

Comparative analysis of Google and Bing SEO on leading Croatian News portals

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Search engine optimization is a important task in professional web site design. Google dominates the search engine market but there are others, namely Bing, Yahoo, etc. How well are web sites optimized for other search engines and is it worth a trouble? What are the main differences between search engine algorithms?

This research paper tend to answer these questions by comparing Google and Bing. Research includes example study of Croatian news portals, analyzing their SEO parameters and results they get on a Google and its primary contender, Microsoft Bing.

I. INTRODUCTION

Enormous quantity of content on World Wide Web is not well organized. A web search engine is complex software which enables user to easily find required information on Web. Search engine basically acts as answering machine. Delivering relevant results to user's query is it's critical success factor – user who found information with one search engine will most likely use it again.

Search engines like Google, Bing, Yandex, etc. have developed different algorithms to rank results and present them to a user. Ranking algorithms are business secret, so knowledge about them are in fact assumptions based on literature. Google algorithm is complex, and it includes more than 200 elements which influence on relevance (and consequently position in result) of web pages which content is closest to user's queries [1]. First position on Google's search engine result pages (SERP) brings 32,5% while second position brings 17,6% of all clicks from SERP [1][2]. That means, if 40.000 queries in Croatia for term 'sport' are submitted in one month, first ranked result could receive about 13.000 of all clicks from users. So, natural tendency for website content publishers is to have their web page as higher as possible on SERP. Better positioning means more visitors to their website.

Based upon [3][4][5], search engine optimization (SEO) can be considered as continuous process which helps web pages to be better positioned on SERP. One class of SEO techniques can be applied directly on particular web page (so it is called on-page SEO). The second class is performed out of web page (it is called off-page SEO). But first of all, it is necessary to emphasize high importance of quality web page content. Quality content means unique, informative and/or interesting content from visitor's perspective. According to [6][7][8][9] quality content could hold visitor for longer time on website, and sometimes user will share that content with his friends on social networks – and that is

exactly a part of off-page SEO. Part of off-page optimization can be made by user – with no cost. On the other hand, poor content can decrease visitor's interest, so he can leave from website quickly.. Search engines learn from user experience, and if many visitors leave website from first page they entered within short time period, that page could fall down on SERP. Creating better content decreases efforts in SEO. If more publishers create equally good content, better SEO could help in better positioning.

II. SEO PHASES

Based upon [10][11][12][13] four main phases in SEO process can be differentiated: search term analysis, on-page SEO, off-page SEO and, finally, measuring results. If measuring results shows weak success, returning to previous phases with redefined tactics is necessary.

A. Search term analysis

Starting point in SEO is developing search terms strategy. Search term is word (or words) which user types into search box. Special online services known as keyword tools help analyst to find out appropriate synonyms, variations and phrases for specific keyword. Some of them provide search volume estimation on monthly basis. Important part of analysis is competitor identification. Trying to get top ranking with one generic single-word term can be unreachable goal for new website if many established competitors exists. With terms compound of two, three or even four words it can be easier to get in top ten ranking in SERP (having in mind that longer search terms have smaller search volume).

B. On-page SEO

Some of most important on-page optimization elements are [4][5][11]: title and description tags, headings, link structure, keywords density and consistency. Results of search term analysis (in further text: keywords) will be applied in on-page elements. Title tag is web page descriptor which is, besides in browser, shown to user in SERP. It is desirable to create eye-catching, not too long (up to 80 characters) title tag which contains exact match or variation of user's query. Meta description tag often (but not always) shows up in SERP, so effort to create concise description on page content can be rewarded by gaining more visitors. HTML header tags contribute to readability of longer text. Using clean URLs (URLs easily read by humans, not containing query strings or parameters) makes search engine easier to crawl pages on website. URL containing important keywords is

descriptive to user who can see it in SERP and in shared content on social networks.

Preferred keywords should appear in title, headings, description, URL and, of course, in page content. Myth is that keywords need to be an exact match, or there is an ideal keyword density in page. It just should be used in a reasonable manner [14]. High keyword density could have negative impact on ranking.

Page load time is also one of important on-page SEO element which influences on user experience. Smaller load time is better, and can be achieved by using caching method, gzip compression, minifying CSS, HTML and JavaScript, prioritizing visible content etc.

C. Off-page SEO

Search engines count link to a page from another website as vote for that page [3]. More external links (or backlinks) does not automatically mean better ranking. Key is value of backlink. Search engines have ways to determine values of links. Backlinks from reliable or popular sites have greater value [6]. More value for sport page has link from sport shoes related website than from jewellery related website. Search engines prefer links from more authoritative and trusting sites because such links are harder to get.

