendly user interface, smart advertisement services to commitment to deliver useful and impartial search results in a fraction of a second. That is the explanation for Google's ultimate success during the last fifteen years.

## 2.4    Understanding how people interact with search engines

People or more specifically businesses' target markets play a crucial role in search engine optimization process. Hence, before building a search engine optimization strategy, it is important for businesses to have an insight about the psychology of target audiences as well as the way they use words and phrases to obtain information about the products or services that businesses provide. In other words, the more businesses understand how its target markets utilize search engines, the more it can effectively reach and keep those users.

### 2.4.1    Principles of conducting a search

Different people have different method to search for information, for instance some people search the Internet using the same words and phrases that used in their daily life conversations while others search using Boolean search technique, a technique that combines words and phrases using the words AND, OR, NOT, NEAR to limit, widen or define a search (Wendy, cited 01.10.2016). Although search engine usage is not the same for every people, the primary principles of conducting a search remain unchanged.

First of all, users experience the desire for information and one of the best sources to seek for those information is the Internet. Then, they turn that need into a search query and submit it to search engine user interface. There are various methods to create a search query, for instance most average searchers formulate their queries using one to three worlds, while others may use longer queries to generate more specific results. After that, the search engines use those search queries or search terms to determine the results that best match users' queries and display them in the search results pages. Finally, users click on a result link which meets their intention after skimming through result pages. If users are not satisfied with the result, they review other results or refine a different search query (The beginner guide to SEO, cited 01.10.2016)

### 2.4.2    Types of search queries

Understanding the difference between types of search queries is important for search engine practitioners since it help them decide the best combination of keywords to apply to optimize websites' content. There are three types of search queries that users perform when seeking for

information: informational queries, navigational queries and transactional queries. Each search queries are categorized based on the type of information users search and the words or phases that they submit to search engines.

Generally, informational queries are used by users who seek for specific information to answer questions or learn something. In fact, informational queries consist board range of queries, vary from local weather, spot result, celebrities' latest news to history, online tutorial, scientific facts, etc. Although informational queries are mainly non-transaction oriented, meaning that searchers only seek for information and do not intend to buy anything or become users of websites, some of those searchers will become potential customers if they find the information provided by websites are useful. Therefore, in order to maximize the result of search engine optimization, it is important to create a website contents that provide helpful information that relevant to users' search queries. The results of this from of queries usually include links to websites, forums, discussion hubs, encyclopedias and so on (Enge, Spencer & Stricchiola 2015 ,47.)

Navigational queries provide fewer but more focused results in comparison with informational queries since users who perform navigational queries have the intent of going directly to a specific website. In certain situations, users do not know the exact URL and the search engine, in this case, serves as a provider of contact information for people and businesses. Due to the characteristics of navigational queries, the results for these types of queries usually are websites and profiles related to a company or a person or websites that have articles or news about them (Enge , Spencer & Stricchiola 2015 ,46.)

When users perform a search with an intent to buy a product, download a resource, or subscribe to a service, they are using transactional queries. In other hands, transactional queries are queries that show an intention to complete a transaction, for instance making a purchase or registering an account. Users that perform this type of queries usually include exact brand and name of product (Lenovo laptop) or general (steel razor) or combine with terms such as "buy", "discount", "order", "deal", "coupon", etc. The retrieval results of transactional queries are primarily ecommerce websites, web applications, online services providers (Enge, Spencer & Stricchiola 2015 ,48.)

Although, those three types of search queries have different characteristics, they all share the same value in terms of importance. Hence, so as to drive more overall traffic to websites, SEO

practitioners need to analyze the market to find the niche keywords combinations that can target all of those search queries effectively.

# 3   SEARCH ENGINE OPTIMIZATION THEORETICAL BACKGROUND

## 3.1   Search Engine Optimization

Search engine optimization (SEO) is a term which is preferred to methods and techniques that are used to affect the visibility of a web page in a search engine organic results, organic search results are result listings when users search for certain words or phrases, they are different from advertisement sponsored results. On the other hands, SEO is a process to ensure that business's website is placed on top of search engine results pages as long as possible when users perform a search term for particular products or services provided by that business. That is to say the higher rank a website achieves the more visitors which can be converted into potential customers it attracts. Besides, it is also important to highlight that the ultimate goal of SEO is helping a target web page to be displayed in the first five results listing because according to a statistic about Google organic click-through rates in 2014 conducted by Moz, 67% of all clicks belong to top five results and users tend not to browse beyond the third results page or else they will redefine their search terms (Moz, citied 03.10.2016). Another point to consider is the various kinds of search that are targeted by SEO process, for example image search, video search, news search, local search, academic search and so on.  In conclusion, SEO, as one of the most important techniques in Search Engine Marketing (SEM) process as well as Internet marketing strategy, not only improves a business's visibility on the digital world but also leverages its profit. Subsequently, in order to utilize properly and achieve best outcome with SEO, it is necessary for webmasters to accumulate knowledge about other relevant concepts, including the operation of search engines, the search page layout, the different search engines that are targeted in the SEO process, the design of a webpage, the market analysis, the keyword research, the user's psychological behaviors when using search engine.

Search engine optimization process involves various types of method, varying from editing website code and structure, creating friendly user interface and helpful content to promoting web page via social medias or other relevant websites, building inbound links. Despite of differences and purposes of those techniques, the optimization procedure can be categorized into two major components: On-page SEO and Off-page SEO.

The On-page SEO refers to techniques that are applied to the website itself in attempt to remove barriers to the indexing process of search engines as well as assist them to determine the content of the website better. Besides, the main purpose of On-page SEO also includes the enhancement of user experience by offering friendly user interface and helpful information. On-page SEO method includes choosing a suitable domain name for the website, this domain should be related to the product, resource or service provided by the business or contain business's name and identity. In addition, it also includes creating the meta tag which consists of information about the website, for instance, its title, description, important keyword and implementing it to the HTML file. On the other hand, On-page SEO technique concerns other aspects of the website like optimizing site content loading speed, creating convenient navigation, building helpful content as well. Importantly, according to Rafiq Elmansy, so as to maximize the outcome of this method, it is suggested that On-page SEO should be the first step in the whole SEO process (Rafiq 2013, 6). In conclusion, although On-page SEO technique does not directly drive traffic to the website compared to Off-page SEO technique, it helps search engines' spiders or crawlers reach and index the content of website easier as well as improve user experience which is a crucial factor to determine whether users want to stay and and keep returning or leave the website at the first glance.

On the contrary, Off-page SEO technique involves all activities conducted outside the boundaries of the webpage to increase its rank, traffic and visibility in the search engine. Those activities include building links which refers to a concept that using third-party tools, forums, blogs, relevant websites or social networking websites to increase the number of links that point to the website content. To be more precise, the total number of links serve as an indicator on how other websites and users perceive specific webpage, hence, a webpage that provides users helpful content is likely to have more reference links from other websites, it also tends to get more shares and mentions among communities and social network. As a results, based on the number of those links, search engines assume that webpage has great content and rank it higher on the search engine results pages. Off-page SEO also includes promoting a website through different marketing channels, for instance, press releases, blogs, articles, social networks and more in order to raise people's awareness toward that website. Besides, submitting websites to search engine to reduce the index time and online directories to reach more users are considered as Off-page SEO activities as well (Rafiq 2013, 20.)

On-page SEO is as important as Off-page SEO in terms of optimizing the website for higher rank in search engine results page. Hence, in order to make a SEO campaign successful, it is smart

strategy to conduct both of them simultaneously as well as share time and effort between them equally.

## 3.2 Keywords

Keywords, in term of SEO process, refer to the most important words or collection of words that describe the content of webpage. It not only improves the efficiency of search engines index activities but also helps SEO professionals reach higher rankings in search engines results pages as well as connect customers to businesses' websites. There are three different types of keywords that should be simultaneously applied in order to achieve the best outcome in SEO process.

The first and also the most common one is generic keyword or head term keyword, this type of keyword is usually just one to three words in length. Majority of people are not clearly defined when using search engines to seek for information about something. As a result, they become eventually using general keywords which tend to return to them wide range of results, for instance "sport car", "laptop", "smartphone". Therefore, generic keyword gains the highest search volume in comparison with other keyword types. However, it is difficult to achieve better rank with generic keyword because it is not specific enough to describe the actual content of the webpage and the competition level with popular websites is really high. Moreover, generic keyword has low conversation rate, the percentage of visitors who take a certain action that go beyond the casual content view or website visit for example buying products, register email newsletter and so on (Wikipedia, cited 02.10.2016), because users who reach a website by using general keywords are often searching for broad topic and they do not have a clear intention.

The other types of keyword that should be targeted by SEO practitioners is popular keyword or board match keyword, which may range from two to five words depending on the topic that it is related to. This type of keyword is more specific than generic and often present certain categories of product or services such as "Sony laptop", "Samsung smartphone", "buy sport car", etc. Besides, because there are many variations of broad match keyword, the competition for high rank in search engines results pages is not as difficult as genetic keyword. Broad math keyword has an average conversation rate (O'Toole 2013, 20.)

The last of those types of keywords is the long tail keyword. Long tail keyword includes long, very specific phrases or sentences that are close to daily conversation for example "cheap Sony laptop in Oulu", "Samsung galaxy s5 covers", etc. As illustrated in Figure 4, the genetic keyword and broad match keyword only comprise less than 30% of the total searches performed on the Internet, while the remaining, 70%, belongs to long tail keyword. To be more precise, long tail keywords only get a few search volumes individually, however, if added together they include the majority of search online queries (Enge , Spencer & Stricchiola 2015 ,194). Besides, although, long tail keyword dose not generate as much traffic as others types of keywords, websites have better chance to appear in search engines if webmasters know how to target long tail keyword properly because of the low competition. Furthermore, when users perform a search using long tail keyword, they are aware of the existence of products or services, thus the conversation rate with this type of keyword is much higher than generic keyword or broad match keyword.

