

Definition: *Search engine optimization* is the art of designing or modifying Web pages so that they achieve high rankings in search results and pass converting traffic.

Definition: *PageRank* is a Web document valuation model developed by Larry Page (for whom the model is named) and Sergey Brin. PageRank is used to estimate the probability that a person will arrive on any particular Web page simply by randomly clicking on links. Page and Brin believed, when they created this model, that links are natural indicators of value between Websites. Although this is not true, the Google search engine that Page and Brin founded does incorporate PageRank into its indexing algorithm.

Introduction: Search engine optimization is a form of Website marketing that seeks to achieve the best possible results in generating referrals from Web search engines. The search optimizer helps the Website developer define the focus and scope of Web content, as well as the internal structures that facilitate appropriate indexing in search engines. Because today's search engines place great value on linking relationships, many search marketers concentrate on building links to Websites. This very limited approach often results in Websites losing or failing to achieve good rankings.

A complete search engine optimization plan balances resources (in time, effort, and money) between creating good content that is well organized for indexing and between promoting that content through links on other Websites. The best links are placed without request or exchange and give no consideration to "anchor text", PageRank, or other marketing values. Links help search engines find new content. They also help search engines determine how trustworthy Web page may be. And links can (but do not always) pass value in the form of PageRank and link anchor text that may be used by search engines to organize the data in their indexes.

How Search Engines Determine Results: When you type a query into a search engine, the engine scans its database for documents that may be relevant to your query. It looks for matches between the items in your query (called "keywords") and terms in the documents. The rarity of the terms, the emphasis placed on them in the document, and the frequency of their use in the document all help determine how relevant the document is to your query. Some search engines also associate the link anchor text documents use to point to each other to influence relevance scores.

A document's *relevance score* is thus derived from on-page factors, off-page factors, or (most often) a combination of both.

Some search engines, like Google, also add a document value score, usually called PageRank, to the document's relevance score. The PageRank of a document only *weights* the document's relevance score and in most queries PageRank does not have enough influence to change search results.

- 1. SEO words best when incorporated from the starts.** The best time to optimize a Website is when you design it. Many Web developers are not trained in even basic search engine optimization and SEO specialists often are asked to improve Web page rankings in search results after the Websites have been designed and installed. It is much, much easier and far more

productive for the SEO specialist and the Web designer to work together as the site is being designed.

- 2. On-page factors are found in both the HEAD and BODY.** Many people still wrongly believe that search engine optimization is only concerned with titles and the keywords meta tag. A fully-optimized page incorporates SEO knowledge into many on-page aspects.
- 3. Each page should emphasize 1-3 unique expressions.** Many Websites use the same text for their titles and headers. This limits the ability of a Website to achieve high relevance scores for multiple expressions. Each page on a site should be about a distinct topic. Accordingly, each page should emphasize its unique topic first. Of course, many pages include content about 2 or 3 related topics. It is often possible to optimize a page for 2 or 3 expressions.
- 4. No one factor is more important than others.** Some SEOs try to include every on-page factor possible. Some SEOs only include certain factors, ignoring all others. Your inventory of on-page factors allows you to be flexible and you should not limit yourself to specific requirements. Each page is different and you should assume all factors have an equal chance of improving search results. In practice, many pages score well for relevance without using some of the most popular on-page factors. If it makes sense to do something that provides search optimization value, do it. But don't do anything just to improve search optimization value.
- 5. Usability and accessibility standards are great SEO guidelines.** It is no mistake that many very usable and universally accessible pages achieve high rankings for a variety of queries. The search engines are "users" just like people. What you do to make a human visitor's page navigation experience easier and smoother usually helps the search engines as well.
- 6. HTML elements do not "hurt" SEO.** Flash, frames, HTML tables, CSS, Javascript – all have been criticized as being "bad" for SEO. Only a very few design elements hurt your search engine optimization. Macromedia made the technology to index Flash content available to search engines in 2005. Search engines have been actively retrieving style sheets and Javascript template files since 2003. Javascript is generally analyzed for sneaky redirects and may be completely indexed; the search engines can and do look at the Javascript very closely because it has been widely abused.
- 7. Don't be sneaky.** If you are tempted to hide anything from visitors on a Web page, the chances are very good that you are violating a search engine's guidelines. Let your visitors see everything the search engines see; let the search engines see everything your visitors see. Some legitimate practices intended to produce cool effects (like mouseovers) have been abused but the search engines strive to determine what is legitimate and what is sneaky. If you are in doubt, trust your instinct. Try a different approach in your design work.
- 8. Repetition is important but should not be abused.** The more often you repeat a word in a document (or in links pointing to the document), the higher that document's relevance score will be for that word. But keep your visitors in mind. If seeing a word repeated 30 times on a page makes the copy look ugly, don't repeat the word 30 times. Resist the urge to follow the path of "if one is good for me, 20 will be better."
- 9. Link effectively, not profusely.** Many links never help the search engines find Web pages. Links embedded in Javascript, Flash, or dropdown menus may or may not be crawled. The best links

