

Locating and Evaluating Information on the World Wide Web

The screenshot shows a Microsoft Internet Explorer browser window displaying the Library of Rush University website. The browser's address bar shows the URL <http://www.lib.rush.edu/library/index.html>. The website header features the text "Library of Rush University" and "Rush-Presbyterian-St. Luke's Medical Center, Chicago IL". Navigation buttons for "Rush University", "Medical Center", and "Contact Us" are visible. A horizontal menu contains links for "Interlibrary Loan", "Patron Registration", "Subscribe to Library News", "E ~ Reserves", "METC", "Archives", and "Proxy Info". The main content area is organized into three sections: "Library Services" with links to "Contact Us -- What's New (05 DEC 2002)", "Latest Newsletter", "Workshops", "Hours", and "Graduate Student Information"; "RushCat" with the link "The Online Catalog of Books and Journal Titles"; and "Databases" with links to "UpToDate(Onsite Only)", "Ovid Web", "MD Consult", "Micromedex-- FirstSearch", "Ebsco", "GenRx", and "More".

The Library of Rush University & McCormick Educational Technology Center

Rush-Presbyterian-St. Luke's Medical Center
Armour Academic Center, 5th Floor
600 South Paulina Street
Chicago, Illinois 60612

Telephone: 312 942-5950
Fax: 312 942-3143
Email: Lib_Ref@rush.edu

www.lib.rush.edu/library

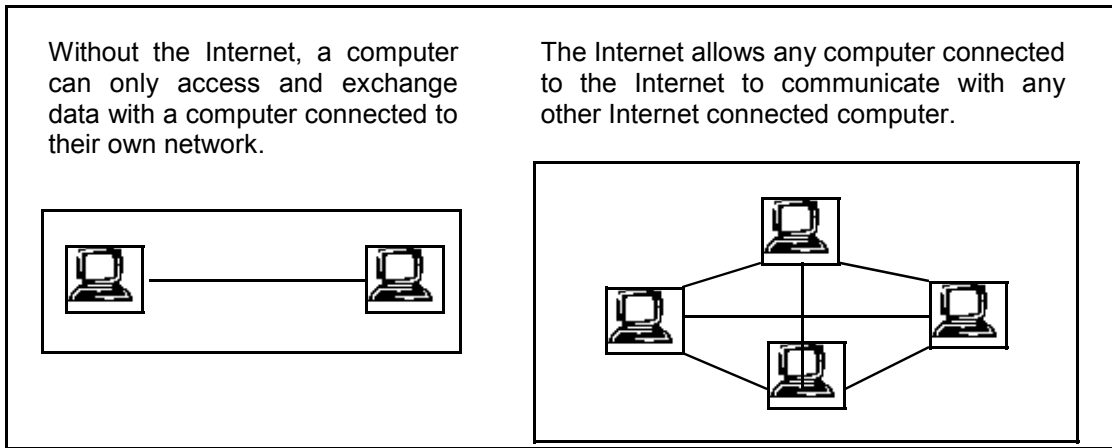
Introduction

The Internet provides a gateway to information about any topic imaginable. Using it to find health care information is one of the top reasons people use the Internet. While the benefits of the Internet are tremendous, there are a few cautions. It is not hard to find information about a topic on the Internet. With multitudes of new sites added each day, you are sure to find something. But is the information correct? The difficulty is locating the factual information from dependable resources. The information must be accurate, reliable and current.

What is the Internet?

