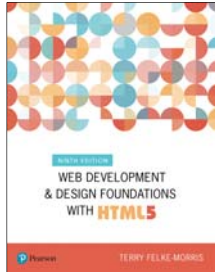


Web Development & Design Foundations with HTML5

Ninth Edition



Chapter 13

Web Promotion

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Learning Objectives

- 13.1 Identify commonly used search engines and search indexes
- 13.2 Describe the components of a search engine
- 13.3 Design web pages that are friendly to search engines
- 13.4 Submit a website for inclusion in a search engine or search directory
- 13.5 Monitor a search engine listing
- 13.6 Describe other website promotion activities
- 13.7 Use the iframe element to create an inline frame

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Popular Search Engines

Market Share Survey Results for a Recent Month:

Google	77.98%
Bing	7.81%
Baidu	7.71%
Yahoo!	5.05%

Source: <http://www.netmarketshare.com/search-engine-market-share.aspx?qprid=4&qpcustomd=0>

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Search Engine Components

- Popular Search Engines:
 - Google <http://www.google.com>
 - Bing <http://bing.com>
- Search engines use the following components:
 - Robot or “spider”
 - Database (also used by search indexes)
 - Search form (also used by search indexes)

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Search Engine Robot

- Also called a spider or bot
 - A computer program that follows hyperlinks and “walks” the Web -- accessing and documenting web pages.
 - Categorizes the pages and stores information in a database.
- May access the following components of web pages:
 - title
 - meta tag keywords & meta tag description
 - text in headings
 - other text on the page
 - hyperlinks
- See <http://www.robotstxt.org>

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Search Engine Database

Database:

- A collection of information organized so that its contents can easily be accessed, managed, and updated.

Database Management Systems (DBMSs)

- Configure and manage database
 - Oracle, MySQL, Microsoft SQL Server, IBM DB2

Search Engine Database

- Contains information about web pages

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Search Engine Search Form (1 of 2)

- The part you are most familiar with!
- The search form is the graphical user interface that allows a user to request a word or phrase to search for.
- The visitor to the search engine types words (called keywords) related to their search into the text box.



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Search Engine Search Form (2 of 2)

- When the form is submitted, the data typed into the text box is sent to server-side processing that searches the database using the keywords you have entered.
- The search results (also called a result set) is a list that contains information such as the URLs for web pages that meet your criteria.



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Search Engine Results Page (SERP)

- A list of items that describe web pages matching the search terms.
 - Each item contains a link to a page along with additional information that might include the page title, a brief description, the first few lines of text, the size of the page, and so on.
- The order the web page items are displayed in the SERP may depend on:
 - paid advertisements
 - alphabetical order
 - link popularity
- Each search engine has their own policy for ordering the search results.



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Designing Web Pages for Promotion

Keywords

- Terms and phrases that people may use when searching for your site.
- Words or phrases that describe your web site or business.
- Create a list of them
- Include common misspellings

Description

- What is special about your web site that would make someone want to visit?
- 25-30 words -- inviting and interesting
- Some search engines will display your description in the SERP



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Description Meta Tag

- The meta element
 - A stand-alone tag
 - Placed in the head section
 - Attributes:
 - name
 - content

```
<meta name="description" content="value">
```



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Example: Description Meta Tag

Example: "Acme Design"

```
<meta name="description" content="Acme Design, a premier web consulting group that specializes in E-commerce, website design, website development, and website re-design.">
```



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Search Engine Optimization (SEO) (1 of 3)

- Determine keywords
- Page Title
 - Include the company and/or website name
 - Include selected keywords as appropriate
- Heading tags
 - Include keywords
- Text on page includes keywords



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Search Engine Optimization (SEO) (2 of 3)

- Linking
 - Provide text navigation hyperlinks
 - Verify that all hyperlinks are functioning
- Page Layout
 - Use CSS for page layout
- Images & Multimedia
 - Configure meaningful alternate text
 - Be aware that text and hyperlinks contained within multimedia may not be accessed by search engine robots



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Search Engine Optimization (SEO) (3 of 3)

- Valid Code
 - Validate HTML
 - Validate CSS
- Content of Value
 - Follow Web Design Best Practices
 - Well-organized
 - Meaningful & useful to your target audience



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Listing in a Search Engine

- Wait until your site is finished
- Don't submit "under construction" Web sites!
- Locate the "Add URL" or "Submit Your Site" page for a search engine
- Follow the directions and fill out the form
- A robot from the search engine will visit your website and index it
- Allow several weeks and test the search engine to see if your site is listed



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Preferential Placement (1 of 2)

- **Offers vary:**
 - Example: Google's AdWords
 - <http://www.google.com/adwords>
- **Commonly used acronyms:**
 - **CPC – Cost Per Click (PPC – Pay Per Click)**
The price you are charged if you have signed up for a paid sponsor or ad program and a visitor clicks on a link to your Web site.