are still static HTML text links with no special attributes. You should use a consistent format for all links (absolute URLs are recommended by most search engines). Use your link anchor text to describe the content uniquely but concisely. The most often used but least useful anchor text keyword is “home”. Your homepage link will work best if you use the site name.

- 10. Use on-page factors that help SEO.** Remember that you are not obligated to use all these factors. But neither should you ignore any of them. They all help about equally. The one element that is almost universally believed to be more important than others is the page title element.
- a. **Title** - The page title is often used by search engines as anchor text in their listings. Your title should inform people about the page’s content. Be as descriptive as possible. Refrain from repeating keywords “for SEO”. Use keywords wisely. Titles should be no more than 65 characters long. Two common, effective formats are:
 - i. **Site name – Page description using keywords 1-2 times**
 - ii. **Page description using keywords 1-2 times – Site name**
 - b. **Meta description** - The meta description tag may be used by search engines in their listings. It should describe the page in greater detail than the title and offer a brief but compelling reason for people to visit the page. Meta descriptions should be no more than 250 characters long. Use plain, simple language. Avoid superlatives like “best”, “greatest”, ‘proudly”, “proudest”, etc.
 - c. **Meta keywords** - The meta keywords tag may still be honored by smaller search engines but Google and Bing disregard it in their general Web search results. Use the meta keywords tag only for internal site search tools.
 - d. **Meta robots** - By default, search engines assume “index, follow, archive” for all pages but it doesn’t hurt to include them. Future legal settlements may require Web designers to explicitly extend permission to search engines to index, follow, and archive content. NEVER use “noarchive” until a page has appeared in the search engines’ indexes (“noarchive” almost guarantees that new pages won’t be indexed). “Nofollow” is generally regarded as a sign that someone is being sneaky about link exchanges. Only use “nofollow” to control how search engines crawl your own site. Use “noodp, noydir” to tell search engines not to use descriptions from DMOZ and the Yahoo! directory in their search results. Search engines will generally use your meta description tag if they see these values in your robots meta tag.
 - e. **Hx headers** - The search engines look at Hx headers as being approximately equivalent to using BOLD (or STRONG) and a large FONT size. It doesn’t matter if you use Hx headers or just BOLD large FONT text snippets. However, DIVs and SPANs are not substitutes for Hx or FONT with respect to how search engines evaluate emphasis placed on text. The greater the emphasis you place on keywords through large FONT sizes, BOLD (or STRONG), ITALICS (or EM), etc., the higher your page’s relevance score becomes for those words.
 - f. **Bold or Strong** - The search engines have indicated they treat BOLD and STRONG elements equally. It is probably best to use the STRONG element consistently. DIVs and

SPANs are not substitutes for BOLD or STRONG. The search engines can parse style sheets but they may not associate emphasis derived from class definitions with text embedded in DIVs and SPANs. Also, some Websites block crawlers from accessing their style sheets.

- g. Italics or Emphasis** - The search engines have indicated they treat ITALICS and EM elements equally. It is probably best to use the EM element consistently. DIVs and SPANs are not substitutes for ITALICS or EM.
- h. Quoted text** - Placing quotes around text is a rarely utilized technique for providing emphasis. Both single quotes (') and double quotes (") appear to work effectively. The search engines may not recognize fancy quotes. They will NOT recognize images of quotes.
- i. Underscored text** - Underscored text is also a rarely utilized technique for providing emphasis.
- j. Image alt= text** - The alt= text attribute is intended for browsers that don't support images (or in which images are not being displayed). Use it appropriately. Make the text robust but relevant to the image it is supposed to describe. Unfortunately, search engines do not index **title** attributes on either links or images. You may be required to use the same or similar text in both alt= and title= attributes for compliance with non-search standards.

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