Statistical Analysis of SEO for Joomla, Drupal and Wordpress

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ABSTRACT

In the current scenario to get a good business or visitors, your site should be in the list of top 10 in most of the search engines. And this is the time when you need to know about Search Engine Optimization (SEO). In last decade Content Management System (CMS) is widely acceptable for web development. In CMS open source has gain lot of popularity in last few years. There are over thousand open source CMS available in the market but when content management principals are concern two to three name like Joomla, Drupal and WodPress comes first.

For SEO, one of the unsolved questions is, out of these three which provides good SEO? As there are lots of factors affect SEO still above CMS provide good insight into for SEO. We came across Steve Burge one of the researchers also worked in the same area, Steve Burge and their team has done SEO test on Joomla, Drupal and WordPress. And on the base of that data we have prepared statistics and try to get the result of best CMS for SEO.

General Terms

Open Source Content Management System

Keywords

Open Source, Joomla, Drupal, WordPress, SEO, Statistical Analysis

1. INTRODUCTION

SEO means Search Engine Optimization. Basic concept of SEO is how search major engines create list of sites when you enter search query. SEO helps to increase the traffic to one's site. SEO can be a temporary or a permanent activity. Sometimes it is enough to do some standard SEO in order to get higher page rank in search engines – let's take an example, if you are using infrequent keywords, then you do not have a much to do in order to get decent page rank. But in most cases, if you really want on top, you need to pay special attention to SEO and devote significant amounts of time and effort to it [1]. In this paper we want to highlight importance, working methodology and role of SEO in web development. We also discuss available SEO modules for different CMS and comparison of different CMS with case study.

2. HOW SEARCH ENGINE WORKS

Search engine's working is based on two aspects, the first is how spiders work and the second is how search engines figure out what pages relate to which keywords and phrases.

In the simplest terms, search engine sends an electronic spider to collect data about a unique web site and copy its content which is stored in database. Generally known as 'bots', these spiders are designed to follow links from one page to the next. As they copy and take in content of one page and record links of that page and send other bots to make copies of those link pages. This process is infinite. By sending out spiders and collecting information endlessly, the major search engines have established their databases extremely large.

Knowing the spiders and how they read information on a site is the technical end of basic SEO. Spider read content from left to right in the same way as we normally do. From the top left hand corner, a spider will read site content line by line from left to right. If there is column in a page (not in most cases)
spider read left most column first from top to bottom, if link found before moving to further columns it record it and send another bots to copy and record the content on the page the link leads to. The spider will proceed through the site until it records everything it can possible find there. As spiders follow links and record everything in their paths, one can safely assume that if a link to a site exists, a spider will find that site. There is no need to manually or electronically submit your site to the major search engines. The search spiders are perfectly capable of finding it on their own, provided a link to your site exists somewhere on the web. Search engines have an uncanny ability to judge the topic or theme of pages they are examining, and use that ability to judge the topical relationship of pages that are linked together. The most valuable incoming links come from sites that share topical themes.

Once a search spider finds your site, helping it get around is the first priority. One of the most important basic SEO tips is to provide clear paths for spiders to follow from point A to point Z in your website. This can be easily accomplished by providing to follow text links directed to the most important pages on the site in the navigation menu or simply at the bottom of each page. One of these text links should lead to site map, which lists and provides a text link to every page in the site. The site map can be the most basic page in the site as its purpose is to help spiders to find out site pages.

There will be cases where you want to hide some of the site content from spider. Therefore you'll need to know how to tell spiders that some site content is off limits and should not be added to their database using "robots.txt" files. Offering spiders' access to the areas of the site one wants them to access is half the battle. The other half is found in the site content. Search engines are supposed to provide their users with lists of pages that relate to the search terms people enter in their search box. Search engines need to determine which of billions of pages is relevant to a small number of specific words. In order to do this, the search engine needs to know your site relates to those words. [2]

Search engines have two functions major - crawling & building an index, and providing answers by calculating relevancy & serving results.

Search engines works as answering machines. When a person looks for something online, it requires the search engines to search their mass of billions of documents and do two things – first, return only those results that are relevant or useful to the searcher's query, and second, rank those results in order of perceived usefulness. It is both "relevance" and "importance" that the process of SEO is meant to influence.

To a search engine, relevance means more than simply finding a page with the right words. In the early days of the web, search engines didn't go much further than this simplistic step, and their results suffered as a consequence. Thus, through evolution, smart engineers at the engines devised better ways to find valuable results that searchers would appreciate and enjoy. Now, have a close look on how Search Engines Determine Importance. Currently, the major engines typically interpret importance as popularity – the more popular a site, page or document, the more valuable the information contained therein must be. This assumption has proven fairly successful in practice, as the engines have continued to increase users' satisfaction by using metrics that interpret popularity.