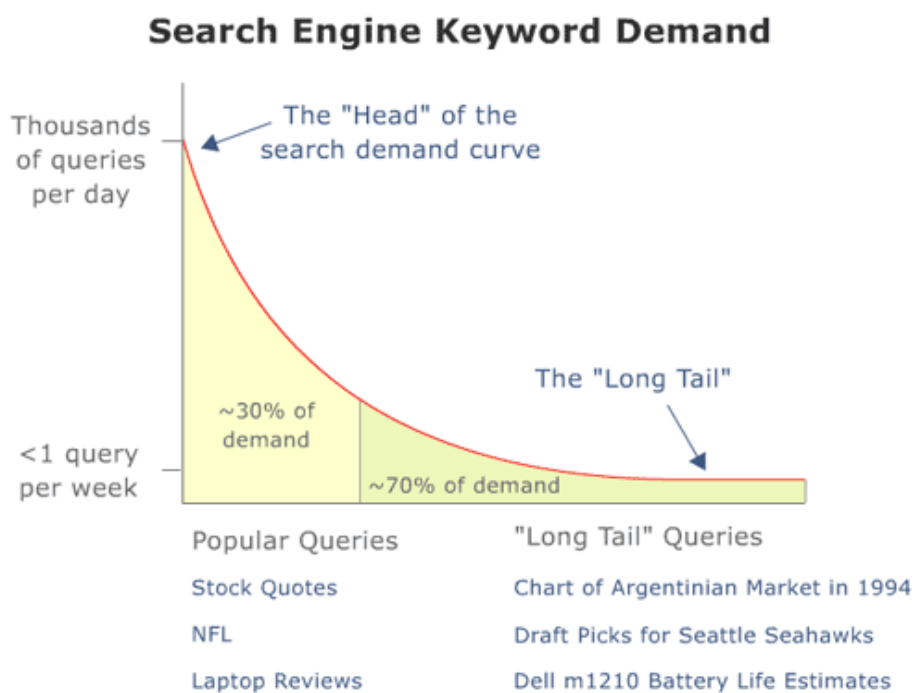## Search Engine Keyword Demand

*FIGURE 4. Search Engine Keyword Demand (Fishkin, cited 02.10.2016).*

## 3.3 Importance of SEO for business

Nowadays, the Internet is one of the most competitive market for every business and profitable as well if they know how to capitalize its potential properly. Subsequently, SEO, as a very viable and

affordable marketing tool that can help business attract more qualified traffic and customers, has become a significant need for every small, mid-sized and even large businesses.

First of all, SEO aids search engine to index and rank a website. To be more precise, although search engines have developed into complex and sophisticated machines, there are some parts of the webpage that they are not able to analyze and understand as human be, for instance non-text contents (image, video, flash data...), uncommon terms or words, etc. In addition, the main goal of search engines is providing users the best quality and relevant results as quickly as possible. Therefore, search engines require websites to fulfill certain rules and principles in order to be ranked and indexed. As a result, websites that do not follow those guidelines are not likely to appear on top of search engine results pages, which, obviously results in losing potential customers, partners or even investors. Due to optimizing websites' structures and contents, SEO helps search engines evaluate the content of business's website and how it may helpful for users.

Besides, thanks to SEO, businesses have more chances to increase their organic search expose for branded keywords and terms. In other words, SEO helps customers to easily find businesses' website when they enter keywords that related to brand, product or services into search engines. On the other hand, the majority of search engines users tend to click through the top five recommendations in the results pages, as 67% of all clicks belong to the first five results (Moz, citied 03.10.2016), and SEO is one of the viable marketing tools that are able to take advantage of this phenomenon and attract more visitors to business's websites. It is also important to highlight that people are aware of the ranking for the words or phases they enter into search engines and in their mind ranking is a vote for confidence and trust. Consequently, many consumers are more likely to interpret high rankings on search engine results page as an implicit brand endorsement. Therefore, a successful SEO campaign can help business improve its brand by building credibility (Lyngbø, cited 03.10.2016).

Furthermore, SEO drives more traffic to business's website. Indeed, the more traffic business has the more users visit its website, and, although the traffic itself does not turn into profit instantly, it has a high chance that a few of those visitors will eventually become business's customer, partner or investors. Besides, traffic generated by SEO is also a valuable resource. Because webmasters can use some internet analytics tools such as Google Analytics to track that traffic in order to have an insight into businesses' customers, for instance, how they search, the language and technology they use, the region they live, when they are most active, etc. Thanks for those information, it is

easier for webmasters to make appropriate decisions regarding business's marketing plans and strategies.

According to Figure 5 which is a graph provided by Marketing Charts in April 2013 (Marketing Charts, cited 07.10.2016), SEO is rated as "excellent" (32%) and "good" (43%) in terms of ROI (return on investment). In other words, SEO brings a higher ROI in comparisons with other traditional offline marketing channels such as television, radio or newspaper. The explanation for this is because SEO is an inbound marketing, it means that instead of reaching out to get customers' attention, business earns their attention by offering customers helpful information and exciting user experience. when they are searching for products or services provided by that business. Besides, SEO process also aims to capture users' mindshare, so that it can aid business to guide customers through different stages of the purchase funnel which is shown in Figure 6.
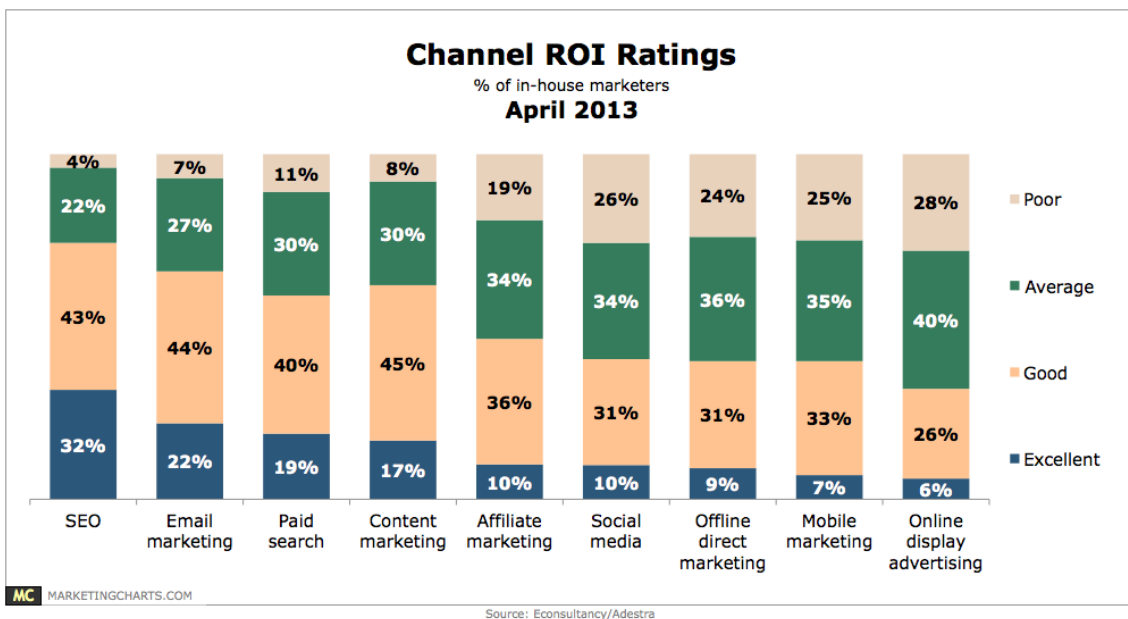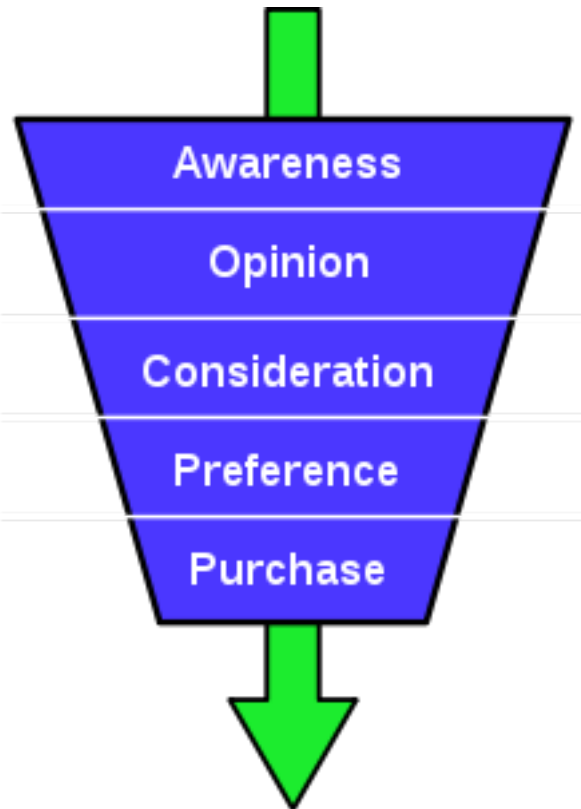


*FIGURE 5. ROI ratings of some marketing channels (Marketing Charts, citied 07.10.2016).*

*FIGURE 6. Purchase funnel (Wikipedia, citied 08.10.2016).*

Finally, SEO practices act as guidelines for businesses and webmasters to improve the user experience and usability of their website. Because a well-designed SEO is all about users and not about search engines. In other words, a SEO process is called successful and excellent if it can offer users a helpful content, a well-organized structure, a friendly and attractive user interface as well as a comprehensible navigation.

