

Use the advanced search features of Internet search engines to retrieve the results you want.

Many search engines have advanced search options that allow you to construct targeted search strategies, refine results by media type, date, or language and include features for focusing on domains.

Advanced Search Screen Examples:

Ask - <http://www.ask.com/webadvanced?q=>
Alltheweb - <http://www.alltheweb.com/advanced?advanced=1&&q=>
Altavista - <http://www.altavista.com/web/adv>
Bing - <http://www.bing.com/search?qb=1&FORM=AXLH>
Google - http://www.google.com/advanced_search?hl=en
Yahoo - <http://search.yahoo.com/search/options?fr=fp-top&p=>

Developing a Search Query Using Advanced Search Forms

All advanced search interfaces provide search forms to help you develop a search strategy. These help you create sophisticated search statements without needing to know the specialized syntax of the search engine.

- **All of these words/Must have:** Results must contain all of the words entered. This is equivalent to inserting AND between the words.
- **Exact phrase:** Documents must contain the exact words in the same order you typed them.
- **Any of these words/Should have:** The search should return documents with at least one of the words. This is equivalent to typing OR between the words
- **None of these words/Must not include/Must not have:** Pages that contain these words will be omitted from your results.

Refining a Search with Advanced Search Options

Each search engine with advanced search is different and many provide similar options to help you better define or narrow your search parameters. They do not all look the same or use the same syntax from one search engine to the next but the functionality is basically the same. Since each is different, read the help screens of your favorite search engine to optimize your use. Google provides an easy to print cheat sheet of advanced operators at <http://www.google.com/help/cheatsheet.html>

- **Date:** Use the date option on most search engines to retrieve pages that have been updated within a desired time period.
- **Domain:** Restrict your search to sites with a specific domain suffix such as .com, .edu, or .gov.
- **File Format:** Depending on the search engine you can restrict your results to PDF, HMTL, Microsoft Excel, and other file formats.
- **Language:** Specify the language for your search results.

AND, OR, NOT – Creating Complex Queries

There are only a few search engines that offer users the opportunity to search with full Boolean logic and parentheses. **Example:** (“avian influenza” OR “bird flu”) AND symptoms NOT veterinary. The advantages of creating complex search strategies make Alltheweb and Yahoo good choices for web searches requiring the power and flexibility of Boolean operators.

Cached Results

Many search engines create snapshots of web pages when they are indexed. These snapshots are called cached pages and are available when search results are returned. This is helpful if the page isn't available anymore or if the content has changed since it was indexed. Search engines that offer cached results include Google, MSN, Ask, and Yahoo!

Google Scholar

The advanced scholar search http://scholar.google.com/advanced_scholar_search?hl=en&lr= permits searching for scholarly literature across many disciplines and sources and even provides author, date and publication search options.

Personalized Search Assistance:

Google and Yahoo personalized search may be useful for your Web research. The Google service is designed to improve the relevance of your search results based on previous searching. Both services allow you to bookmark your favorite websites and organize them. Bookmarks can be accessed from any computer by signing in.

Google Personalized Search - <http://www.google.com/psearch>

My Yahoo: - <http://my.yahoo.com/>

Maps

A number of map tools are available that provide directions to specific addresses. Some of the tools also provide special features. Google Maps includes satellite images and Multimap includes international coverage.

Bing Map Search – <http://www.bing.com/maps/>

Google Earth - <http://earth.google.com/>

Google Maps - <http://maps.google.com/>

Google Sky – <http://www.google.com/sky>

MapQuest - <http://www.mapquest.com/>

Multimap.com - <http://www.multimap.com/>

Yahoo Maps - <http://maps.yahoo.com/>

Note: These tools are not perfect and do not provide accurate information in every case. Image searching can also be a good way to find maps.

Image and Video Searching

Many popular search engines also have specialized search features to help you find images, photographs, and videos. Take advantage of this feature to find graphical information.

AltaVista Image Search - <http://www.altavista.com/image/default?qbmode=>

Google Advanced Image Search - http://www.google.com/advanced_image_search?hl=en

Google Video Search - <http://video.google.com/videoadvancedsearch>

Yahoo Advanced Image Search - <http://images.search.yahoo.com/search/images/advanced>

Yahoo Advanced Video Search - <http://video.search.yahoo.com/video/advanced>

YouTube – <http://www.youtube.com>

News Search

News searching has become a popular side line of search engines. They offer searching across multiple news sources to retrieve a variety of stories on the research topic of your choice.

Bing News - <http://search.msn.com/news/>

Clusty News - <http://news.clusty.com/>

Google Advanced News Search – http://news.google.com/news/advanced_news_search?pz=1&ned=us&hl=en

Yahoo Advanced News Search - <http://news.search.yahoo.com/news/advanced>

Blogs, RSS Feeds and Wikis

Blog is short for weblog and is a frequently updated online journal or newsletter that is intended for a public audience. They generally represent the personality and opinions of the author or of a web site though they are also used by businesses for marketing and information dissemination. An example is the Google blog at <http://googleblog.blogspot.com/>

RSS stands for Really Simple Syndication and is a format for gathering and distributing content from sources across the Web, including newspapers, magazines, and blogs. They require a special reader like Bloglines <http://www.bloglines.com/> or Google Reader <http://www.google.com/reader/> to view messages. The Hanford Technical Library provides a RSS Feed for the NewsBridge newsletter <http://libraryweb.pnl.gov/newsbridge/>

Wikis are browser-based applications that enable documents to be written collectively and often without review before revisions are accepted. Many wikis are open to the public without the need to register. Private wiki servers require user authentication. However, many edits can be made in real-time, and appear almost instantaneously online. An example is Wikipedia <http://en.wikipedia.org/>, the free online encyclopedia that anyone can edit.

The Libraries at the State University of New York at Albany have developed an in-depth web page of search engines for specific uses <http://www.internettutorials.net/choose.asp>.