Recently anchor text (visible text in hyperlink) was highly appreciated by search engines, but now things have changed [15]. SEO masters used same anchor texts excessively in links from other websites, but it was indicator to search engine that such links could be made by professionals [16]. There is an opinion in SEO community that search engines now like more imperfectly structured links (variations in anchor text, using 'click here' in anchor text, links without anchor text) [17]. That could mean non-professional user put link to web page, and such user usually does not know anything about anchor text. Mix of two above mentioned types of inbound links is considered as the best for SEO at this moment [18].

Social media links are unavoidable part of off-page SEO. Social media activity helps search engines to determine page relevancy. Higher social network activity increases authority of website and it also directly brings visitors to website.

D. Measuring results

Performance measurement activities are necessary in efficient SEO. Keyword rank monitoring, traffic tracking, link tracking and cost of SEO (time and money) are inputs for adaptation, improvement and planning a new SEO cycle.

III. BING VS. GOOGLE SEO

Search engines publish guidelines to webmasters for optimizing web pages. Some of general Bing recommendations are [19]:

- clear, deep, easy to find, rich and engaging content which provides visitors information they need
- inbound links as signal of popularity

- social sharing as impact on organical rank (unpaid position on SERP)
- technical part such as using sitemaps, robots.txt files, fast page load time, redirects and canonical tags
- using title, description and header tags

Some of Google guidelines are [20]:

- create useful, information-rich site with clear hierarchy and text links
- include words users would type to find a page in page content
- create pages primarily for users, not for search engines
- use sitemaps, robots.txt, optimize load times
- reasonable number of links on a page

Search engines emphasize avoiding techniques which try to deceive users and search engine (known as black hat SEO) such as:

- cloaking (showing one content to search engine and another content to visitor),
- link buying, link spamming, participating in link schemas
- duplicate content
- meta refresh redirects
- automatically generated content
- hidden text and links
- sending automated queries to search engine.

Differences between Google and Bing SEO ranking factors which make search engines unique are not easy to determine. Comparing various resources on Web, some findings however can be obtained [21][22][23] as shown in Table 1.

Table 1. Differences between Bing and Google SEO ranking factors

	Bing	Google
Caching	caches first 100 KB of most pages	has no problem with larger pages
Indexing	discards pages with no ranking authority	indexes every file
Keywords in title	heavier emphasize on keywords, doesn't consider position of keyword in the title of page	lighter emphasize on keywords, considers keyword in the title of page as ranking factor
Natural links	less emphasize	more emphasize
Flash	more friendly	less friendly
Fresh content	less important	more important
Exact matching keywords	necessary	not necessary thanks to better understanding of synonyms
Domain age	more important	less important

Google is dominant search engine. According to [24] Google is used by 97.49%, Bing by 0.95% and Yahoo by 0.48% users in Croatia in 2013. Most of Croatian SEO efforts are aimed toward Google. But Bing US market share is 18.2% [25]. Since US market determines worldwide trends it is clear that Bing is not irrelevant.

IV. SEO ANALYSIS

In order to determine how are Croatian sites optimized for search engines and what results they achieve on two major search engines we selected five leading news portals in Croatia: www.index.hr, www.jutarnji.hr, www.vecernji.hr, www.net.hr and www.tportal.hr. List is kept only five sites short in order not to lose focus by analysing too much similar sites. Criteria for selection was site popularity, but also a differences in site designs and SEO approach. News portals are selected because they should rank rather high in search results in Croatian language.

Basic SEO parameters that are taken in account are: Woorank grade, Google PageRank, number of indexed pages, backlinks, Facebook likes, Twitter backlinks and load time. Tools used in all analysis are Woorank and Webrank.

A. Woorank grade

Woorank grade is dynamic grade on a 100 point scale that represents internet marketing effectiveness at given time. Many parameters are considered in Woorank grade, so it's a relevant global grade for SEO.

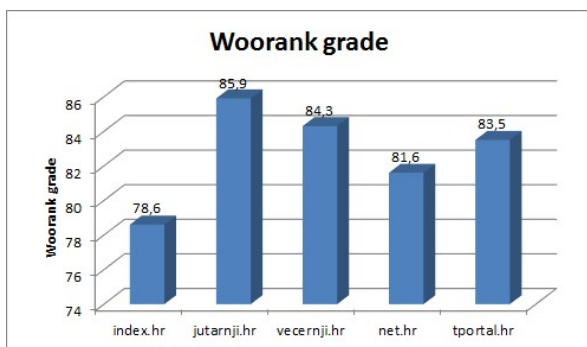


Figure 1. Woorank grade

Jutarnji.hr had the highest score and index.hr the lowest, but that grade is dynamic so results may vary in future.