# 4   SEO IMPLEMENTATION

## 4.1   Keyword Research

Keyword research is a foundation and a critical component of search engine optimization. SEO practitioners conduct keyword research not only to find actual words and phrases that people enter into search engines but also to study about target market including customers' insight and competitor analysis. In other words, by analyzing data and metric that are collected during keyword research process, businesses are able to respond to shifts in demand and adjust their product, services or contents in order to adapt for the increasingly changing market (Ledford 208, 143). That is to say keyword research is the most important activities and should be conducted at first in any SEO campaign. Generally, keyword research process is divided into two specific phases, respectively called identifying the niche market and keywords list and determining keyword's commercial intent.

### 4.1.1   Identifying the niche market and creating list of keywords

The first and most important thing that should be done when conducting a keyword research process is identifying niche market. Generally, niche market is the small market segment within a larger market or industry on which a specific product or service is targeted. It consists a group of people that sharing some common characteristics such as demographic, psychological behavior, geographic location, social and religious belief, interests and hobbies, etc. Hence, identifying the niche market can help businesses increase their profit by affectively targeting the right group of customers. Besides, niche market also plays a vital role in creating list of keywords by providing webmasters new keyword ideas as well as excluding redundant and unpromising keywords (Backlinko, cited 19.10.2016).

After identifying the niche market that businesses should target, the next phase of keyword research process is generating a solid list of keyword prospects. There are different methods that SEO professionals can apply to develop keyword ideas.

The first method is brainstorming and writing down as much keyword ideas as possible in a short period of time. In order to develop proper keywords, SEO practitioners have to get inside the head of customers and think about actual terms or phrases that they would type into search engines to search for businesses' products or services. It is also important to highlight that those keyword ideas must relevant to the identified niche market.

More keywords can also be found by using Google autocomplete feature which is a service provided by Google to enhance users' search interaction by suggesting words or phrases that are related to users' search queries when they perform searches. Keyword researchers can type the list created in brainstorm phase into Google, then, pay close attention to the relevant terms that Google displays and write down those terms into keyword lists.

Another technique that can be applied to acquire new keywords is using keyword research tools. According to O'Toole, keyword research tools are main source to generate keywords used in search engine optimization (O'Toole, 2013). There are various types of keyword research tools available on the Internet, among them Google Adwords Keyword Planner is most popular one. To find new keyword ideas, keyword researchers can type the main keyword that is closely related to businesses' product and services into Google Adwords Keyword Planner and it will suggest a list of relevance keywords. For instance, when entering the term "keyword research" into Google Keyword Planner tool as shown in Figure 7, it automatically suggests a list of relevant keyword related to "keyword research" term. In fact, those suggested keywords are actual search terms that are anonymously recorded by Google when users perform a search.

| Search terms | Avg. monthly searches | Competition | Suggested bid | Ad impr. share | Add to plan |
|---|---|---|---|---|---|
| keyword research | 10K – 100K | Medium | ₫114,332 | – | » |

Show rows: 30 ▼  1 - 1 of 1 keywords  |<  <  >  >|

| Keyword (by relevance) | Avg. monthly searches | Competition | Suggested bid | Ad impr. share | Add to plan |
|---|---|---|---|---|---|
| adwords | 1M – 10M | Low | ₫12,689 | – | » |
| keyword tool | 10K – 100K | Low | ₫42,933 | – | » |
| keyword tools | 1K – 10K | Low | ₫58,678 | – | » |
| keyword research tool | 1K – 10K | Medium | ₫150,804 | – | » |
| keyword search | 1K – 10K | Low | ₫65,137 | – | » |
| adwords keyword tool | 10K – 100K | Low | ₫36,652 | – | » |
| keyword analysis | 1K – 10K | Medium | ₫92,970 | – | » |

FIGURE 7. Relevance keywords for the term "keyword research" (Google Adwords Keyword Planner, citied 21.10.2016).

### 4.1.2 Determining commercial intent keywords

A valuable keyword not only drives traffic to businesses' website, but also converts visitors into potential customers. Generally, a keyword that has high conversation rate is called commercial intent keywords. In other words, commercial intent keywords are keywords that respond to transactional queries performed by searcher (Backlinko, cited 22.10.2016). In practice, commercial intent keywords can be divided into two main categories:

'Buy now' commercial intent keyword is keyword which indicates that prospect are willing to buy products or subtribe services right now and they are searching for offers that meet their expectations. 'Buy now' commercial keyword tends to include some of the following words: 'discount', 'buy', 'coupon', 'deal', 'purchase', etc.

Product commercial keyword is keyword that focuses on specific product, product category, service or brand name. People searching for product commercial keyword are interested in product or service but hesitate to pay for it because they need more information to make their decision. Product commercial keyword usually includes these words and phrases: "Review', 'Best', Top 10', "Comparison', 'Cheap', 'Affordable', etc.

There are several tools available on the Internet that can be used to determine whether a keyword is commercial intent keyword or not. Among them, Google Adwords Keyword Planner is a free and powerful tool that suits the purpose of this thesis despite the fact that its purpose is serving Google Adwords users.

The method of using Google Adwords Keyword Planner to identify a commercial intent keyword is similar to find new keyword ideas in phase one. However, in this situation, SEO practitioners need to pay close attention to two important figures presented in results page: suggested bid and competition.

Suggested bid is actually the cost per click that advertiser who uses Google Adwords service pays for keywords in order to appear on search engine results page. It is the real word data to show the approximate value of a keyword.

Competition presents the number of advertisers bidding on particular keyword in Google Adwords. In other words, this element shows how competitive an ad placement is for a keyword. As a result, the more people that bid on the keyword, the more profitable that keyword is. There are three level of competition: low, medium and high. For example, when entering the term "keyword research" into Google Keyword Planner tool, figures and data about every keywords' value are shown in Figure 8.

| Search terms | Avg. monthly searches | Competition | Suggested bid | Ad impr. share | Add to plan |
|---|---|---|---|---|---|
| keyword research | 10K – 100K | Medium | €4.71 | – | » |

Show rows: 30 ▾  1 - 1 of 1 keywords  |< < > >|

| Keyword (by relevance) | Avg. monthly searches | Competition | Suggested bid | Ad impr. share | Add to plan |
|---|---|---|---|---|---|
| adwords | 1M – 10M | Low | €0.52 | – | » |
| keyword tool | 10K – 100K | Low | €1.77 | – | » |
| keyword tools | 1K – 10K | Low | €2.42 | – | » |
| keyword research tool | 1K – 10K | Medium | €6.21 | – | » |
| keyword search | 1K – 10K | Low | €2.68 | – | » |
| adwords keyword tool | 10K – 100K | Low | €1.51 | – | » |
| keyword analysis | 1K – 10K | Medium | €3.83 | – | » |

*FIGURE 8. Competition level and Suggested bid for the search term 'keyword research' and its relevant keywords (Google Adwords Keyword Planner, citied 23.10.2016).*

In conclusion, a commercial intent keyword is a keyword that is satisfied two criteria high or medium competition level and high suggest bid value.

## 4.2 On-page SEO

After creating a list of commercial intend keywords, the next important step is implementing those keywords into the website properly, this process is part of On-page SEO. Generally, On-page SEO is the method of optimizing the website itself so as to achieve higher rank in and earn more traffic in search engine. The whole optimization can be divided into two main activities: code optimization and user experience optimization.

### 4.2.1 Code optimization

Code optimization refers to the practice of editing and modifying the HTML fundamental elements in order to enhance the indexing process of search engine as well as improve user experience. Those HTML elements include title tag, meta description tag, heading tag, image file name and alt attribute.

Title tag or page tag is an element that is placed in the <head> section of HTML document. It is often displayed to users in search engine results pages or in the top of the browser's window and tab bar. The main purpose of page tag is providing users and search engines an accurate and concise description of the website's content. Therefore, title tag plays a crucial role in both search engine optimization and user experience. In fact, it is considered as the most important aspect of on-page SEO. An optimal title tag should be less than 70 characters because search engines only allow limited amount of characters to be displayed in search results pages. Consequently, if the title tag is too long, it will be shortened and and ellipsis (…) will be displayed to replace excess characters (King, cited 26.10.2016). In addition, according to Moz, an optimal title tag should also include the most relevance keywords of the page and be formatted as been shown in Figure 9 (Moz, Cited 26.10.2016).

```
<head>
    <title> Primary Keyword — Secondary Keyword | Brand Name </title>
</head>
```

*FIGURE 9. Title tag optimal format  (Moz, cited 26.10.2016).*

Meta description tag is a HTML element that is used to provide a brief explanation of the website's content as illustrated in Figure 10. In other words, it is an opportunity for a website to advertise its content to users and help them decide whether that contain is the information they are looking for or not. Although meta description tag does not affect the search engine ranking, it is extremely helpful in terms of increasing users' click-through rate, as reported by SurveyMonkey, 43.2% of people click on given results because of meta description (King, cited 26.10.2016). Thus, the meta description should include keywords strategically as well as contain compelling information that attract searchers. The syntax of meta description tag is demonstrated in Figure 11. Besides, similar to title tag's principle, the length of meta description should be between 150 and 160 characters long otherwise search engines will omit extra characters from search results. Search engines display meta description as a preview snippet of information contained in a webpage.

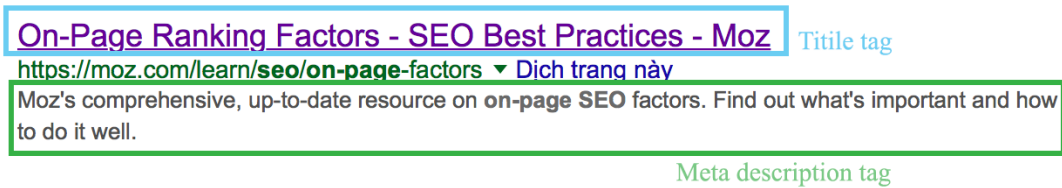FIGURE 10. Title tag and Meta description tag in Google search results page.

```
<head>
    <meta name="description" content="The webpage description is here">
</head>
```

FIGURE 11. Example syntax of meta description tag.