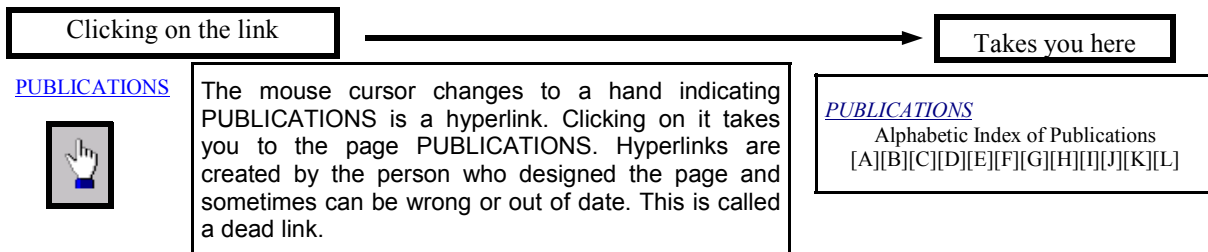
The Internet is a system of computers linked together so that they can 'talk' to each other. Using the Internet, the computer on your desk can exchange information with computers across the globe. The Internet began during the Cold War as a method to insure military and government communications would survive a nuclear attack. At first, only government and university computers were connected. However, as people began to see the Internet's potential, commercial and personal users began to join. There are now millions of places to visit on the Internet with thousands of new places added each day. You could even add your own page of information if you like! To read more about the history of the Internet, please visit the Internet Society at:

www.isoc.org/internet/history/brief.shtml



What is the World Wide Web?

The World Wide Web (WWW) is a system that offers a simple method to navigate the Internet. In the beginning, users needed to type in commands to use the Internet. It was a text-based environment without images, sounds, or any other of the interactive multimedia content that is now common place. The WWW makes traveling the Internet easy. Instead of typing in commands, navigation is accomplished links. Users move from one location to another by simply clicking on the link with the mouse. Links are often underlined or a different color that the rest of the text. An image can also be a link. You can often tell if something is a link by observing the cursor: when it passes over text or images: it often changes to a picture of a hand.



How Do I Connect to the Internet?

Office (Medical Center or University)

If your office computer is connected to a local network that provides access to the Internet, you are already connected. If you need help, contact your supervisor. Most computers here at Rush are connected to the Internet.

Home

To access the Internet from your home, you must first select an Internet Service Provider (ISP). An ISP is a company or organization that provides a gateway to the Internet. One method is to use your computer's modem to dial into your ISP's computer network using a telephone line. This is called a 'dial-up account'. Other methods use cable modems, which share the same cable access as your cable TV. DSL is similar to a "super" telephone connection using a special modem.

Both cable modem and DSL are often called Broad Band Access because they process transfer data from the Internet to your computer faster than a telephone dial-up account. You notice this when working with large files, graphics, and online searching. There are many variables that can account for how fast your connection to the Internet works: the number of people using the Internet at the same time, the quality of your computer or the one you are connected to, etc. In general, cable modems and DSL service can move than 1 to 3 megabytes of data per second from the Internet to your computer. A typical telephone modem dial-up connection is lucky to move 56 kilobytes worth of data per second.

Some ISP's provide Internet service free such as schools and universities. (Rush provides free dial-up service: contact Information Services at 942-HELP for details). Most ISP's charge for access. Examples include America Online, Interaccess, etc. To find an ISP in your area, talk with friends in your area. To learn about the Internet services provided by Rush to access the Library Resources from your home, ask for the Library's handout about Home Access.

What is an Internet Address?

Universal Resource Locator (URL)

This is the address you use to tell your browser where to find a particular Internet resource. For example, the URL for the Library of Rush University is **http://www.lib.rush.edu/library**. The components of this address are:

| | |
|--------------|---|
| http:// | http:// stands for Hypertext Transfer Protocol. Indicates that you are using the World Wide Web features of the Internet. |
| www.lib.rush | The location of the Server (computer you are connecting to). Rush is the main computer and lib stands for the Library's own server connected to the Rush Network. |
| .edu | Called a domain name; it indicates the general type of source. Common domain names include: .mil military .gov government .edu education .com commercial .org organization .net net (usually commercial) |
| /library | The slash indicates that what follows is a file on the computer your are connecting to. In this example, the file is the Library file on the server of the Library. This is where we store our home page information. |

Internet Protocol (IP) Address

The IP address identifies what server you are using to connect to the Internet. An IP address can be numeric or text: *http://144.74.100.150/library/* is the same address as *sunlibrary.is.rpslmc.edu*.

