# Chapter 16   Search Engines - The Key To Searching the Web

If you haven't already noticed throughout this book that the various graphics of my web browser displaying my start page shows in big letters the word "Google." If you are not already familiar with this word "Google" now is the time to learn.

Google at this time is the most popular search engine on the net. I use it as my "Start" page because if I do not have a specific web site target in mind when I initiate my web browser, then I expect to be searching the web for something. The vast majority of the time Google will do the job. . . So why not start with it.

Don't worry about learning to do a "Boolean" search or the so called "Power Searching." All most people need to know is a little basic "search engine 101" or "Search Engine Math" in order to improve their results. I will show you how to easily add, subtract and multiply your way into better searches using your favorite search engine. At this time the most favored and also my favorite is "Google." The following information works for nearly all of the major search engines.
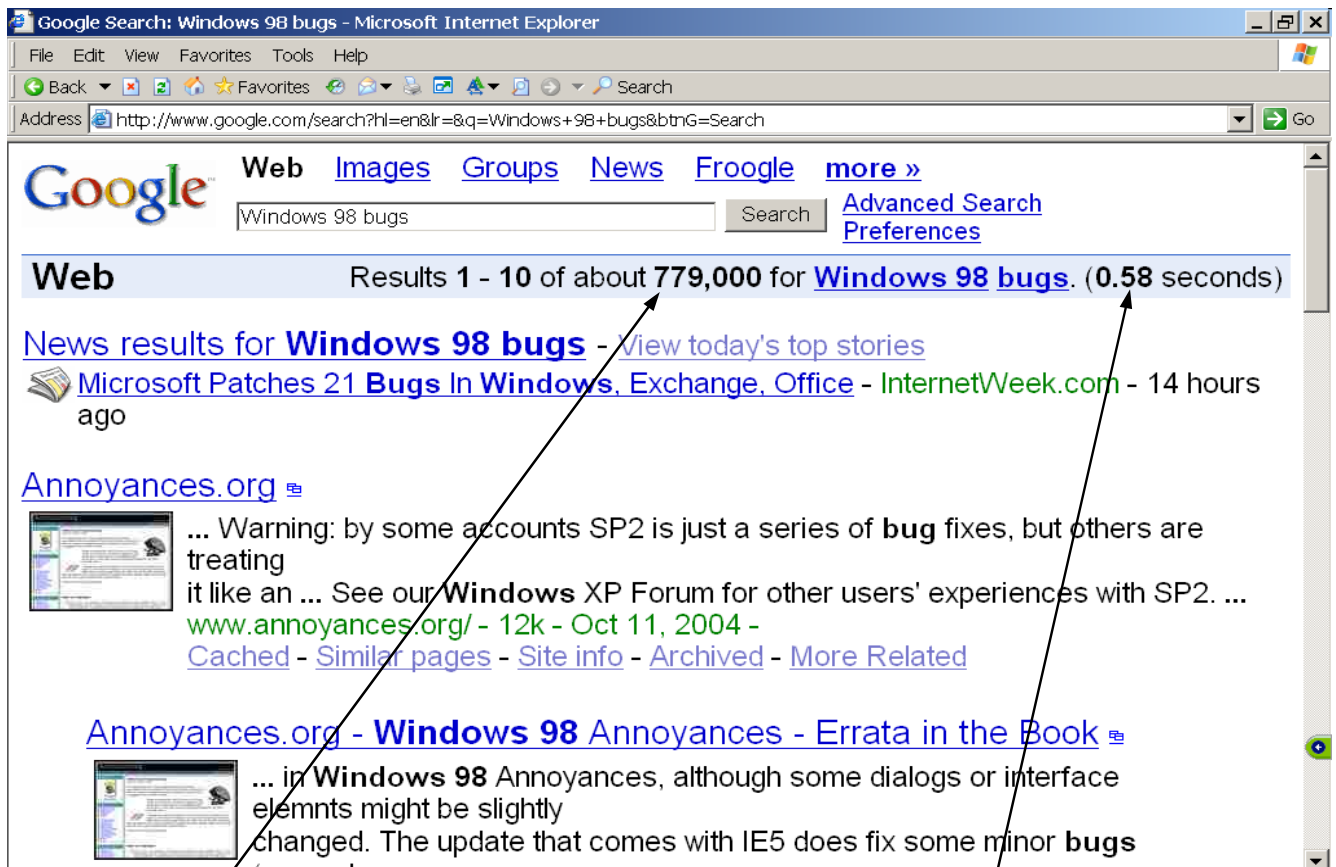
Above is a sample search on "Windows 98 bugs" using the "Google" search engine. Notice that the results is 779,000 web pages on the subject. . . And it took less than a second to do it. The time it would take to open each one of these sites and read the results is ridiculous. . . So, lets learn how to do the math on Search Engines.