The heading tag is an important HTML element which is designed to provide headline hierarchy to the content of webpage as illustrated in Figure 12. In other words, it helps readers and search engines' spider get a concise overview of the topic presented in the webpage. As a results, search engines reward a slight boost in raking for webpage that has keywords appearing in the heading tag. Heading tag range from <h1> to <h6> in which <h1> has the largest font size as well as the most important headline. In addition, if a webpage contains multiple heading tags, search engines will weight the importance of keyword based on the heading tag level where it is placed. Hence, an optimal webpage's content should put he most important topic keywords in the <h1> tag, follow by subsection of that topic which should have a <h2> tag and so forth.

```
<body>
    <h1>This is most important topic headline </h1>
    <h2>Sub heading </h2>
</body>
```

FIGURE 12. Example syntax of heading tag.

Image plays a crucial part in SEO process. First of all, it improves user experience by making the webpage's content more attractive and interesting to users. Besides, some search engines such as Google, Yahoo! or Bing also provide search by image feature as an alternative to the traditional search by words or phrases. Therefore, using images in the content can bring more organic traffic to the webpage through search engine image results (Fishkin, cited 26.10.2016). However, as mentioned in Chapter 3, search engines are not able to read the content of image, they can only recognize the existence of image on the webpage. Thus, it is important to implement an alt-text attribute inside an <img> tag, like in Figure 13, in order to provide search engines the description

as well as the function of that image on the page. Besides, alt-text is designed to give users the description of the image in case that image is not able to displayed or loaded. Furthermore, alt-text is also used by screen reader software to explains the content of the image to people that have visual impairments. Generally, a good alt-text should be clear, concise and focus on the actually content of the image rather than stuffing with redundant keywords.

```
<img src="image.jpg" alt="image description" />
```

FIGURE 13. Alt-text syntax.

The ideal outcome of the code optimization phase should include relevant keywords inside the title tag, meta description, the content of webpage and the alt-text as well as been illustrated in Figure 14.
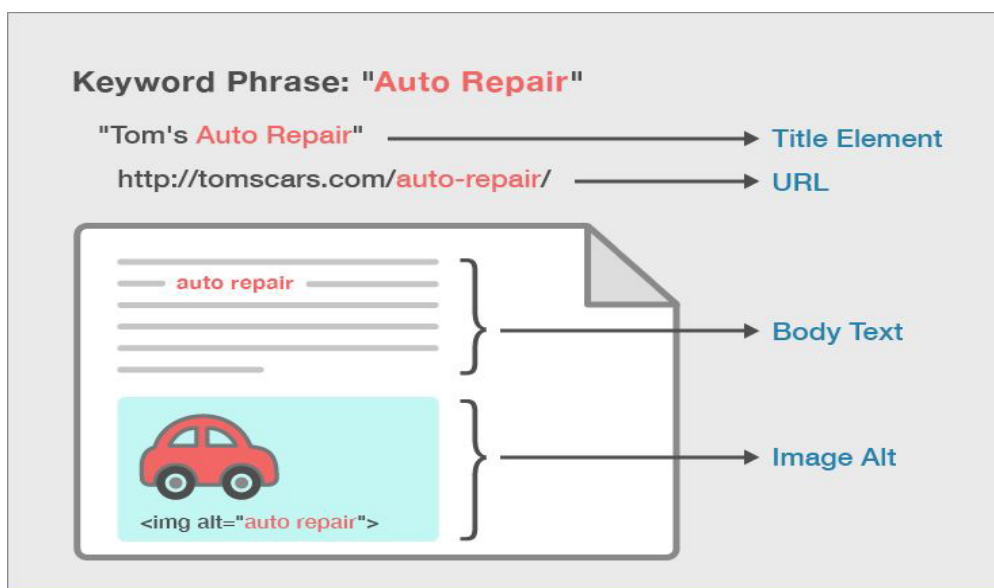


FIGURE 14. Keyword usage inside the HTML document (Shepard, cited 27.10.2016).

## 4.2.2    User experience optimization

Many businesses wrongly believe that they should only focus on ranking as high as possible by applying various SEO techniques and neglect the experience of users when visit their websites. In fact, the ultimate goal of the whole SEO process is about serving people rather than search engines. To be more precise, time, resources and effort that businesses spend on SEO will be useless if users only visit their websites for couple of second and then return to search engines

results pages. Besides, some search engines, such as Google or Bing, record time that users spend on reading the content of webpage and use that figure to rank that webpage. Some vital factors that directly affect the user experience are discussed in this section, including the loading speed, the design and the content of website.

Recent research conducted by Marlow Keith found that 47% of Internet users expect website's loading speed should not exceed more than two seconds and 57% of website's visitors will leave the site if it takes more than three second to load completely (Marlow, cited 29.10.2016). Therefore, in order to persuade users to read the content, it is essential for webmasters to improve the loading speed of the webpage by paying attention to the following SEO principles.

> First of all, images used on the website should have optimized size. It is not necessary for webmaster to upload high resolution images and then reduce the size of those images to fit the dimension of the webpage. Thus, instead of having large images, it is better to use images that fit exactly the size of website and avoid using a bitmap format images because they have large file size and decrease the loading time of website.

> Besides, it is also important for webmasters to keep the HTML code as short as possible by removing unnecessary code, such as excessive commenting, as well as separating CSS and JavaScript code from the HTML file. In fact, the ideal webpage will have less HTML code as compared to the content of the page.

Content is the most important element in the whole SEO process. A good website content not only helps business attract more visitors but also encourage those victors to return to the website again which result in increasing the conversation rate for the business. According to HubSpot's marketing report in 2014, 75% of customers prefer to research about businesses' products and services via their articles and blogs rather than through advertisements (HubSport, cited 29.10.2016). Furthermore, a rich and appealing content is more likely to be linked by another website which is an import element in Off-page SEO. There are two rules that website's owner should follow in order to have a good content (Clark, 2016).

> The content should be high quality in terms of usefulness and convenience for readers. Besides, webmasters should avoid duplicated content. Because search engines consider every URL (Uniform Resource Locator) as a unique entity. As a results, the existence of

duplicated content regardless of the purpose of the page will affect the ranking of that website negatively.

The length of the content is essential as well. As stated by Matt Cutts, head of Google web spam team, a thin content is either very little or no contribution value to users, as a results Google does not favor thin content website to appear high in its search results pages. It is also important to highlight a statistics conducted by Kevin Espiritu which found that the average length for a website that ranks in top ten of Google search results regardless of the search terms has at least 2000 words (Espiritu, cited 30.10.2016).

Another crucial aspect of user experience optimization is the functional design of the website. Regardless of how interesting and helpful the content is, businesses are not able to deliver their message to potential customers efficiently if the content is not displayed properly. A user friendly website design should be easy to navigate, avoid stuffing every single category into one main navigation, instead webmasters can place less important categories into sub navigation for instance footer navigation or side navigation. It is also critical for website owner to pay close attention to responsive deign, as reported by Framingham, in 2015, there are over 3.2 billion people (44% of world's population) accessing the Internet and among them, more than 2 billion using mobile devices to do so (Framingham, cited 30.10.2016). Moreover, search engines like Google do concern about the mobile experience as they declared in April 2015 that mobile-friendly will become an important factor to determine ranking of website. Responsive design allows website to be flexibly accessed on multiple platforms and users do not have to zoom and out in order to see the content of the page when they are navigating around the website. In detail, responsive design automatically adjusts the website's screen resolution as well as resize image to fit the screen.

## 4.3 Off-page SEO

Off-page SEO refers to all methods that are outside the boundaries of website and usually conducted after finishing On-page SEO. Off-page SEO is considered as the major impact in website ranking. The whole process can be divided into three main activities: link building, social media and social bookmarking.

### 4.3.1 Link building

Links play a critical role in search engine operation as search engine's robots, also known as spiders or crawlers, use link as a path to crawl and index every website in the World Wide Web. In addition, search engines treat link as a vote for popularity, importance and quality of a website. To be more precise, a website that offers rich content and good user experience are more likely to acquire reference links from other websites or to be shared via social media like Facebook, Twitter, Google+, etc (Shreves 2015, 70). As a result, link building is considered as the most important activities during the Off-page SEO process. Generally, link building is a technique of obtaining external links from other websites that point to the target website. Although there are many methods that can be used to obtain links from other website, they can be categorized into three major types: reciprocal linking, triangular linking and one-way linking.

Reciprocal linking, also known as link exchange, is a link based on the agreement between two websites to provide an inbound link in their content to each other websites. For example, in Figure 15, website A will obtain an inbound link from website B in exchange for the link back to website B from A. In the past, many webmasters abuse this technique by spamming links to each other in order to manipulate search engines' ranking system. Hence, search engines do not encourage this type of link building. Besides, they even have updated their search algorithm to apply negative impact on ranking with website that has excessive reciprocal links as well as decrease the value of reciprocal links in terms of raking factor.
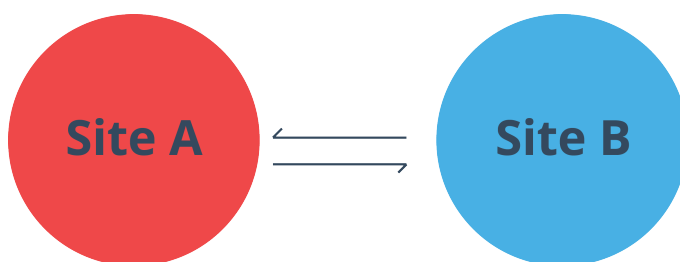


FIGURE 15. Reciprocal linking diagram.