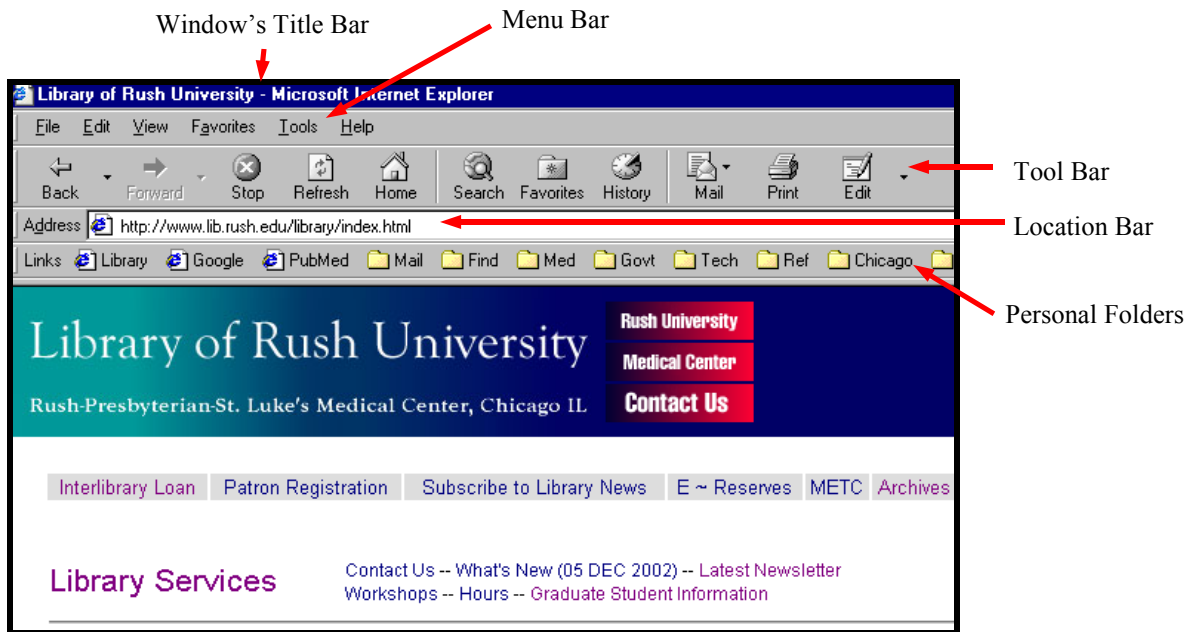
Some services on the Internet can only be used by people dialing in to a specific computer. The service examines the IP address to see if it is allowed access. For example, due to licensing restrictions with publishers, very few resources from the home page of the Library can be used by people who are not connected to the Rush Network. If you try to use these services when you are connected to a different server such as America Online, you will be denied access.

What is a WEB Browser?


A web browser is a software program used to navigate the Internet. A browser allows users to move around the Internet using links. From a browser, you can view images, print information, listen to sounds, etc. There are several browsers on the market such as Netscape or Microsoft Explorer. The examples in this handout are from Internet Explorer 5.5. Similar features and tools are available from most browsers.

What is a Web Page?

A web page is a block of data available on the World Wide Web identified by a URL. It is constructed using a program languages. A common one is called Hypertext Mark-up Language (HTML); the are others you may run across. A web site is a collection of web pages. The starting page for navigating a web site is called the home page.







Internet Explorer 5.5 Web Browser



Danger: Viruses!

A virus is a malicious program designed to damage your computer. They hide in data you download to your computer. Be safe! Whenever you download information, do not open the file until you have checked the contents with a virus checking software program. Also, even if you know the sender, do not open email attachments without checking for viruses first. Check your entire computer for viruses often.