Popularity and relevancy are not determined manually. Instead, the search engines use mathematical equations – algorithms to sort the result pages. These algorithms are often comprised of hundreds of components. In the search marketing field, we often refer it as "ranking factors". [3]

2.1 Importance of SEO

Search engines take almost 90 per cent of all web traffic. Most of the search queries retrieve thousand and millions of results to choose from. So if your web site comes after first page on search engines for keywords relevant to your website, then you may miss out a large number of visitors because many visitors doesn't go for the second page. So if you want to increase your website ranking in most of the popular search engine you have to use a combination of correct keywords, inbound linkage, effective content and last but not the least the META tags. [4]

Here are some of the statistics to show the importance of SEO.

- 91% of Internet users use search engines to navigate the web.

- 9 out of 10 searches are done from the top 20 search engines

- 8 of 10 searches are done from Google, Yahoo and Bing

- 85% of search engine users do not look past the first 40 results.

- 77% of Internet users use search engines more frequently than any other online media to search web sites, surpassing banner ads, web links, e-mail links, etc.

- Search volume presently exceeds 300 billion per month worldwide [5]

2.2 Role of SEO in Web Development

The efficacy of a search engine is determined by how efficiently it provides you the search result. This depends on the search engine algorithm; there are lots of factors that help the search engine respond to your question with relevant answers. So depending on your page rank you will get the higher position in search result [6]

Businesses want their websites to have a strong and visible online presence so that they can attract visitors and generate revenue. With higher conversion rates, businesses are bound to experience growth rates. Website designers should not only focus on creating appealing websites, but also ones that are able to generate more targeted traffic. A SEO website design is essential for attracting search engine spiders to move the websites ranking up on search engines. [7]

Many web designers these days are incorporating SEO in the web design process. However, many companies do not take it seriously, and ignore the value of SEO while designing the site. A site with good SEO friendly web design will get good traffic. For example, many technologies make a site look "cool" but are not search engine friendly. If your website design uses many of these technologies, then you may either be blocking or slowing down a search engine when it tries to access the content on your website. If a search engine cannot quickly and easily access content on your website, you will not get high rank in search results. Incorporating SEO best practices in your website goes beyond just content and linking. It needs to happen with technology decisions, site architecture, navigation and more. And this is where SEO can play a vital role in your website design.[8]

SEO plays a crucial role in online business websites as well as other interactive sites. SEO helps to get more traffic to site with regular update of content. There are other ways like link exchange and subscribe to RSS Feed that are more crucial parts under SEO work. Based on the specific keywords SEO can generate good traffic and ultimately affect the revenue for e-commerce site. E-commerce site only get success when have good amount of traffic, SEO helps it to get decent traffic. To make a good business it is crucial to maintain the position on the search engines like Google, yahoo, Bing and others. The SEO ranking can be monitored by Alexa and other ranking site to monitor the position over the search engine. You can monitor your website by getting the rank to know the status of your website. [9]

3. JOOMLA SEO

Joomla is one of the most popular CMS on the market today. When you choose CMS as a web development SEO could be countable factor more precisely when you select any CMS you should check that how SEO-friendly it is, and how easily it enables you to include SEO content to your web pages etc. some of the CMS are design with SEO factor as one main consideration and some are not. This is one of the major aspects you need to aware when selecting any kind of CMS. [10]

Joomla! is software that lets you make and update web pages easily. You can think of a Joomla site as bringing together three elements.

- Your content, which is mainly stored in a database.

- Your template, which controls the design and presentation of your content (such as fonts, colors and layout).

- Joomla! which is the software that bring the content and the template together to produce webpages.[11]

Joomla has lots of SEO module out of that we have mentioned some important here.

1. Back Links Checker
2. Google Banned
3. Google Data Center
4. Google Pagerank
5. Search Index
6. Keyword Density / Suggestion
7. Link Popularity
8. Search Engine Position
9. Alexa Traffic Rank
10. Broken Links
11. Meta-Tags

4. DRUPAL SEO

The Drupal SEO Tools module seamlessly integrates a sophisticated all-in-one suite of search engine reporting, analysis and optimization tools into your website. It provides a dashboard that integrates analytics reports with links to webmaster tools and vital Drupal SEO modules.