Triangular linking is another complicated variation of reciprocal linking. As illustrated in Figure 16, triangular linking is a linking scheme in which website A offers to link to website B if website B adds a link to website A in neutral website C. Website C which is in this scenario can be a partnership of website A, an online directory website or local listing website, etc. Triangular linking is invented to overcome search engines updated policy about decreasing value of reciprocal linking. However,

search engines' algorithm especially Google's algorithm is becoming sophisticated software which is capable of realizing the triangular linking scheme pattern easily. Thus, this type of link building has the same value in terms of ranking factor as the reciprocal linking.
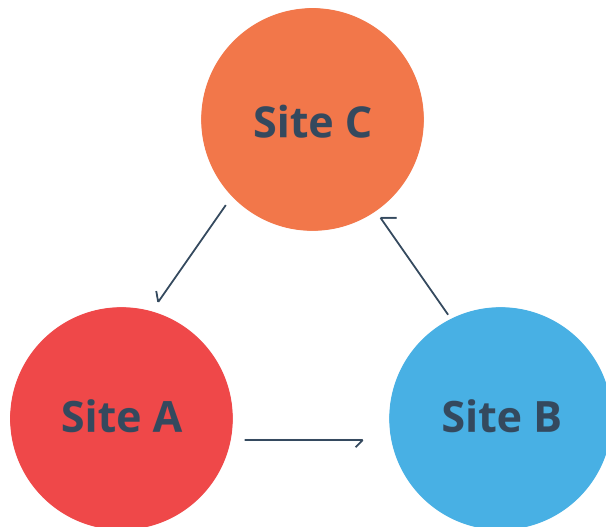


*FIGURE 16. Triangular linking diagram.*

One-way linking, as exposed in its name, is a linking scheme in which website A gets a link from website B and it dose not need to link back to website B. One-way linking is the most efficient method to build link as one-way linking indicates a vote of confidence and favor from other people for the linked website and search engines do weight much value on this type of building link. There are various methods for webmasters to obtain links from other websites, for instance they can create a unique, rich and quality content which is helpful for users and naturally people will promote those websites by themselves. In addition, website's owners can also join online forums or communities that are closely related to their business niche and try to reply to threads, give people advice or answer their questions, etc. Actively involving in those forums or communities helps website's owners build reputation for their sites. Creating quality content and involving in online community are safe, long-term goal and sustainable methods of acquiring one-way link.

However, those techniques are tough, time consuming and require lots of effort and patience from webmasters. Consequently, an alternative method to get one-way link is introduced, it is known as buying link. In general, buying link prefers to all activities that associate with exchanging money for links. In some circumstances, companies may offer high rank website's owners free products or services in exchange for them to place those companies' link in their websites. Obviously, search engines do not favor this type of link building because it interferes with their pure ranking systems.

They desire websites achieve high rank in search results as they deserve it, not because they pay for it. Thus, search engines have developed their ranking algorithm to detect any websites that sell or buy links and put some penalties with those websites. However, search engines do not totally disagree with buying link, there are certain situations that search engines allow webmasters to buy links from popular and high rank websites for advertising and increasing the brand awareness of their business. Nevertheless, in that specific case, search engines require those advertisement links do not pass any 'vote', as mentioned above links can be considered as a vote of confidence toward linked websites, to the websites that buy those links. In order to do that, search engines introduce a special tag called "nofollow". In general, "nofollow" tag, as shown in Figure 17, is a tag that signals search engines do not count a particular link as a 'vote' to the referenced website. "nofollow" tag allows webmasters to add links from other websites without being suspected for selling or exchanging links. Moreover, "nofollow" tag also contribute to the campaign against spamming website because almost every forums and online directories include "nofollow" tag in their links and it discourages people from spamming links as those links are useless in terms of giving credit to the referenced websites.

```
<a href=http://www.example.com rel="nofollow"> Example </a>
```

FIGURE 17. "nofollow" tag syntax.

Search engines' ranking algorithm has become sophisticated and efficient over the past few years, because they want to protect their search results from spammers and poor quality websites. As a result, the strategy of building link has changed, at present, the quality of link is much more important than quantity. Thus, there are some vital principles that any webmasters should remember when building link so as to avoid getting negative impact from search engines .

> Link relevance is the element determined by the relation between the content of the website from which it originates versus the content of the website to which it points. In other words, the more related topic of the website from which it acquires the link compared with the site to which the link is pointing to, the more value search engines will credit to that link.

> The quality of the link refers the the quality and also relevance content of the website that gives links to other websites. In other words, links from popular and quality websites will be more value than links from poor quality or even spamming websites.

Natural links are links that are acquired naturally by other people as they reference those link in their websites because they believe that the referenced websites is helpful in some extend.

### 4.3.2    Social media

Over the past few years, there has been a rapid growth in some popular social media platforms such as Facebook, Twitter, LinkedIn, Google +, etc. Indeed, social media has become an irreplaceable part in our daily life. Some of the stats are used to back up that argument.

- In June 2015, Facebook monthly users hit 1.49 billion, accounted for 20% of world's population (Morris, cited 02.11.2016).
- As reported by Rodiguez, S.  1 in 5 young adult users (18-24) uses Twitter everyday (Rodiguez, cited 02.11.2016).

Due to the tremendous growth, social media has become a very essential part of Off-age SEO. Social media is also another form of link building. However, it is important to note that all links getting from social media are "nofollow" links. This means building link from social media will not directly affect ranking status of website as explained in the above section. Nevertheless, social media can be considered as the best broadcasting channel to promote a business and increase its brand awareness among enormous amount of active users. Many people who interact in social media with their friends, families or colleagues are using it as a channel to search for information, recommendations and entertainments. And if your business is able to satisfy their needs, there will be tons of opportunities that your business can build relationship between your customers and your business. Besides, information can be shared via social media in amazing pace, and that information are often in form of opinions. Thus if businesses can listen from their customer, social media will become a priceless source of feedback and insight.

### 4.3.3    Social bookmarking

The concept of social bookmarking is simple, when people surf the Internet, they bookmark some webpages that they think useful so that they can read them later. Those webpages are stored in

their device's browser. However, for any reason, they wan to read those webpages again but they cannot access them unless they use the same device that they bookmark webpages in the first place. And social bookmarking is a solution for the problem. Generally, social bookmarking is an internet service which let users bookmark, add note, edit and share their favorite websites with other people in anytime and anyplace (Singla, cited 27.10.2016).

Similar to social media, links acquiring from social bookmarking are "nofollow" links. Although nowadays social bookmarking websites are flooded with spamming websites, it is a good channel to promote business's website and its contents as well as reach target audience, as there are still lots of people using social bookmarking and if they find out your website and contents are interesting they will recommend it for their friends or share it on their own social media. Besides social bookmarking is also a good method to increase traffic.

There are few steps that can be followed in order to get benefic from social bookmarking. Firstly, it is important to collect a list of top popular and trusted social bookmarking, some of them including Reddit, Stumbleupon, Scoop.it, Delicious, etc, so that website can engage as much audience as possible. Then, webmasters decide which social bookmarking websites are closely related to their market niche. After that they can start to promote their websites by replying to other threads, giving advice or recommendation with their relevant content. It is important for website's owner to avoid spamming social bookmarking sites with their own website as this action will result in getting banned from social bookmarking sites as well as penalties in ranking from search engines. Overall, promoting website via social bookmarking is not a difficult task, however, it requires webcasters' a consistent effort and patience in order to maximize the benefit (Helena, cited 27.10.2016).
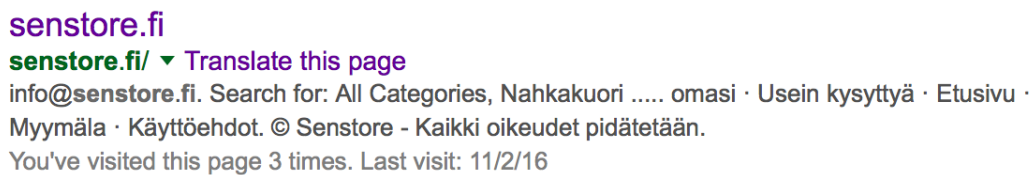
# 5    OPTIMIZING SENSTORE.FI

The commissioner, senstore.fi, is an ecommerce website which is specialized in selling mobile device leather cover and accessories. The website is created based on WordPress content management system. There are two languages that are available in the website: English and Finnish. However, due to the limited Finnish skill of the author, the English version will be optimized first and then the commissioner can follow the implemented plan and strategy to optimize their Finnish webpages. Beside, the whole optimization process will mainly focus on Google's search engine, because Google is the most popular search engines with billions of active users.

## 5.1    Analyzing senstore.fi

After the analyzing process, the author has identified some reasons that affect Senstore's ranking in the search engine results pages. Those reasons will be the main problem that the author is going to solve in this chapter.

The first reason is they do not have a proper tile tag and meta description as can be seen in the Figure 18. The proper title tag and meta description should include brand name and keywords that describe the content of the page.



FIGURE 18. Senstore result in Google search results page.

The second reason is that they do not have good external links that point to their webpage. 4 external links that they acquire, as show in Figure 19, are "nofollow" links. This means that those links does not have any impacts on their ranking except for increasing their traffic a little bit.

**EXTERNAL LINKS**  Total links: 4  Follow: 4  No follow: 0  |  Images: 0  Text: 3  Forms: 0  Frames: 1  |

Request all parameters   Save as CSV   Add/hide parameters

| # | URL | Link params | Domain params | | | | | | Backlink params | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No-follow | Google index | Bing index | Alexa rank | Webarchive age | Whois | SEMrush Rank | Google links | SEMrush backlinks | SEMrush subdomain backlinks |
| 1 | https://www.youtube.com/embed/5o8R6HaPjIU?feature=oembed  frame | | | | | | whois | | | | |
| 2 | https://www.facebook.com/senstore.fi  text  Empty anchor | | | | | | whois | | | | |
| 3 | http://twitter.com/senstore_fi  text  Empty anchor | | | | | | whois | | | | |
| 4 | https://wordpress.org/  text  Anchor WordPress.org | | 17,500,000 | 5,420,000 | 185 | June 18, 2003 | whois | 676 | | | 52673426 |

*FIGURE 19. External links that point to Senstore.*

Besides, Senstore's code to text ratio is very low (7.92%) as illustrated in Figure 20 using code to text ratio tool. To be more precise, code to text ratio represents the percentage of the actual text in compared with the code in the webpage. Search engines use code to text ratio to determine the relevant of a webpage. Thus if a webpage has very low code to text ratio, they will not rank high in the results page. Moreover, it is very difficult to implement keywords into the website properly and naturally if its content is thin.