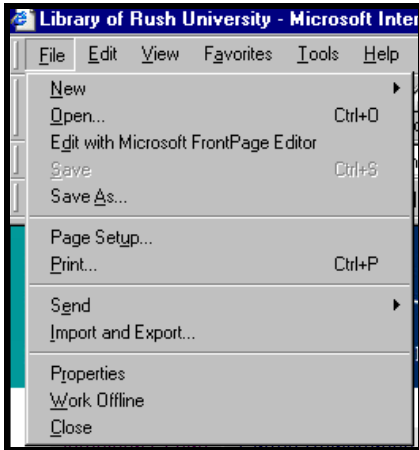
The Menu Bar

By default, there are six pull down menus in Internet Explorer. However, you can customize your display.



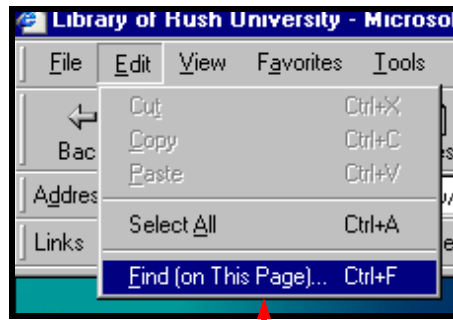
File

Save pages, print pages, close the program, send the page or URL for the page to someone by e-mail.



Edit

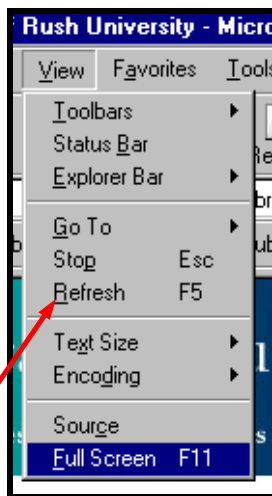
Cut, copy, paste, select all information from a web page and move to a Word document, e-mail, etc.



Use this option to find a word or phrase appearing anywhere on a web page.

View

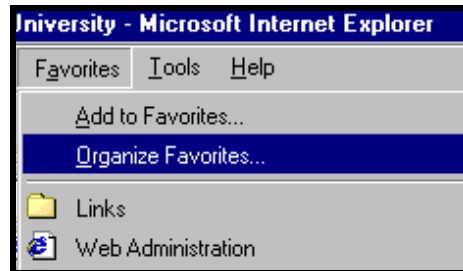
Select what toolbars you wish to display and see information about how the page was constructed. Make the Page fonts bigger (Text Size).



Sometimes a page can get stalled when loading. If it freezes or doesn't look proper, click on Reload.

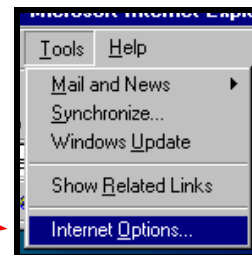
Favorites

You can bookmark your favorite places on the Internet, places you'd like to return to without having to retype in the Internet address each time you wish to revisit them. These are called favorites.



Tools

Tools help you use your browser to link over to your e-mail program, new group reader, update Microsoft Windows products and more. You can also set your web browsing/Internet options.



Cookies

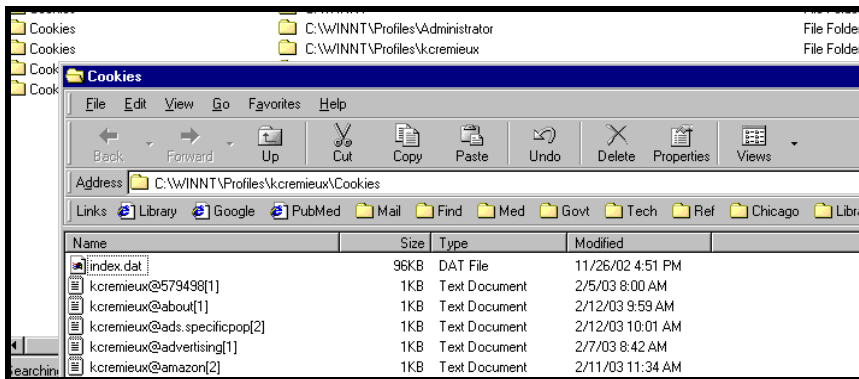
A cookie is a small string of data deposited into a file on your computer's hard drive from a web site you visited. The cookie provides information about your activities on the Internet to other web sites. Some cookies help a web site recognize you so that you do not have to enter your password every time you go to the site. Other cookies identify the types of sites you visit so that merchants can display targeted advertisements. Some people consider this an intrusion of their privacy. Depending on how the web site was constructed, you may not be able to use any of the features without allowing the site to place or read cookies. For example, many database need cookies 'enable' to work properly when you search.

