



## Searching the World Wide Web

Brought to you by the Purdue University Online Writing Lab at <http://owl.english.purdue.edu>  
Check out our search engine tutorial for an interactive experience that will help you learn about searching the web at <http://owl.english.purdue.edu/internet/search/index.html>.

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Searching the World Wide Web can be both beneficial and frustrating. You may find vast amounts of information, or you may not find the kinds of information you're looking for. Past studies have indicated that search engines index only about 16% of the total content on the Web and that they are biased toward well known information. (One study found that Northern Light has about 16% of the total content and Snap and Alta Vista each have about 15.5%; Lycos has about 2.5%.) Moreover, the content on search engines can be at least several months old, although new indexing techniques are making this less likely.

So, using search engines is not the only way to find material on the web, but they are one tool you can use. Knowing a few search strategies and hints, as you use these engines, can make the search more profitable.

One way to improve your Web searching techniques is to meet with a Writing Lab tutor in the Lab (226 Heavilon, 494-3723), work together on the Web on one of our computers, and get some advice from the tutor. We also have a search engine tutorial at <http://owl.english.purdue.edu/internet/search/index.html>, and several PowerPoint presentations on searching the web at <http://owl.english.purdue.edu/workshops/pp/index.html>. In addition, the following suggestions should help.

[Kinds of Search Engines](#) || [Using a Search Engine](#) || [List of Search Engines](#) || [Other Strategies For Your Searches](#)

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## Kinds of Search Engines

### 1. Catalogues

These are broken down into categories and are good for broad searches of established sites. For example, if you are looking for information on the environment but not sure how to phrase a potential topic on holes in the ozone, you could try browsing through Yahoo's categories. In Yahoo's "Society and Culture" category (at <http://www.yahoo.com>), there is a subcategory of "environment" that has over subcategories listed under that. One of those subcategories is "ozone depletion," with

over twenty references, including a FAQ site. Those references can help you determine the key terms to use for a more focused search.

## **2. Search engines**

These ask for key words and phrases and then search the Web for results. Some search engines look only through page titles and headers. Others look through documents. Many search engines now include some categories as well.

## **3. Metasearch engines**

These (such as Dogpile at <http://www.dogpile.com> and Metacrawler at <http://www.metacrawler.com>) search other search engines and often search smaller, less well known search engines and specialized sites.

# **Using a Search Engine**

## **Learn how the search engine works**

Read the instructions and FAQs to learn how that particular site works. Each search engine is slightly different, and a few minutes learning how to use the site properly will save you large amounts of time and prevent useless searching.

Each search engine has different advantages; for example, Alta Vista (at <http://www.altavista.com>) offers the option of selecting which language you want to search in and HotBot (at <http://www.hotbot.com>) permits you to specify date, location, media type, etc. for the references it searches for. Infoseek (<http://www.infoseek.com>) permits you to ask questions.

## **Select your terms carefully**

Using inexact terms or terms that are too general will cause you problems. If your terms are too broad or general, the search engine may not process them. Search engines are programmed with various lists of words the designers determined to be so general that a search would turn up hundreds of thousands of references. Check the search engine to see if it has a list of such stopwords. One stopword, for example, is "computers."

If your early searches turn up too many references, try searching some relevant ones to find more specific or exact terms. You can start combining these specific terms with NOT (see the section on [Boolean operators](#) below) when you see which terms come up in references that are not relevant to your topic. In other words, keep refining your search as you learn more about the terms.

You can also try to make your terms more precise by checking the online catalog of a library. For example, check THOR at <http://www.lib.purdue.edu>, the Purdue University Library online catalog, and try their subject word search. Or try searching the term in the online databases in the library.

If you use AltaVista (at <http://www.altavista.com>), you'll find their LiveTopics very

useful. After you enter your key terms and get the results, you will notice a LiveTopics option on the top of the page that has a list of possible related keywords. You can highlight some and reject others to narrow your search.

## Know Boolean operators

Most search engines allow you to combine terms with words (referred to as Boolean operators) such as "and," "or," or "not." Knowing how to use these terms is very important for a successful search.

### **AND**

AND is the most useful and most important term. It tells the search engine to find your first word AND your second word or term.

AND can, however, cause problems, especially when you use it with phrases or two terms that are each broad in themselves or likely to appear together in other contexts.

For example, if you'd like information about the basketball team Chicago Bulls and type in "Chicago AND Bulls," you will get references to Chicago and to bulls. Since Chicago is the center of a large meat packing industry, many of the references will be about this since it is likely that "Chicago" and "bull" will appear in many of the references relating to the meat-packing industry.