## Code to Text Ratio

Results for: http://senstore.fi/
Web Page Size :            Code Size :                Text Size :
124986 Bytes = 122 KB      115091 Bytes = 112 KB      9895 Bytes = 10 KB
**Code to Text Ratio : 7.92 %**

*FIGURE 20. Senstore's code to text ratio.*

In addition, some images in Senstore's database do not have any title or alt tag. As a results, search engines' spider cannot crawl and index those images properly.

Finally, Senstore do not have any keywords that can best describe their products. As can be seen in the Figure 21, the author has used Google Webmaster Tools to analyze Senstore's website and

discovered all of keywords in their website that have been already indexed by Google, and none of them are relevant to the main products that they are offering.

## Content Keywords

| Keyword | Significance |
|---------|-------------|
| 1. wishlist | |
| 2. iphone | |
| 3. nahkakuori | |
| 4. product | |
| 5. browse | |
| 6. leather | |
| 7. skin | |
| 8. plus | |
| 9. valkoinen | |
| 10. add | |
| 11. added | |
| 12. already | |
| 13. samsung | |
| 14. nahkakotelo | |
| 15. white | |

*FIGURE 21. Keywords in Senstore's website that are indexed by Google.*

## 5.2    Keyword research

In this chapter, the author will demonstrate methods that he used to find Senstore's main keywords as well as sub keywords. This chapter will also cover competitor analysis process with the intention to find keywords that they are using and sources where they obtain external links.

### 5.2.1    Preliminary keywords list

Before starting to create list of keywords, the author thinks it is important to discover which search term is more popular "cover" or "case" in term of search volume. Because both of them have the same meaning but targeting the most popular one will reduce the effort of creating keywords list. Thus, the author has used Google Trend to determine which search term is the most popular. Google Trends is a service provided by Google to show how often a word is searched relative to

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the search volume. As can be seen in the Figure 22, people actually use the search term "case" more than "cover" when they perform a search in Google.
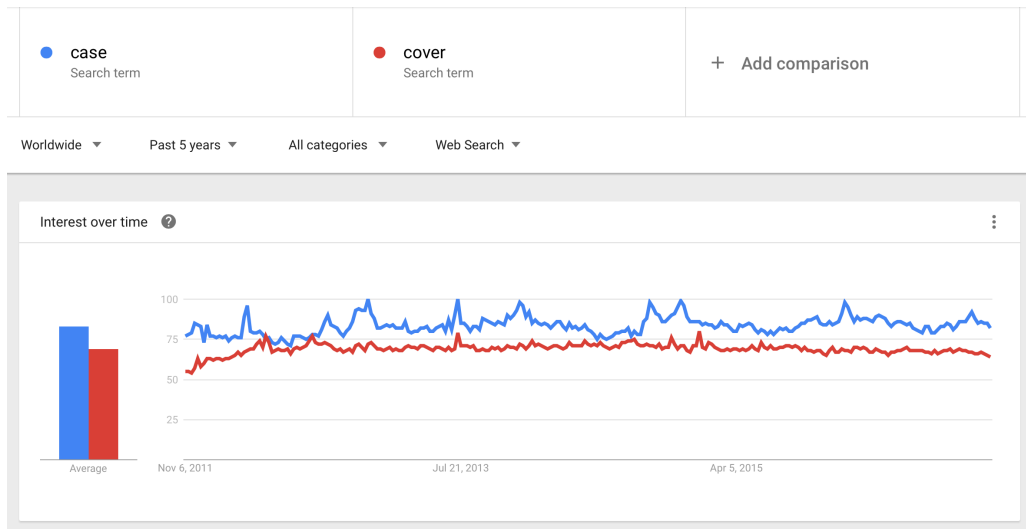


FIGURE 22. Google Trends result for two search term "cover" and "case" (Google Trends, cited 04.11.2016).

Below is the step-to-step summarizing methods and tools that are utilized to generate preliminary keywords list.

- Brainstorming is the first applied method, the author wrote down as much keywords as he can think of in about two minutes.

- Next, he performed two search queries "smartphone case" + "forum" and "smartphone case" + "board" in Google. This special search query will retrieve any forums that contain the keyword "smartphone case". By looking into those forum, the author was able to identify some new keyword ideas based on people's discussion and threads.

- Next, the author entered keywords that were found in the previous steps into Google Adwords: Keyword Planner to generate more keyword ideas as well as discover each keyword's important stats including its search volume, competition and suggested bid.

- Finally, all collected keywords were stored in the Table 1 for further usage.

*Table 1 Preliminary Keywords List*

| Keyword | Avg. Monthly Search | Competition | Suggested Bid | Keyword Difficulty |
|---|---|---|---|---|
| Custom cases | 10K-100K | Medium | € 0.97 | 74.42% |
| Custom leather phone cases | 100-1K | Medium | € 0.58 | 69.4% |
| Custom phone cases | 10K-100K | Medium | € 0.97 | 75.73% |
| Design your own phone cases | 1K-10K | Medium | € 0.61 | 69.3% |
| IPhone cases | 100K-1M | High | € 0.84 | 80.11% |
| Leather cases | 1K-10K | Medium | € 0.6 | 78.57% |
| Leather phone skin | 10-100 | Medium |  | 70.67% |
| Make own phone cases | 1K-10K | High | € 0.65 | 78.03% |
| Personalized phone cases | 1K-10K | High | € 1.47 | 72.08% |
| Phone accessories | 100-1K | Medium | € 0.68 | 89.49% |
| Real leather phone cases | 100-1K | High | € 0.48 | 66.14% |
| Smartphone accessories | 10-100 | Low | € 0.07 | 85.94% |
| Luxury phone cases | 1k-10K | High | € 0.59 | 60.04% |
| Genuine leather phone cases | 100-1K | High | € 0.64 | 67.39% |

## 5.2.2 Optimized keywords list

As can be noticed in the Table 1, there is a column named Keyword Difficulty. In general, keyword difficulty index shows how difficult it would be to rank high in search engines for the specific term or phrase. Keyword difficulty's value varies from 1% to 100% in which 1% is easiest to rank and 100% is impossible to rank for specific keyword. Keyword difficulty is calculated based on analyzing website's quality and domain strength of top ten websites in search engines results page for a given keyword. Keyword Difficulty in Table 1 was collected using SEMRUSH's tool (SEMRUSH, cited 04.11.2016).

In order to determine the quality of certain keyword, there are three critical factors that should be considered carefully, including search volume, completion and keyword difficulty. Generally, a keyword which is easy to obtain high rank in search engines and have high conversation rate usually has high volume search, medium to low completion level and especially the keyword difficulty should not exceed 75%. Based on those conditions, the author removes some unsuitable keywords and creates the Table 2 which is the optimized keywords list.

*Table 2 Optimized Keywords List*

| Keyword | Avg. Monthly Search | Competition | Suggested Bid | Keyword Difficulty |
|---|---|---|---|---|
| Custom cases | 10K-100K | Medium | € 0.97 | 74.42% |
| Custom leather phone cases | 100-1K | Medium | € 0.58 | 69.4% |
| Custom phone cases | 10K-100K | Medium | € 0.97 | 75.73% |
| Design your own phone cases | 1K-10K | Medium | € 0.61 | 69.3% |
| Make own phone cases | 1K-10K | High | € 0.65 | 78.03% |
| Personalized phone cases | 1K-10K | High | € 1.47 | 72.08% |
| Real leather phone cases | 100-1K | High | € 0.48 | 66.14% |
| Luxury phone cases | 1k-10K | High | € 0.59 | 60.04% |
| Genuine leather phone cases | 100-1K | High | € 0.64 | 67.39% |

### 5.2.3    Competitor analysis

In this section, the author conducted an analysis using optimized keywords list in an attempt to discover competitors' keywords and their external links. For instance, when using the keywords "custom leather phone cases", the author found one competitor that rank in top one for they keyword as shown in Figure 24. And then by coping and pasting the URL of that competitor into Google Adwords: Keywords Planner, the author found lists of keywords that they have implemented for their website (Figure 25). Finally, thanks to Small SEO Tools web application, the author also discovered all of the external links that point back to the competitor's website (Figure 26).
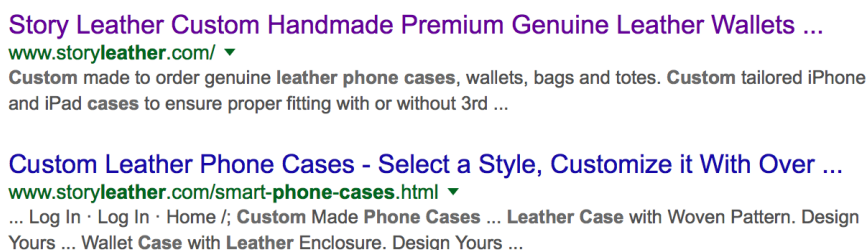
Story Leather Custom Handmade Premium Genuine Leather Wallets ...
www.story**leather**.com/ ▾
**Custom** made to order genuine **leather phone cases**, wallets, bags and totes. **Custom** tailored iPhone and iPad **cases** to ensure proper fitting with or without 3rd ...

Custom Leather Phone Cases - Select a Style, Customize it With Over ...
www.story**leather**.com/smart-**phone-cases**.html ▾
... Log In · Log In · Home /; **Custom** Made **Phone Cases** ... **Leather Case** with Woven Pattern. Design Yours ... Wallet **Case** with **Leather** Enclosure. Design Yours ...

