

POPULAR SEARCH ENGINES

- ▶ Market Share Survey Results for a Recent Month:
 - ▶ Google 84%
 - ▶ Yahoo! 6.21%
 - ▶ Baidu 4.64%
 - ▶ Bing 3.57%

- ▶ Source:
<http://marketshare.hitslink.com/search-engine-market-share.aspx>

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)

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>

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



SEARCH ENGINE SEARCH FORM

A screenshot of a search engine interface showing a white text input box, a 'Google Search' button, and an 'I'm Feeling Lucky' button.

- 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.
- 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.

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.

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

DESCRIPTION META TAG

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

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


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.">
```

SEARCH ENGINE OPTIMIZATION (SEO)

- ▶ 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

SEARCH ENGINE OPTIMIZATION (SEO) 2

- 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

SEARCH ENGINE OPTIMIZATION (SEO) 3

▶ Valid Code

- ▶ Validate XHTML
- ▶ Validate CSS

▶ Content of Value

- ▶ Follow Web Design Best Practices
- ▶ Well-organized
- ▶ Meaningful & useful to your target audience

LISTING IN A SEARCH ENGINE

- ▶ Wait until your site is finished
- ▶ Don't submit "under construction" Web sites!
- ▶ Visit Search Engine and look for "Add URL" or "Suggest URL", or "Add your Site", etc.
- ▶ 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

MAPPING YOUR SITE

▶ HTML Site Map Web page

- ▶ Used by visitors and accessed by search engines.
- ▶ See Figure 5.25

▶ 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>