B. Google PageRank

PageRank is an algorithm used by Google Search to rank the relevance of websites in their search engine results. According to Google: 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 [26]. PageRank goes from 1 to 10, 1 is the worst and 10 is the best PageRank.

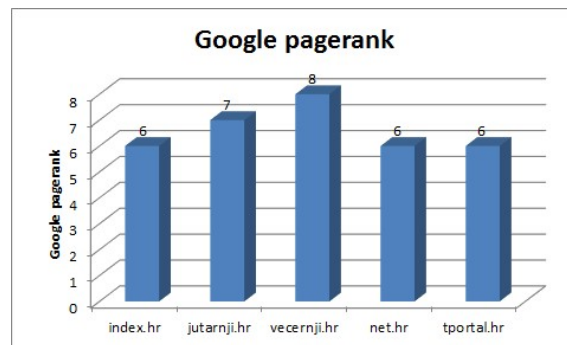


Figure 2. Google pagerank

The highest PageRank has vecernji.hr, followed by jutarnji.hr, remaining three news portals are equally leveled.

C. Indexed pages

Every search engine has its crawler engine that scans all web pages on single site and index them. Number of pages changes regularly, but it is very important factor in search engines ranking. Generally more is better. Here are the results for our portals:

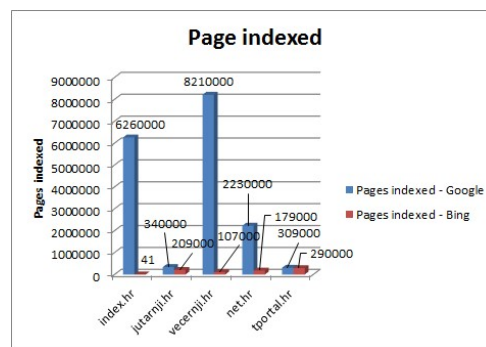


Figure 3. Page indexed

D. Backlinks

Backlinks, also known as incoming links, inbound links, inlinks and inward links, are incoming links to a website or web page. In basic link terminology, a backlink is any link received by a web node (web page, directory, website, or top level domain) from another web node [27].

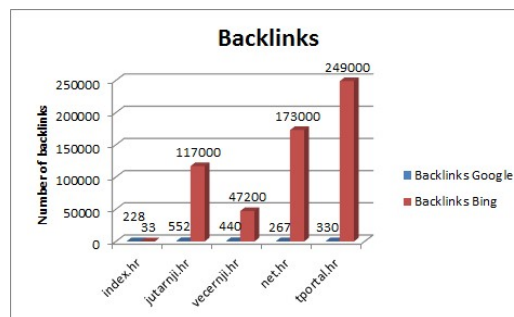


Figure 4. Backlinks

There is noticeable difference, Google has far less backlinks than Bing. It is consequence of very strict polices of Google to remove all links that are considered unimportant. This way Google ignores all marginal or fraudulent links. Bing is at this point less advanced and can be easily misled by fake links.

E. Social

Social networks mentioning (likes, shares, etc.) have a huge influence in SEO. Two major social networks Facebook and Twitter are considered in this analysis.

I. Facebook

Importance of Facebook in today's web cannot be overstated. But here Bing has an advantage, as Facebook data is pretty much inaccessible for Google which is one of the greatest problems that Google faces in order to keep market dominance. Here are the Facebook likes for our sites:

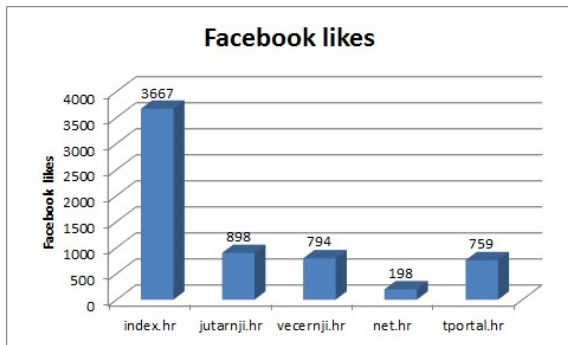


Figure 5. Facebook likes

It is clear that index.hr dominates in this segment which is a clear indication of better integration of this site with social media sites.

II. Twitter

Twitter data are accessible as a paid service to both of search engines and is considered an important factor in search results.