*FIGURE 24. Top results for the keyword "custom leather phone cases".*

| | | | | | |
|---|---|---|---|---|---|
| phone cases for 6 plus | 100 – 1K | High | €0.45 | – | » |
| cases for 6 plus | 100 – 1K | High | €0.39 | – | » |
| 6 plus leather case | 100 – 1K | High | €0.67 | – | » |
| 1 phone 6 plus cases | 10 – 100 | High | €0.77 | – | » |
| 1 phone 6 cases | 10 – 100 | High | €0.44 | – | » |
| 6s plus case leather | 10 – 100 | High | €0.46 | – | » |
| phone cases 6 plus ▾ | 100 – 1K | High | €0.69 | – | » |
| phone cases for 6s plus | 100 – 1K | High | €0.52 | – | » |
| 6 plus phone cases | 1K – 10K | High | €0.58 | – | » |

FIGURE 25. Some keywords that are used by competitor.

| | |
|---|---|
| 1 | http://www.deals365.us/Storyleather-coupons-codes |
| 2 | http://www.prnewswire.com/news-releases/storyleathercom-offers-customizable-genuine-leather-products-perfect-for-corporate-gifts-179649641.html |
| 3 | http://domaintochecks.com/www/storyleather.com/ |
| 4 | http://www.whatsyourdeal.com/storyleather-historical-coupon.html |
| 5 | http://www.storyleather.com.webstatsdomain.org/ |
| 6 | https://fancy.com/shop/storyleather |
| 7 | https://fancy.com/storyleather/added |
| 8 | https://fancy.com/storyleather?user_profile |
| 9 | http://www.siteshowinfo.net/sites/storyleather.com |
| 10 | https://storyleather.knoji.com/questions/ |
| 11 | http://www.dealsdir.com/storyleather/coupons |
| 12 | http://adild.com/coupon-category/storyleather-com-promotional-codes/ |
| 13 | https://fancy.com/storyleather/activity |

FIGURE 26. External links pointing to competitor's websites.

## 5.3 On-Page optimization

In this chapter, the author demonstrated methods that he used to optimize website's structure and content in attempt to improve the indexing process of search engines. Those methods include implementing optimized keywords list into title tags, description tags as well as contents of the website. Besides the author also showed how to manually submit the website to Google for indexing instead of entrusting Google's spider to handle it automatically which might take longer time to complete.

### 5.3.1 Modifying title tag and description tag

As analyzed in the previous section, one of the main reasons that affects Senstore's ranking in search engines is missing the information in the tittle tag and description tag. Currently, Senstore's website has 74 pages and most of them either are missing title tag and description or not implemented properly. Thus the author has divided those pages into specific categories and each category will have a unique title and description based on the optimized keywords list. As mentioned in the previous section, Senstores is powered by WordPress content management system and it is difficult to modify each page manually, therefore a WordPress tool called Yoast SEO is utilized to edit the title tag and description of individual page.

In the Figure 27, there are modified title and description of Senstore's homepage. The tittle and description also contain three main keywords: "custom leather phone cases", "premium leather covers" and "design your own phone cases".
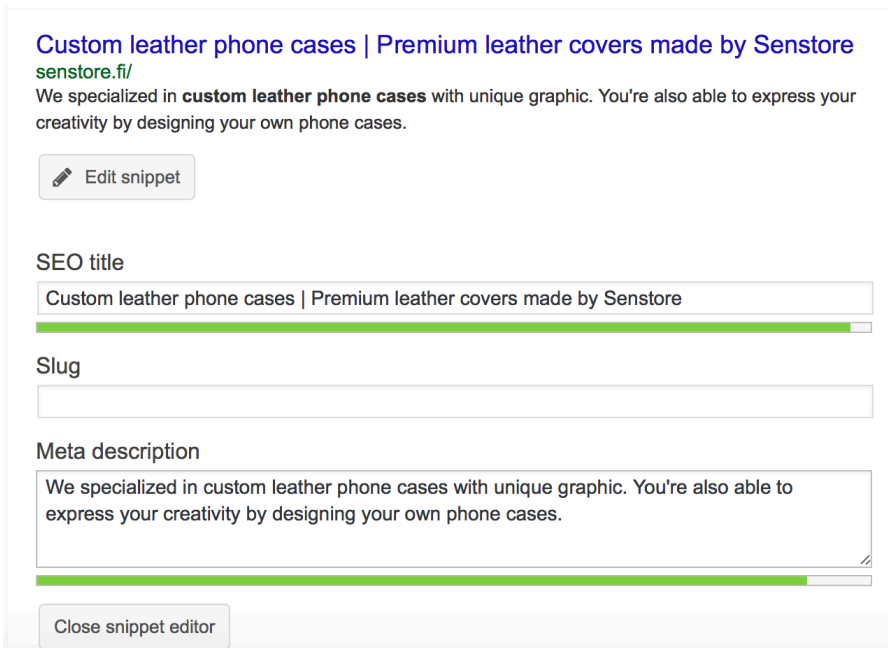
*FIGURE 27. Title and description of the homepage.*

### 5.3.2   Implementing keywords into Senstore's content

The second problems that the commissioner is facing with is the thin content of their website. As a consequent, it is difficult to implement keywords properly because of the high keyword density. Keyword density is the percentage between the length of specific keyword and the contain. Keyword density should not be higher than 10% as search engines assume high keyword density as unnatural and spam.

Because the commissioner does not give permission to modify their website content, the author only suggested some solutions for their current situation.

- Senstores should include a manual and maintain instruction under every products besides description. This solution not only improves the text to code ratio but also helps customers use leather cases properly.
- Testimonial is also a good solution as customers love to hear other opinion about the product before actual buying it.

### 5.3.3  Manually submitting Senstore's website to improve indexing process

There are over 1 billion websites all over the internet and every time each of those website update their information Google's spiders have to return to those websites to index new data. As a result, it usually takes several months for Google to index an updated website. Therefore, in order to improve the indexing process, Google suggests webmasters to submit their website manually via Google Webmaster Tools. By applying this method, webmasters can reduce the indexing time from several months to two or four weeks. The Figure 28 shows the user interface of Google Webmaster Tools for manual website submitting.
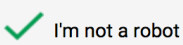


*FIGURE 28. Google Webmaster Tools submitting website.*

### 5.4  Off-Page optimization

Generally, off-page optimization is a long term process, which requires consistent effort and patience from webmaster. Because hasty actions are more likely to result in wrong decisions that may lead to penalties from search engines, for instance, spamming the comment section of forums to build link, exchanging links or buying links from untrusted, low quality websites and so on. Thus, due to the scope of this thesis, the author only suggests strategies and methods for off-page optimization in this section, he dose not conduct any modifications to the actual website. Methods for off-page optimization are divided into two major categories: building link and social media.

### 5.4.1  Building links

As explained in chapter 4, one-way link is the best valuable link in comparison with other types of inbound link. Therefore, all building link strategies suggested by the author will focus in acquiring natural and quality one-way links.

Strategies for building inbound links that point back to the commissioner's website are as followed:

- Creating a blog: blog is one of the best method for promoting a website online. Furthermore, blog is also a channel that business can utilize to communicate with its customers, help them to keep up to date with the latest news. A quality, helpful and unique blog not only gives visitors the reason to keep retuning to the website, but also motivates them to share that website's link in their own blog or social media. Moreover, it is easier for website's owners to be active and interact with other people on social media if they own a quality blog. However, in order to achieve that, webmaster should create blog with a diverse content that is unique and interesting, for instance an infographic, tutorial video, top list products or services and so on … Some of the blog topic that the author has suggest for the commissioner: "How to illustrate your own design using simple and free graphical tool?", a video that demonstrates how to make a leather case, an infographic illustrate how people protect their phones from the past until present.

- By performing search term "smartphone case" + "forum" or "smartphone case" + "board" in Google, the commissioner is able to identify forums that are related to their business. Then they can begin to build up their reputation among those communities by replying threads, answering people questions, giving advice and so on. In some cases, they can also include their website's link into the comment section if it is related. Besides, every forum lets users place their website's link into the profile signature, thus it is important to choose forum that allow "dofollow" links as those can be crawled by search engines' spiders when they index those forums.

- Thanks for discovering competitors' inbound links by utilizing technique in the previous section, the commissioner is able to analyze those links in order to have an insight data about where and how competitors obtain inbound links. If those links are from forums the commissioner can apply the above strategy, or if they are from online blog, the commissioner can contact the blog owners to offer free product in exchange for a review on their blog.

- Submitting products to social shopping network for advertising and increasing brand awareness. Some popular social shopping network that can be used: Google Product Search, MSN Online Shopping, Yahoo Online Shopping,

- Since the commissioner is a startup company it is also a good strategy to conduct a crow funding campaign on some popular crow funding websites such as Indiegogo, Kickstarter, RocketHub, etc. The main purpose in this strategy is not a successful funding, it is about promoting Senstore to other people and increasing their awareness toward the brand.

- Giving promotional offers to customers in exchange for them to spread information about the company. Those offers can be discount on certain products, small gifts, secret sales, etc.

## 5.4.2  Social media

Social media is a great channel for companies to reach and maintain relationship with their loyal customers as well as potential customers, especially for Senstore, a start up company with limited marketing budget. Therefore, it is essential for the commissioner to extend their online network, connect with partners, customers, sponsors, promote their business by becoming a member of most popular social media platforms such as Facebook, LinkedIn, Google+, Instagram and Pinterest. Below are strategies and techniques that the author has planned to target those social media platforms.

1. Facebook
    - Create a Facebook business page to promote business's website. It is important to notice that the name of business page as well as the information about business should also include main keywords that has been discovered in optimized keywords list.