The SEO tools suite integrates following features:

1. Keyword research
2. Keyword management
3. Keyword extraction
4. Content optimization
5. Content reports (via SEO Friend)
6. Content tagging
7. Link management
8. Content autolinking
9. Cornerstone content & silo management
10. Drupal SEO architectural enhancements
    a. Page titles
    b. Metatags
    c. Path & Pathauto
    d. Global redirect
    e. Path redirect
    f. XML sitemap
11. Google Analytics w/ API integration
12. Google Webmaster Tools [12]

Out of many here we mention some of the Drupal SEO modules

1. Page Title
2. Global Redirect Module
3. Nodewords
4. Pathauto

5. Sitemap
6. Path Redirect
7. Google Analytics Module
8. XML Sitemap

5. WORDPRESS SEO

WordPress SEO plugins is automatically optimize your WordPress blog for Search Engines. It has following features.

- Google Analytics support
- Support for Custom Post Types
- Advanced Canonical URLs
- Fine tune Page Navigational Links
- Built-in API so other plugins/themes can access and extend functionality
- ONLY plugin to provide SEO Integration for WP e-Commerce sites
- Nonce Security
- Support for CMS-style WordPress installations
- Automatically optimizes your titles for search engines
- Generates META tags automatically
- Avoids the typical duplicate content found on
  WordPress blogs
- For beginners, you don't even have to look at the options; it works out-of-the-box. Just install.
- For advanced users, you can fine-tune everything
- You can override any title and set any META description and any META keywords you want.
- Backward-Compatibility with many other plugins, like Auto Meta, Ultimate Tag Warrior and others.[13]

Out of many here we mentioned some Wordpress SEO modules which are important to get good SEO.

1. Google XML Sitemaps Generator
2. HeadSpace2
3. High Performance SEO:
4. Increase Sociability
5. Ping.fm Custom URL
6. Redirection
7. RSS Footer
8. SEO Friendly Images
9. Smart YouTube
10. Ultimate Google Analytics
11. WP-PageNavi
12. WP Super Cache

13.   Yet Another Related Posts [14]

6. JOOMLA, DRUPAL AND WORDPRESS SEO COMPARISON – A CASE STUDY

In above section we have seen the working of search engine and some information on SEO like Role and Importance of SEO in web development and SEO tips and techniques to improve the optimization. After that we come to know about some of the plugins for Joomla, Drupal and WordPress and their unique use. As we want to compare these CMSs for SEO purpose it is necessary to create certain condition to make comparison easy. SEO comparison can only possible when we have something common in all CMS. When we trying to perform this case study we came across Steve Burge one of the researcher also worked in the same area. Steve Burge and their team have done SEO test performed on Joomla, Drupal and WordPress. The details of the test are as under:

- They have launched 3 sites: Amritsar.net.in in Drupal, Jabalpur.net.in in WordPress and Vadodara.net.in in Joomla.

- They tried to make them as similar as possible. Each site has 8 articles of 500 words. Each site has had some keyword and title optimization. Each domain has a similar size and has comparable Overture results.

- They have Choose a relatively mutually respectful field (Indian cities) so that each domain has the potential for a big move in the search engine rankings.

- They have watched them carefully using Google Analytics and WebCEO, to track how well each one performs for its keywords.

- They have taken result after a year or so and check which solution has the best built-in SEO.[15]

After just a month they have taken some result and test has produced really interesting results.
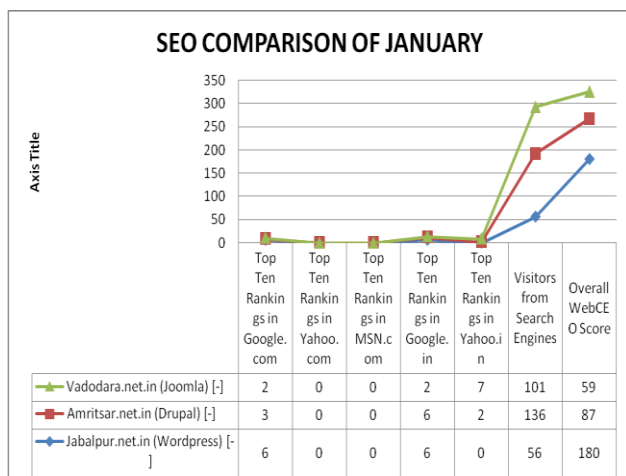
6.1 January Comparison

Fig 1: Seo comparison for january month

WordPress test site came on the first place and gain significant lead with Drupal in second place and Joomla quite a way behind. Google ranking can be considered as most

important ranking, the WordPress site is twice as successful as Drupal and three times more so than Joomla.