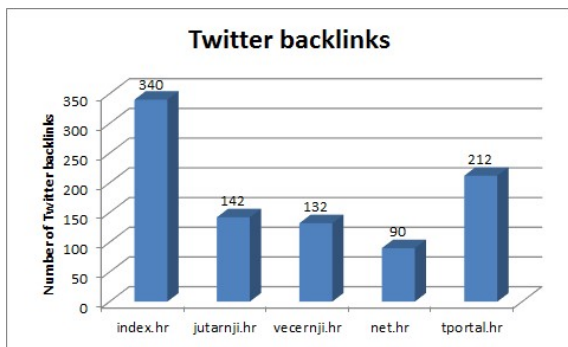


Figure 6. Twitter backlinks

Twitter backlinks are evenly distributed but index.hr has a slight lead even here.

F. Load time

Load time describes the amount of time needed to present the requested page to the end user. Higher load times often indicate not just more multimedia content but poorly designed sites. Naturally, sites that have inadequate structure, unclear design, and HTML and JavaScript errors score noticeably lower in search results. It is general

opinion that Google puts much more accent on this parameter.

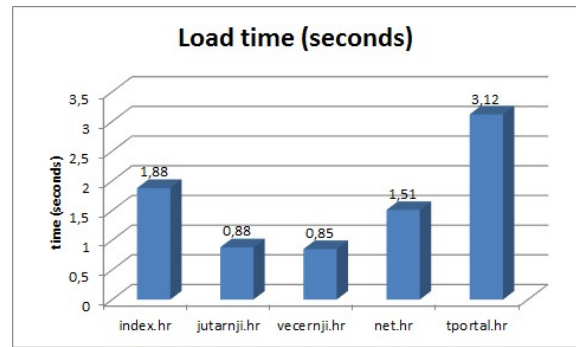


Figure 7. Load time

Tportal.hr has the highest load time, which should indirectly result in worse search rankings.

V. SEARCH ENGINE RESULTS ANALYSIS

Search results ranking for selected news portals is tested for typical daily news search phrases in Croatian. Having in mind site relevance, they all should rank rather high in observed searches, definitely in the top one hundred. However, this wasn't always the case in the performed analysis. Also, there are sometimes significant differences in Google and Bing rankings. Achieved results are shown in the following table (0 indicates site is not listed in top hundred results):

Table 2. Search phrase analysis

Search Phrase	index.hr		vecernji.hr		jutarnji.hr		net.hr		tportal.hr	
	Google	Bing	Google	Bing	Google	Bing	Google	Bing	Google	Bing
novosti	92	0	77	0	5	7	0	86	0	0
vijesti	1	8	4	51	2	10	7	46	8	76
najnovije vijesti	1	1	3	7	4	12	6	9	34	59
vijesti iz hrvatske	1	3	6	4	2	2	4	17	9	0
novosti iz inozemstva	75	0	9	20	4	45	0	18	85	0
hrvatska	18	41	37	0	0	0	47	0	12	51
svijet	8	0	3	2	4	8	25	32	6	51
sportski rezultati	53	0	0	0	15	0	2	8	50	0
vremenska prognoza	21	95	23	0	17	0	23	32	19	83
ljepota i zdravlje	2	33	57	0	42	0	16	18	0	0
dnevni horoskop	0	0	11	36	5	10	6	57	2	43

VI. CONCLUSION

Presented results clearly show that targeted sites usually rank lower than they should in search results. Search term "novosti" is common also for Serbian, Bosnian, and similar languages, so ranking here is a bit lower but still, "not in first 100", is not an acceptable result for any of the selected sites. One factor, not initially considered, emerged as truly important: clean URL's (uniform resource locators) [26]. Well-defined URL's that include search phrase words were ranked high, even when they originated for not so relevant sites. Also, in search results from Table 2, URL structure that didn't comply with the clean URL standards resulted in lower rankings.

When we compare Google and Bing results, it is clear that selected sites are usually ranked far worse on Bing. This is partially proof of superiority of Google search engine but also a strong indicator that sites didn't took Bing in consideration, maybe even didn't created XML site maps for Bing. It should be possible to greatly improve search results with dedicated Bing SEO effort. Having in mind recent iOS Bing integration, it is clear that although Bing is distant second in market share, it cannot simply be ignored in SEO process. Generally, Bing SEO should bring more visitors and enhance profitability for specific news sites.

Altogether, we can assess that SEO is done only partially on selected sites and have potential of further improvement. At this point, all observed sites are losing potential visitors due to unsolved SEO issues. There is definitely potential for improvement in SEO process for researched Croatian news portals.

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