    - Facebook is a great communicating channel for businesses to promote their website and connect with their customer and prospects. However, so as to achieve that goal it is critical to build up strong Facebook' social engagement including: like, share and mention. One of the best methods to increase social engagement is posting interesting, relevant and helpful contents in different types of format such as ordinary text, image, infographic, video and so on. Senstore can create those contents by themselves or share relevant content from related websites. This

approach is also a good technique to develop partnership with other website's owners which is very helpful when asking for their referenced links in the future.

- Create a quiz, survey or test that could be interesting and exciting to target audience. The audience will get a free phone cases, a voucher for discount and so on if he/she answer to that quiz, survey or test correctly and share it on their page.

2. Instagram

- Instagram is a most popular photo sharing social networks that allows users to share pictures, short videos. It is a great channel for business to show different aspect of its brand beside their product and service, for instance employees that work for the company, an industry related to that business, brand value and so on. Some of images and video topics that Senstore can post in their Instagram page:
    o New phone cases that they have released
    o Teasers about new phone cases
    o Customer's design phone cases
    o Clients using the phone cases
    o How phone cases are made?

- When posting new images or video, it is essential for Senstore to include a relevant and compelling hashtag (#) as that will help other users to find and share their new content. It is important to highlight that the hashtag should be keywords that define Senstores and their business. For example, in every new post, Senstores should include local location hashtag (#Oulu) and niche type hashtag (#leatherphonecases , #owndesign #phonecases).

## 5.5   Tracking results and measuring success

Tracking results and measuring success are essential to SEO process as they show webmasters the efficacy of their efforts so that they can make timely adjustment if it is necessary. Therefore, in this section, the author demonstrated the method that he has used to measure the success of the whole process. And by analyzing the result, the author will answer the question that has been

issued in the abstract of this thesis: Whether search engine optimization is the best approach to solve the current situation of the commissioner or not?

The main problem that the commissioner is struggling with is their website visibility in search engines. As users only reach their website by using the search term "senstore.fi". However, after the On-page optimization users can find their webpage by performing more natural search term for instance the search term "senstore real leather phone cases" currently rank second place in Google (as illustrated in Figure 29), or "senstore leather case" rank third place in Google (as illustrated in Figure 30) and so on. Although users need to include the brand name in their search as the optimization has just begin for several days, search engine optimization has proven their certain impact on the commissioner's brand visibility.

SENA | Premium Leather iPhone Cases & iPad Cases
www.**sen**a**cases**.com/ ▾
Buy Premium **leather cases** from the leader in handmade smartphone **cases**, watch bands, and other accessories that guarantee the finest workmanship.

Real leather phone cases | Premium leather covers made by Senstore
**senstore**.fi/tietoa-meista/ ▾ Translate this page
We're specialized in custom **leather** phone **cases** with unique graphic. You're are also able to express your creativity by designing your own phone **cases**.

Leather Case - senstore.fi
**senstore**.fi/en/product-category/nahkakotelo/
Free of charge for shipping in Finland. Easy to install and remove Main material is made of 100% **genuine leather**. Lining by soft and comfortable microfiber f.

*FIGURE 29. Senstore ranks second for the search term "senstore real leather phone cases".*

Cases & Protection - iPhone Accessories - Apple
www.apple.com › iPhone › iPhone Accessories ▼
iPhone 7 **Leather Case** - Tan. $45.00 ... iPhone 7 Plus **Leather Case** ..... More ways to shop: Visit an
Apple **Store**, call 1-800-MY-APPLE, or find a reseller.

SENA | Premium Leather iPhone Cases & iPad Cases
www.**sena**cases.com/ ▼
Buy Premium **leather cases** from the leader in handmade smartphone **cases**, watch bands, and other
accessories that guarantee the finest workmanship.

Leather Case - senstore.fi
**senstore**.fi/en/product-category/nahkakotelo/
Free of charge for shipping in Finland. Easy to install and remove Main material is made of 100%
genuine **leather**. Lining by soft and comfortable microfiber f.

*FIGURE 30. Senstore ranks third the search term "senstore leather case".*

Besides, the author also performed an analysis using Google Analytics tool to obtain more detail about the preliminary results of the SEO. Google Analytics is a free, essential and powerful internet tool that give webmasters useful insights about their website as well as their visitors. Some metrics that Google Analytics offers:

- Website traffic including keyword that users perform to reach the website, which search engines they use to perform that keyword, which browser, operating system or platform that they use to reach the website, the total time that they spend on the website and so on.

- Users' demographic information including: their gender, their age, their geographical location, their langue, etc.

The Figure 30 illustrates the total number of users that visit Senstore from 9th of October to 6th of November. It is also important to highlight that the the optimization process began on 10th of October. According to the bar graph in Figure 31, we can observe that the number of visitors has increased gradually since the optimization began. In addition, the pie chart in Figure 31 also shown the majority of visitors are new users, this means that to some extend, SEO approach has help the commissioner to attract new users. However, the bounce rate, the ration presents the percentage of visitors that leave the website immediately after clicking the results link in Google, is really high, accounted for 21.67% of total visitors. It might be some issues related to the structure or design of the website that lead to this result.
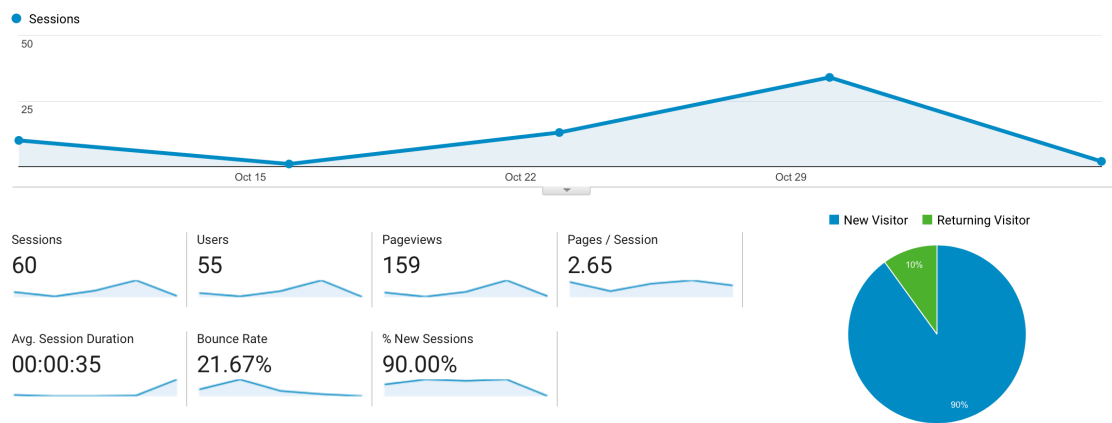
*FIGURE 31. Senstore's Google Analytics results, cited 08.11.2016.*

# 6   CONCLUSION


SEO (Search Engine Optimization) is one of the most vital and powerful digital marketing tool for every business that desire to improve visibility and credibility of their brand on the Internet, especially in the increasingly competitive market. SEO is also an affordable solution for small businesses and startups to promote their websites on the Internet as SEO does not require large marketing budget which is very essential, they only need consistent efforts, patience and repetition to be success with SEO.

The commissioner Senstore has struggled with decreasing in sales for several months. As they conducted an investigation they discovered main reasons for decreasing sales are lacking interaction with customers and prospects on social media and low visibility of their website on search engines results pages. Therefore, the main purpose of this thesis is creating and implementing a SEO plan for the commissioner to solve their problems.

The SEO plan was divided into four parts: keyword and competitor research, on-page optimization, off-page optimization, tracking and measuring the success. Each phases have different techniques to approach and solve problems in order to complete the final goals. The keyword and competitor research focuses on gathering niche keywords that describe the commissioner business and analyzing their competitors in attempt to sturdy their methods to rank high in search engines. The second phase, on-page optimization, focuses on implementing niche keywords into Sesntore's website as well as optimizing their usability to improve user experience. The off-page optimization, in contrast, focused on building links that point back to their website and promoting their website through social media. The final stage, tracking and measuring the success, focused on conducting several tests and analysis to decide the prospect of SEO for solving the commissioner's problems.

Although the result only shows little success, SEO is still a promising approach for the commissioner as it helps increase their visibility by allowing users to reach their website using more diverse search terms instead of only one search term as been mentioned in the beginning of this thesis. Besides, the optimization just begins for a short period and SEO requires certain amount of time in order to observe the great impact.

# 7 DISCUSSION

In my opinion, SEO method has constantly changed since the first time it was introduced in the mid 1990s. At that time, manual submission, including meta keyword tag in HTML file and keyword stuffing were main strategies to rank high in search engines results pages. In 2004, spamming links with anchor text, buying links from automated blog comment, exchanging links could all be leveraged for increasing traffic. In 2011, social media marketing and vertical search inclusion were main techniques for conducting SEO. Along with the changing of SEO method, search engines have also refined their guidelines and evolved their search algorithm in order to protect their search results from spam and poor quality contents as well as offer users the best user experience that they can get. As a result, some strategies and techniques that worked in the past may not work at present or even cause negative impact on the website. The future of SEO is uncertain, but there is only one thing to be sure that the search engine and everything related to it change constantly. Thus, search engine marketing in general and search engine optimization in particular will continue to be a top priority for business who desire to remain and develop on increasingly competitive Word Wide Web.

I had an opportunity to access the concept of search engine optimization one year ago by reading an online article on the Internet. At that time, I only thought this is an interesting concept and did not have any intention to study deeper about it. However, through personally researching and conducting search engine optimization for the commissioner, I noticed that being a SEO practitioner is my career choice as it suits my strengths and skills. Beside, on my personal development aspect, thanks to this thesis, I had a chance to access and learn many helpful and interesting marketing strategies and tools such as Google Adwords: Keywords Planer, Google Analytics, Google Webmaster tools which I would not normally have had motivation to study on my own.

I will keep in touch with the commissioner as they advance further to adjust plans and strategies. Besides, I am also looking forward to seeing the positive impact that search engine optimization could bring to the commissioner so that I am able to accumulate more practical experience which is valuable for my future career.

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