



Search Engine Optimization

Policy and Governance
Creative Services, Communications Division

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TxDOT will optimize all webpages on TxDOT.gov and partner websites to make them visible through proven search engine optimization techniques.

Sponsor

The Chief Communications Officer is the **sponsor** and has signed off on the search engine optimization strategy on XX/XX/XXXX.

Living Document

The field of search engine optimization is evolving, and as the industry grows and changes, this document will evolve as TxDOT becomes more proficient in its techniques.

Purpose

The purpose of the search engine optimization plan is to:

- systematically make pages as visible to meet the searchers needs without financial transactions,
- increase search traffic to website,
- increase perceived authority on transportation related topics for Texas.

Result

This process will result in continuous improvement for the user's experience so that user's are able to locate desired information quicker, increase appropriate search terms to appropriate content on website and heighten TxDOT's authority.

Oversight

Communications Division's Creative Services section is the office of primary responsibility over search engine optimization.

Expectations

- Creative Services will implement optimization techniques to improve findability of pages on TxDOT.gov and partner websites.

Roles and Responsibilities

- Creative Services will implement optimization techniques to improve findability of pages on TxDOT.gov and partner websites.

What is Search Engine Optimization

Search engine optimization (SEO) is the process of affecting the visibility of a website or a web page in a search engine's "natural" or un-paid ("organic") search results.

As an Internet marketing strategy, SEO considers how search engines work, what people search for, the actual search terms or keywords typed into search engines and which search engines are preferred by their targeted audience. Optimizing a website may involve editing its content, HTML and associated coding to both increase its relevance to specific keywords and to remove barriers to the indexing activities of search engines. Promoting a site to increase the number of inbound links is another SEO tactic.

How search engines work

Search engines have two major functions: crawl the web to build an index of all documents and to provide answers to research queries. Search engines move from page to page to learn about the below features in order to build an index of information about the page.

- Who links to that page?
 - Are there any links from high authority websites such as news websites, government websites, social media websites like Twitter and Facebook, or blogging websites such as Wordpress.com and Blogger.com
- What is the content of the page about? What words are on that page?
- What images are on the page?
- What documents are linked from the page?
- What other pages can I get to from that page?

When a user makes a search query, the search engine uses the index to determine which pages are most relevant to the search query.

Criteria for ranking your website or webpage relevancy

Google, Bing and other search engines are always improving how they determine the most relevant pages for the search query. But the general concepts comes down to how well they trust the website or webpages. They determine their trust though:

- Trust through Authority – Authority relates to how important Google see a specific webpage.
- Trust through Content – On the Web, quality content is king. Which means delivering unique high-quality content on topics that are well-researched on a daily basis.

- Trust through Age – The older the domain and number of times the page was indexed, are valued higher. New domains and URLs will always rank lower until they build their trust with Google, which will take a long period of time (For the first two years, in Google’s eyes you are considered a new friend that needs to establish that you are trustworthy. Until you prove to Google that you are trustworthy your Pagerank will be low (0-2). Because of this it is always better to add your content to TxDOT.gov, which is a government website that will always have high trust authority with Google, then creating a new website. If you must purchase a domain purchase (from GoDaddy Auctions) an "aged domain", which is a domain name that already existed but is not longer in operation. Do your research of the domain before purchasing - see Purchasing Aged Domains through GoDaddy Auctions for instructions.

Fundamentals of building trust

- Add new high-quality content on a daily basis
- Over time, gradually get a variety of high-quality websites that Google already trusts to add links to your content. The best links are from in content pages - meaning a page of content that discusses the topic linking to domain, instead of just footer links or a page of listed links.
- Increase shares, likes, tweets, videos views, etc. from social media to your content over time

Off-site Principles

- For each domain, create a Google webmaster tools account to learn about or provide:
 - Crawl errors
 - Search engine queries
 - Sitemap
 - Link to site
 - Internal links
 - Index Status
 - Content Keyword
 - Robots.txt file
- Build Authority through content
 - Using blogging sites that already have a high pagerank such as Blogger.com or Wordpress.com create an website such as TxDOT.Blogger.com or TxDOT.Wordpress.com. On these domains create high quality content opimize them for primary keywords, then add links to you domain on a daily basis. These sites are indexed very often and will help with your own domain pagerank. Search engines will see these trusted domains (TxDOT.Blogger.com

- and TxDOT.Wordpress.com) linking to your own domain (TxDOT.gov) and begin to trust your domain (TxDOT.gov) more.
- Do the same for Hubpages.com and Tumblr.com though not blogging sites allow you to create pages about your primary keywords and niche topic. Optimize the pages for keywords. Then add links back to the domain pages.
- Add your Powerpoints, PDFs, Word files etc to Scribd.com and Slideshare.com. Add keywords, tags, titles and descriptions to your files. Then add links back to the domain pages.
- All natural and organic links from high authority websites and social media sites directly to the domain.
- Creating and Optimizing Linkbait - is content (photos, videos, infographics, text) that everyone wants to share because it has value of some sort - entertainment, informational, etc.
 - Provide content for free and in return collect email addresses to build up a subscription email list
- Building and Optimizing Videos
 - Create videos entertainment or instructional that you can create easy and add to Youtube and Vidmeo. Add primary and secondary keywords, tags, titles, descriptions and links back to the domain.