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Preferential Placement (2 of 2)

- **CPM – Cost Per Impressions**
Your cost for every 1000 times that your ad is displayed on a web page (whether or not the visitor clicks on your ad).
- **CTR – Click Through Rate**
The ratio of the number of times an ad is clicked on to the number of times an ad is viewed.
For example if your ad was shown 100 times and 20 people clicked on it, your CTR would be $\frac{20}{100}$ or 20%.



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Mapping Your Site

- HTML Site Map Web page
 - Used by visitors and accessed by search engines.
 - Example: <http://webdevbasics.net/sitemap.html>
- XML Sitemap file
 - Accessed only by search engines
 - List of Web pages with URL, last date updated, frequency of update, and priority indicators
 - See <http://google.com/support/webmasters>

Checkpoint 13.1

1. Describe the three components of a search engine.
2. Describe the purpose of the description meta tag.
3. Is it beneficial for a business to pay for preferential listing? Explain.

Monitor Search Engine Listings

Web Analytics:

- "the measurement, collection, analysis and reporting of Internet data for the purposes of understanding and optimizing Web usage."

Analyze web site logs

Keyword	Visits	Pages Per Visit	Average Time on Site
web design best practices	27,097	1.75	00:01:17
web design best practice	21,773	6.08	00:07:32
web development and design foundations	15,751	5.71	00:04:56
basics of web design: HTML5 & CSS3	14,346	5.96	00:05:43
html5 basics	6,859	5.32	00:04:05
basic html5 template	4,943	5.98	00:06:24
basic html5 page	4,023	8.20	00:05:23
html5 basic code	3,198	4.17	00:05:02
basic html5 tags	3,141	5.06	00:04:46
html5 basics pdf	3,120	4.94	00:04:27

Link Popularity

Rating determined by a search engine based on the number of sites that link to a particular website and the quality

Checking Link Popularity

- Analyze your log file
- Visit a link popularity checking service web site
 - <http://linkpopularity.com>
- Visit search engines and check for yourself:
 - At Google type the following into the search box: link: yourdomainname.com

Social Media Optimization

- Creating content of value that is easily sharable
- Benefits:
 - Increased brand awareness
 - Increased inbound links
- Make sharing easy
 - Social Bookmarking.
 - <http://addthis.com>
 - Twitter, Facebook, Pinterest, Digg, Reddit, LinkedIn, YouTube,

Other Site Promotion Activities (1 of 2)

- QR (Quick Response) Codes
- Affiliate Programs
- Banner Ads
- Banner Exchange
- Reciprocal Link Agreements
- Newsletters
- "Sticky" Site Features
- Personal Recommendations

Other Site Promotion Activities (2 of 2)

- Newsgroup and Listserv Postings
- Traditional Media Ads
- Leverage Existing Marketing Materials



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QR (Quick Response) Code

A two-dimensional barcode in a square pattern that is readable by a smartphone camera scan application or a QR barcode reader

Free online QR code generators:

- <http://qrcode.kaywa.com>
- <http://www.qrstuff.com>
- <http://www.labeljoy.com/en/generate-qr-code.html>



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Checkpoint 13.2 (1 of 2)

1. Are the results returned by various search engines really different?
 - Choose a place, music group, or movie to search for.
 - Enter the same search terms, such as "Door County" into the following three search engines: Google, Yahoo!, Bing.
 - List the URLs of the top three sites returned by each.
 - Comment on your findings.



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Checkpoint 13.2 (2 of 2)

2. How can you determine if your web site has been indexed by a search engine?

How can you determine which search engines are being used to find your site?
3. List four web site promotion methods that do not use search engines.

Which would be your first choice? Why?



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Inline Frame

- Also called a floating frame
- Embeds one web page within another in a scrolling area
- Configure with the iframe element

```
<iframe src="trillium.html" title="Trillium Wild Flower"
height="160" name="flower" width="350">
Description of the lovely Spring wild flower, the
<a href="trillium.html" target="_blank">Trillium</a>
</iframe>
```



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Use the Iframe Element to Embed A Youtube Video

```
<iframe src="http://www.youtube.com/embed/VIDEO_ID"
width="640" height="385">
View the
<a href="https://youtu.be/VIDEO_ID">YouTube Video</a>
</iframe>
```



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Summary (1 of 2)

- This chapter introduced concepts related to promoting your website.
- Techniques for search engine optimization were discussed.
- The activities involved in submitting websites to search engines and search directories were discussed along with techniques for making your website more useful to search engines.
- The new trend of social media optimization was introduced.



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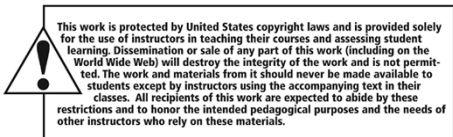
Summary (2 of 2)

- Other web site promotion activities such as banner ads and QR codes were also discussed.
- You can help the marketing staff by creating websites that work **with** search engines and directories by following the suggestions in this chapter.



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