Before learning math, it's a helpful reminder that the more specific your search is, the more likely you will find what you want. Don't be afraid to tell a search engine exactly for what you are looking .

For example, if you want information about Windows XP or Windows 98 bugs, search for "Windows XP bugs," not "Windows." Or even better, search for exactly what the problem is: "How can I install a USB device in Windows 98," or just "Install a USB device in Windows 98." You'll be surprised at how often this works.

Using The + Symbol to Add

Sometimes, you want to make sure that a search engine finds pages that have all the words you enter, not just some of them. The + symbol lets you do this.

For example, imagine you want to find pages that have references to both presidential candidates George W. Bush and John Kerry on the same page. You could search this way: +Bush+Kerry

Only pages that contain both words would appear in your results. Here are some other examples:

+windows +98 +bugs

That would find pages that have all three of the words on them, helpful if you wanted to narrow down a search to Windows 98 bugs, rather than on Windows 98 in general.

+star +trek +insurrection

That would get you pages about Star Trek that also specifically mention "Insurrection," the title of a Star Trek film.

The + symbol is especially helpful when you do a search and then find yourself overwhelmed with information. Imagine that you wanted to reserve a camping space in California's Yosemite National Park. You might start out simply searching like this:

yosemite

If so, chances are, you'll probably get too many off-target results. Instead, try searching for all the words you know must appear on the type of page you're looking for:

+yosemite +camping +reservations

Using The (-) Symbol to Subtract

Sometimes, you want a search engine to find pages that have one word on them but not another word. The - symbol lets you do this. For example, imagine you want information about President Clinton but ***don't*** want to be overwhelmed by pages relating to the Monica Lewinsky scandal. You could search this way:

clinton -lewinsky

That tells the search engine to find pages that mention "clinton" and then to remove any of them that also mention "lewinsky."

Similarly, perhaps you are looking for information specifically about Windows 95 but keep getting pages about Windows XP, Windows ME, Windows 98 or Windows 3.1. You could eliminate them with a search like this:

windows -XP -ME -98 -3.1

Perhaps you are a fan of the original Star Trek series but instead keep finding pages about Voyager, Deep Space Nine or Star Trek: The Next Generation. Try a search like this:

star trek -voyager -deep -space -nine -next -generation

In general, the - symbol is helpful for focusing results when you get too many that are unrelated to your topic. Simply begin subtracting terms you know are not of interest, and you should get better results.

Using Quotation Marks To Multiply

Now that you know how to add and subtract terms, we can move on to multiplication. As in normal math, multiplying terms through a "phrase search" can be a much better way to get the answers you are looking for.

For example, remember above when we wanted pages about reserving a campsite in Yosemite? We entered all the terms like this:

+yosemite +camping +reservations

That brings back pages that have all those words on them, but there's no guarantee that the words may necessarily be near each other. You could get a page that mentions Yosemite in the opening paragraph but then later talks about getting camping reservations in the Grand Canyon. All the words you added together would appear on this page, but it still might not be what you are looking for.

Doing a phrase search avoids this problem. This is where you tell a search engine to give you pages where the terms appear in exactly the order you specify. You do this by putting quotation marks around the phrase, like this:

"yosemite camping reservations"

Now, only pages that have all the words and in the exact order shown above will be listed. The answers should be much more on target than with simple addition.

Likewise, remember this addition example?

+windows +98 +bugs

As you can imagine, multiplying the terms together within a phrase search would work better, because that exact phrase probably appears on good pages dealing with Windows 98 bugs. So try this:

"windows 98 bugs"

Remember the search for information about the latest Star Trek movie? We could transform that into a phrase search like this:

"star trek insurrection"

But the movie's title actually has a colon after the word "trek," and many pages might also follow this format. Thus, a better phrase search might be:

"star trek: insurrection"

Combining Symbols

Once you've mastered adding, subtracting and multiplying, you can combine symbols to easily create targeted searches.

For example, remember the person who wanted pages only about Star Trek's original series? We searched this way:

star trek -voyager -deep -space -nine -next -generation

A better search might use subtraction and multiplication:

"star trek" -voyager -"deep space nine" -"next generation"

The above method is probably sufficient for the 90 percent of search engine users. If you still want more, I suggest you investigate the term "Power Search." or "Boolean Search?" Again using the same method you will discover a wealth of information on the Net on Power and Boolean Searching.