Most browsers allow you to configure how you would like to deal with cookies. The default is to accept any cookies and let anyone view your cookie file. You can completely disable cookies meaning no one can place a cookie on your computer. Alternatively, you can set it up so that only the company who placed the cookie can read it. Whichever option you choose is up to your own personal preference.

To change you cookie settings, go to the **Menu Bar** of the web browser and locate **Tools: Internet Options Security** and follow the online help.

For Advanced Users:

The cookie file on your computer is called *cookie.txt* and can be edited using any word processing software. To get rid of unwanted cookies, open the cookie file with your word processor and delete items you wish removed. Caution: before you remove a cookie with log-on information, make sure you know the passwords.



This shows a folder where cookies are stored and some of actual cookies. Some are from advertisers I may not want, other are from places like Journals, that remember my login information, or Amazon.com that remembers what books I like to read. Not all cookies are bad.

Source and Page Information

This is a sample showing the code some people use to create a web page.

Library of Rush University has the following structure:
<http://144.74.100.150/library/>
Image: <http://144.74.100.150/library/redline.gif>
Image: <http://144.74.100.150/library/greenline.gif>
Image: <http://144.74.100.150/library/redline.gif>
Image: <http://144.74.100.150/library/rushl.gif>
Image: <http://144.74.100.150/library/redline>.

Properties

```
<HTML>
<HEAD>
<TITLE>Library of Rush University </TITLE>
</HEAD>
<BODY BACKGROUND="" BGCOLOR="#e"
font size="-2">
<table>
<tr>
<td valign ="top" rowspan="2">
<FONT COLOR="330066"><FONT SIZE="+4">
```

Source Code (HTML)

Navigation Bar

The Tool Bar provides helps you browse through the Internet and perform common tasks.



Go to the next or previous web page you have visited



Brings up your list of bookmarks, sites you saved the address to so that you do not have to re-enter the address to revisit them in the future.



Reload a web page if it is stalled or doesn't appear correctly



Show a list of sites you have listed. Like a trail of bread crumbs, you can retrace your steps back to a site you visited previously.



Takes you to the home page you specified in the preferences.



Can be configured to bring up your e-mail program.



Takes you to Internet's Explorer's tools for searching the Internet.



Print the page..



Stop the current page from loading.



See the coding that went into making the page.

Location Bar

The Address Bar shows the URL of the site you are visiting.



Favorites

Favorites are a simple way to connect to web sites you visit often. When you visit a site you would like to return to, click the Favorites Icon (Favorites are sometimes called Bookmarks in other applications). You can file the web site name and address in favorite file, organizing it like a phone book. When you wish to visit that site later, open your Favorites file and click on the name of the site. Consult your web browser's instructions for more details.



Sample of one person's Favorites file. It is organized by a folder at the top for Medical web site (abbreviated MED to save space) and then divided by topics Guidelines: Clinical Trials. Under that division are the actual web sites such as the NIH and HSTAT. Clicking on any of these will take you right to the site without having to type in the web address.

Printing, Saving to Disk and Graphics

To copy some text from a page:

1. Select the text.
2. Choose Copy from the Edit menu.

Usually, you can paste the text into other files.