### **OR**

OR is not always a helpful term because you may find too many combinations with OR. For example, if you want information on the American economy and you type in "American OR economy," you will get thousands of references to documents containing the word "American" and thousands of unrelated ones with the word "economy."

Use OR when a key term may appear in two different ways. For example, if you want information on sudden infant death syndrome, try "sudden infant death syndrome OR SIDS."

### **NEAR**

NEAR is a term that appears only on some search engines, and it can be very useful. It tells the search engine to find documents with both words but only when they appear near each other, usually within a few words.

For example, suppose you were looking for information on mobile homes, almost every site has a notice to "click here to return to the home page." Since "home" appears on so many sites, the search engine will report references to sites with the word "mobile" and "click here to return to the home page" since both terms appear on the page. Using NEAR would eliminate that problem.

### **NOT**

NOT tells the search engine to find a reference that contains one term but not the other.

Some search engine sites have advanced or power options for searches, and you can read about those to see how they can help you.

# Know the limitations of the Web and of search engines

The World Wide Web is a superb resource, but it doesn't contain all the information that you can find in libraries. Don't expect to limit your search to what's on the Internet, and don't expect search engines to find some very recent information or to find everything that is on the Web. After you try several search engines, you will see that you get different results from different sites. Also, remember that some information appears and then disappears from Web sites.

Search engines will put the most relevant sites at the top of their lists, but most engines determine relevancy by the number of key term matches. This means that the most repetitive site will be the most relevant in their list, and that may not turn up the best sites for your use.

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## Search Engines

Some of the most powerful search engines include the following that you'll find on OWL's Search Tools & Directories on the Net at <http://owl.english.purdue.edu/internet/tools/index.html>.

- Alta Vista at <http://www.altavista.com/>
- Dogpile at <http://www.dogpile.com/> (is a metasearch engine and will search other search engines)
- Excite at <http://www.excite.com/>
- Google at <http://www.google.com/>
- HotBot at <http://www.hotbot.com/>
- Infoseek at <http://www.infoseek.com/>
- Lycos at <http://www.lycos.com/>
- Metacrawler at <http://www.metacrawler.com/> (is a metasearch engine and will search other search engines)
- Northern Light at <http://www.nisearch.com>
- Open Text at <http://index.opentext.net>
- Snap at <http://www.snap.com>
- WebCrawler at <http://webcrawler.com>
- World Wide Web Worm at <http://www.goto.com>
- Yahoo at <http://www.yahoo.com>
- DejaNews at <http://www.dejanews.com> (searches newsgroup postings)
- People Search at <http://people.yahoo.com/> (has online white-page directories for telephone numbers, addresses, e-mail addresses, etc.)
- Big Yellow at <http://www1.bigyellow.com> (has electronic yellow pages)
- WebSeer at <http://webseer.cs.uchicago.edu> (has a huge database of graphics)
- All4one at <http://www.all4one.com> allows simultaneous searching of 4 search engines.

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## Other strategies for your searches

Don't limit your Internet searching to using search engines. Be creative and think about

which Internet sites might have the information you are looking for. For example, might any of the following lead you to the sites that will provide the information you are looking for?

Our OWL also has a list of starting points for Internet research (at <http://owl.english.purdue.edu/internet/tools/research.html>) grouped by different fields of interest, and some other general reference tools (at <http://owl.english.purdue.edu/internet/resources/sourceofinfo.html>) for searching the web that may help you to find what you're looking for.

- **Looking for information about job opportunities?** Look at some of the sites listing job vacancies. Try university websites that sometimes list jobs through their placement offices, or try professional organizations which also sometimes list jobs in that field. Or look through the websites of various large companies because they usually have a section on job opportunities in their company.
- **Looking for information likely to be discussed on newsgroups or chat rooms?** Look through the lists of newsgroups or use a search engine like DejaVu.
- **Looking for information about a current topic?** Check the newspaper and current newsmagazine sites. Most have a search engine for articles in their publications.
- **Looking for data that might have been collected on a government site?** Start with sites such as the Library of Congress (at <http://www.loc.gov/>) or The White House (at <http://www.whitehouse.gov/>). If the data concerns a state or a foreign country, is there a site for that political entity?

This site (at <http://www.virtualsalt.com/evaluat.htm>) has some valuable information on how to evaluate Internet resources. For more help, see the handout on Evaluating Sources of Information at [http://owl.english.purdue.edu/handouts/research/r\\_evalsource.html](http://owl.english.purdue.edu/handouts/research/r_evalsource.html).

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