. . . And it is all FREE.

Using "Google" Search

The Basics of Google Search

To enter a query into Google, just type in a few descriptive words and hit the 'enter' key (or click on the Google Search button) for a list of relevant web pages. Since Google only returns web pages that contain **all** the words in your query, refining or narrowing your search is as simple as adding more words to the search terms you have already entered. Your new query will return a smaller subset of the pages Google found for your original "too-broad" query.

Choosing Keywords

For best results, it's important to choose your keywords wisely. Keep these tips in mind:

- Try the obvious first. If you're looking for information on Picasso, enter "Picasso" rather than "painters".

- Use words likely to appear on a site with the information you want. "Luxury hotel dubuque" gets better results than "really nice places to spend the night in Dubuque".

- Make keywords as specific as possible. "Antique lead soldiers" gets more relevant results than "old metal toys".

Automatic "and" Queries

By default, Google only returns pages that include all of your search terms. There is no need to include "and" between terms. Keep in mind that the order in which the terms are typed will affect the search results. To restrict a search further, just include more terms. For example, to plan a vacation to Hawaii, simply type:

vacation hawaii

Automatic Exclusion of Common Words

Google ignores common words and characters such as "where" and "how", as well as certain single digits and single letters, because they tend to slow down your search without improving the results. Google will indicate if a common word has been excluded by displaying details on the results page below the search box.

If a common word is essential to getting the results you want, you can include it by putting a "+" sign in front of it. (Be sure to include a space before the "+" sign.)

Another method for doing this is conducting a phrase search, which simply means putting quotation marks around two or more words. Common words in a phrase search (e.g., "where are you") are included in the search.

For example, to search for Star Wars, Episode I, use:

Star Wars Episode +I
or
"Star Wars Episode I"

Capitalization

Google searches are **NOT** case sensitive. All letters, regardless of how you type them, will be understood as lower case. For example, searches for "george washington", "George Washington", and "gEoRgE wAsHiNgToN" will all return the same results.

Word Variations (Stemming)

A. Top Links
Click the link for the Google service you want to use. Search the web, look for images only, browse Google Groups (Usenet discussion archive), or search for products with Froogle.

B. Google Search Button
Click on this button to submit another search query. You can also submit a query by hitting the 'enter' key.

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C. Advanced Search
Links to a page that enables you to restrict your search if necessary.

D. Search Field
To enter a query into Google, just type in a few descriptive keywords. Hit enter or click on the Google Search button for your list of relevant results.

E. Preferences
Links to a page that enables you to set search preferences, including the default number of results per page, the interface language, and whether to screen results using our SafeSearch filter.

F. Statistics Bar
This line describes your search and indicates the number of results returned as well as the amount of time it took to complete your search.

G. Tip
Information that will help you search more effectively, based on the query you've just conducted. Will help you learn more about Google's unique special features and point to tools that can save you time and effort.

H. OneBox Results
Google includes many sources of specialized information and those that appear most closely related to your search are included at the top of your search results. We call these "onebox results" because they don't require you to enter your search in a special place. Any Google searchbox will trigger them. Typical onebox results include news, stock quotes, weather and local websites related to your search. **I. Page Title**
The first line of the result is the title of the web page found. Sometimes, instead of a title there will be a URL, meaning that either the page has no title, or Google has not indexed the full content of that page. We still know it's a good match because of other web pages – which we have indexed – that have links to this returned page. If the text associated with these links matches your query, we may return the page as a result even though its full text has not been indexed.

J. Text Below the Title
This text is an excerpt from the returned result page showing your query terms bolded. These excerpts let you see the context in which your search terms appear on the page, before you click on the result. If Google expanded your search using its stemming technologyto include variations of your search terms, those words will also be bolded.

K. URL of Result
This is the web address of the returned result.

L. Size
This number is the size of the text portion of the web page. It is omitted for sites it is not yet indexed.

M. Cached
Clicking the cached link will enable you to see the contents of the web page as of the time we indexed it. If for some reason the site link does not connect you to the current page, you can still retrieve the cached version and may find the information you need there. Your search terms are highlighted on the cached version.

N. Similar Pages
When you select the Similar Pages link for a particular result, Google automatically scouts the web for pages that are related to this result.

O. Indented Result
When Google finds multiple results from the same web site, the most relevant result is listed first with the other relevant pages from that same site indented below it.

P. More Results
If there are more than two results from the same site, the remaining results can be accessed by click-ing on "More results from..." link.