To copy a link (URL) from a page:

1. Right-click the link or image to display a pop-up menu.
2. Choose Copy Link Location or Copy Image Location. If an image is also a link, you are offered both options.

You can paste the link into other files or into Navigator's Location field.

Saving a Page

To save an entire page, choose Save As from the File menu. When you view a page containing frames and a frame is currently selected, the File menu's Save Frame As option is offered in addition to Save As. This lets you save only the page within the selected frame. Saving a file onto your hard disk lets you view the page (or its HTML code) when you're not connected to the Internet.

To save an image from a page:

1. Right-click the image to display a pop-up menu.
2. Choose Save Image As.

! Some people block you from doing this if they do not want their images downloaded from their site. Also be sure to observe copyright laws when downloading any information from the Internet.

Printing a Page

To print the current page, click Print. On Windows, you can choose Print Preview from the File menu to see how the printed page will look. Note: When you view a page containing frames, the File menu contains Print Frame in place of Print. To set up the page layout for printing (optional):

1. From the File menu, choose Page Setup.
2. Choose page layout options, including header and footer information.

Important: Navigator formats content according to the size of the printed page, not the size of the on screen window. Text is word-wrapped and graphics are repositioned to accommodate paper size.

Searching Within a Page

To find text within the page you are currently viewing:

1. From the Edit menu, choose Find in Page. If the page you are viewing contains frames, you may need to click within a frame first.
2. Type the text you want to find.
3. Select the "Match case" check box if capital letters should be matched.
4. On Windows, select Up or Down to search from the beginning or end of the page. If there is a current selection, the search begins at the selection and does not wrap around to the beginning of the page.
5. Click Find Next to begin the search.

To find the same word or phrase again click Find Next again (Windows only), or open the Edit menu and choose Find Again.

Error Messages

While navigating the Internet, you may occasionally receive an error message.

You are trying to enter an area that the web site manager does not want you to visit or the web master has incorrectly set up the site. Refer back to the section on IP address.

403 Forbidden

Your client does not have permission to get URL / from this server.

The file you tried to access was not found. The web site manager may have moved or deleted the file. Also, check to see if you made a typo. Consider moving up one level in the URL address you entered. For example:

If you type in `http://www.lib.rush.edu/library/ovidweb` and receive the 404 error message, try removing the last file in the address (`/ovidweb`). Re-type the URL as `http://www/lib.rush.edu/library`. By going up one level, you may be able to see where the file has moved.

404 Not Found

The requested URL `/libindex` was not found on this server.

The server (computer you are trying to connect to) could not be found. In this example, the browser could not locate the server at the address *library.rush*. Check your spelling for typos.

Also, check the domain name (.edu, .org, .gov, etc.) to see if you entered the correct one.



**Netscape is unable to locate the server:
www.library.rush.edu
The server does not have a DNS entry.**

**Check the server name in the Location (URL)
and try again.**



Please keep in mind that the Internet is a dynamic environment. Web sites are added, removed and changed constantly. URL's become out dated quickly.

Beginning A Search

- 1) Define your question: What exactly do you want to know when your search is completed.
- 2) Decide if the Internet is the best resource to answer your question. Many questions are better answered using materials such as textbooks or specialized databases such as MEDLINE. Remember: not everything is on the Internet.
- 3) Break your question into components. Identify the keywords that describe your topic and think of any related synonyms. For example, if you are looking for information on cancer, in addition to the word cancer, consider adding neoplasm, tumor and other related words to your search also.
- 4) Select the best search tool. Do you need a search engine, subject index, etc?
- 5) Watch your spelling. Spelling errors are the most common reason for poor results.
- 6) Run your search through several search tools. The average search engine covers only a small fraction of the information available on the Internet. Frequently, the exact same search run on different search engines will find different results. If you cannot find what you are looking for using one search engine, do not quit. Try another search tool.