On-site Principles

- Create an enjoyable user experience for your site
- Be sure your site loads quickly
- Be sure you can get any where from any page within the site
- Create a site map
- Create information-rich content that adds value to users, that is unique and engaging
- Create content that is keyword driven, making sure that each page has a specific purpose, that the content on that page stays on topic. A keyword can be a word, a group of words, or a phrase that help Google determine what the webpage is about.
- Use text links instead of image links
- For external links that do not link to any of our partner sites, use the nofollow tag.
 - When to use the nofollow tag: Links to newspapers, TV stations and other media outlets,
 - When to not to use the nofollow tag: Any partner website: My35, I-69, Grandparkway, etc. MPOs, RMAs, public transportation
- Be sure to use these tags to help Google understand what the page topic/content is about: <title>, <alt>, <h1>, <h2>, <h3>, <bold/strong>, <italic/emphasis>, use primary keyword of page within these tags

- No broken links
- URLs have primary keyword - don't use acronyms EXAMPLE:
www.TxDOT.gov/DontMesswithTexas.html not
www.TxDOT.gov/DMWT.html
- Images:
 - use descriptive filenames that include primary keyword,
 - use <alt> tag,
 - use high-quality photos that are in focus
 - use original images
 - always add image dimensions
 - place images close to the top of the page
- Videos: use Schema.org for marking up video information
- Limit use of javascript, flash and DHTML
- Search engines need to be able to crawl without the useage of session ids
- Use HTTP Header support - this informs Google when the page was last modified
- Create a Robot.txt file for all domains to inform Google only where they should not crawl.
- If you use a CMS - be sure that all your pages are crawlable
- Be sure that your site is cross-browser compatibile - meaning having the similar user experience across all browser (web and mobile)
- Use a content inventory to keep track of the primary and secondary keywords for each page

What not to do

- Don't include too many ads on a page
- Create doorway pages - these are pages that look different to search engines than people
- Link farming - creat hundreds/thousands of links back to your content through automatic link creating software
- Content farming - having vast number of freelancers to develop content in order to target seach engine algorithms - results with low-quality content

On-page Principles

- Design each page for users not search engines
- Each page needs to have high-quality content including homepage (not just images). High-quality content answers questions that users are seeking by addressing a specific need. The content length of a page should be tween 500 and 1000 words per page. Do not have one long

piece of content, but instead section into multiple groups of smaller bits of content.

- Always use primary keyword and/or secondary keywords at least once in the first and last paragraphs of the page.
- Use related or secondary keywords through out the content to help increase Latent Smeantic Indexing which Google values. Write to have a 2-5% keyword and secondary keyword density per page.
- Use keyword styling, at times throughout the page, use the keyword in bold or italics.
- When creating webpages use the keyword in the URL. example:
www.TxDOT.gov/high-speed-rail.html
- Use primary and/or secondary keywords in the meta description tag.
- Use primary and/or secondary keywords in the title of the page. Also include keywords and secondary keywords in your H1-H3 tags.
- When you add content - ping Google with Linklicious so that Google will index the site, specially if you have a low Pagerank score
- Keep keyword content above the fold line, these includes article title, relevant heading tags and keywords
- Have a reasonable amount of links per content page, portal style pages are exceptions. Try to reduce the number of portal style pages.

What not to do

- Keyword stuffing in neither meta tags nor within the content
- Invisible text - text that is the same color as background text in order to perform keyword stuffing that the user would not read

Purchasing Aged Domains through GoDaddy Auctions

When considering a new URL, consider purchasing an aged domain that has already been indexed by Google.

- Find a URL that the historical content matches the content of the website you wish to build. Use Wayback Machine to view the historical content to determine if it matches your intended use.
- Using the Wayback Machine look at the historical index to see when and how often the domain was indexed by Google. Then view the content of the webpages during that index. The URL must have been indexed by Google at least once two years ago. It is much better if the URL is older and index multiple times by Google.
- Use Wayback Machine to follow traffic patterns of the domain. If you see a sudden drop in traffic the domain might have been penalized by Google. Do not purchase a domain if it as been penalized for it will take too long

to build up the trust for Google to increase its pagerank. Google does not provide a list of domains that are penalized.

- Once you make a purchase it can take several days to multiple weeks for the URL to transfer.

Social Media and SEO

As of 2014, TxDOT must have the following social media accounts. These account must be connected with each other. Since these sites already have a high pagerank and trust value with Google, links from them will help to improve trust of your content. When a search is conducted on a keyword we want multiple results coming that TxDOT owns - URL, Facebook page, Twitter account, YouTube account, etc.

- Twitter (Pagerank 10)
- Facebook (Pagerank 9)
- Google+ (Pagerank 9)
- YouTube (Pagerank 9)
- LinkedIn (Pagerank 9)
- Xing (Pagerank 9)
- Vimeo (Pagerank 9)
- Pinterest (Pagerank 8)
- Tumblr (Pagerank 8) and Hubpages.com (Pagerank 6)
- Slideshare (Pagerank 8) and Scrbd.com (Pagerank 8) - we should add all of our Commission presentations, PDFs and Word files.
- Additional Social Media outlets to consider and might only be appropriate for certain types of content:
 - Plurk.com, Reddit.com, LiveJournal.com, MySpace.com, Lifestream.AOL.com, Typepad.com, Delicious.com, Slashdot.com, StumbleUpon.com, About.me, Bibsonomy.org, Devianart.com, Diigo.com, Instapaper.com, Newsvine.com, Storify.com, Scoop.it, Bitly.com, Tagged.com, Skyrock.com, Hi5.com, Kaboodle.com, App.net, Kippt.com, Jumptags.com, GetPocket.com, Folkd.com, Webshare.co, LinkaGoGo.com, ZooTool.com, Sonico.com

Analytics and SEO

In order to know if your SEO efforts are making any difference you will need to track:

- Unique visitors, segmented by traffic source
- Time on site/page
- Top pages are getting the most visitors segmented by traffic source
- Keywords that visitors used to find your site, segment those keywords by conversions

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- What is the pagerank for each of the keywords - (most accurate way to do is pay Moz.com \$99 per month)
 - Onsite search – are people able to find what they are looking for?