WebCEO is used to calculate overall score, and is based upon a website's top-5, top-10, top-20, top-30 rankings. [16]
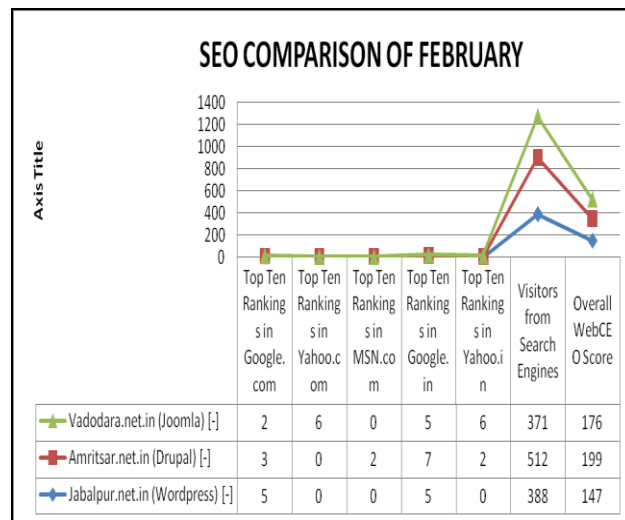
6.2 February Comparison

Fig 2: Seo comparison for february month

Within short time the WordPress site was so ahead that it look like that competition will be over. However, Joomla and Drupal also recovered themselves to significant level. The Joomla site is on top with 6 of its 9 keywords in Yahoo India and the Drupal site has two top-10 rankings in every search engine except for Yahoo.

All above thing surprise with one thing that can and do search engines distinguish between different forms of software? Does Google penalize a blog site if it is not updated in two months, this kind of frequent updates doesn't expect from CMS like Joomla and Drupal. [17]
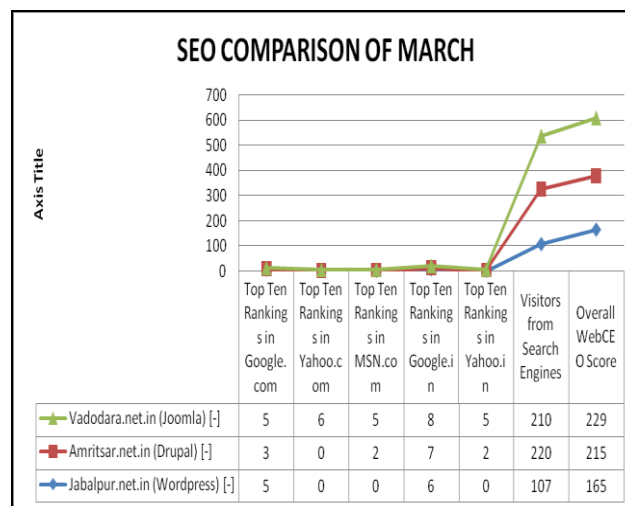
6.3 March Comparison

Fig 3: Seo comparison for march month

Joomla has shown its performance and its site got the highest ranking in all the major search engines. Drupal's site page got rank in all except yahoo.com. In the same scenario WordPress site also not get ranking in Yahoo.com as well as Yahoo.in. Joomla and Drupal site got double number of visitors than

WordPress. Joomla makes it ground with highest score in WebSEO.[18]
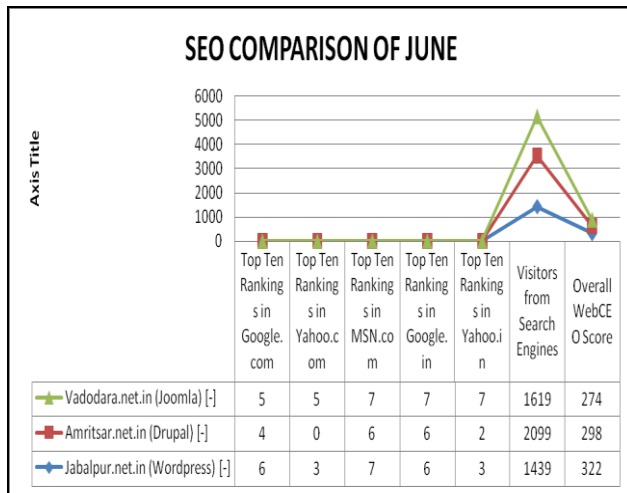
6.4 June Comparison

Fig 4: Seo comparison for june month

In the starting phase, WordPress site was far ahead that it seems that competition was over. Slowly however, Drupal and Joomla have recovered until things are more or less equal. There are lots of ups and downs we have seen, and finally it looks like the three sites have pushed themselves to a draw. The only major difference is that the Drupal site is lagging somewhat in Yahoo and MSN. Because of its early success however, it has managed to gather a much greater number of visitors from search engines. [19]

7. CONCLUSION

Search Engine Optimization (SEO) is highly dynamic in nature. The trends of search engine are changed year by year. In this paper we have also seen how major search engines like Google, Yahoo!, and MSN retrieve result set for the search query; they adopt unique techniques to identify the valuable contents through the web. Through case study we conclude that all three CMS are good for SEO and provide enough plugins to get good SEO but somehow Drupal is able to gain good number of visitors for its site we can put it above than rest of two.

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