Search Tools

There are many different tools you can use to search for information on the Internet. Here is a brief description of the types of tools available and a few examples:

Links From A Home Page

Many web sites include a list of links to related subjects. This is often a fast and easy method to find related information. Home pages with good related links include Professional Societies, Libraries and Government Pages.

The Library of Rush University

<http://www.rush.lib.edu/library>.

The American Academy of Family Physicians

<http://www.aafp.org/sites/>

Subject Directory

A subject directory arranges sites by topic. A group of people looks through web pages and decides what categories they best fit. Since the actual site has been looked at and reviewed, a subject directory usually a good place to start your search. However, because of the work involved in looking at each site, not every site on the Internet is in their index. In addition, it takes time for new sites to be entered into the index.

Example:

Scirus

<http://www.scirus.com/>

Yahoo

<http://www.yahoo.com>

Yahoo Health

<http://health.yahoo.com/>

On Health

<http://www.onhealth.com/ch1/index.asp>

Web MD

<http://www.webmd.com/>

Medical Mega Site

<http://henry.ugl.lib.umich.edu/megasite/toc.html>

HealthFinder

<http://www.healthfinder.gov/>

Combined Health Info Database

<http://chid.nih.gov/>

Healthgate

<http://www.healthgate.com/>

Health Web

<http://healthweb.org/>

Search Engine

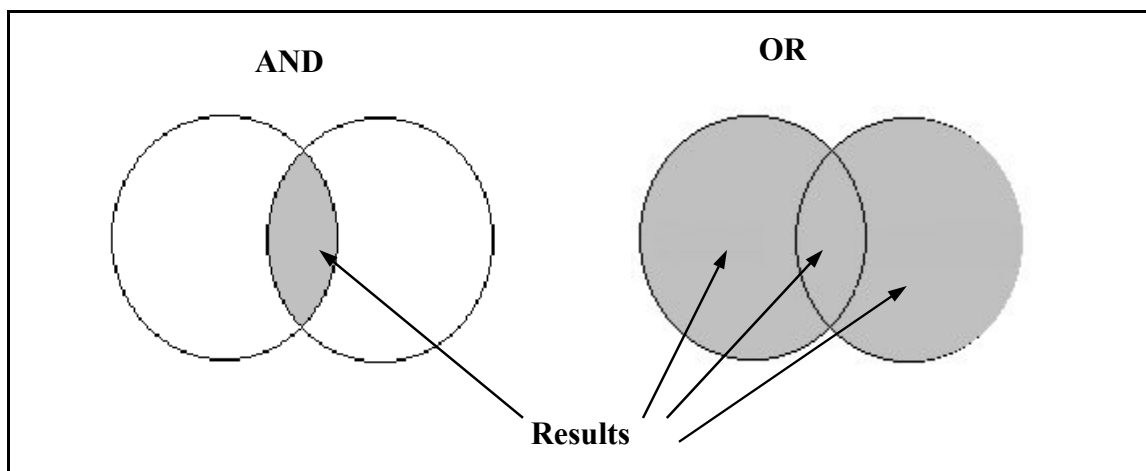
A search engine uses an “agent” (sometimes called a spider or crawler) that travels across the Internet visiting various home pages. They send back information about the sites to the search engine that adds this data to their index. When you use a search engine, you are actually searching that search engine’s index, not directly on the Internet.

Since there are many ways to configure the agents and indexes, each search engine contains different data. Recent studies suggest that most search engines only cover about 20% of the information on the Internet. Also, there is very little over-lapping. Experienced searchers run their search strategies through multiple search engines.

Search engines use complex algorithms to rank the results of your search. They put the most relevant results first in the list. They rank relevancy by looking at if the words appear in the title, are near the top of the page, how many times the word appears in the page, if the words you are searching appear together (adjacent) to each other, etc. Practically, this means that although your search may turn up hundreds of hits, the ones at the top will be your best choices. Many search experts suggest looking at only the first 20 - 50 hits of your search.

Boolean logic

To create an effective search, you often have to use combinations of terms. Boolean Logic uses the terms *and*, *or* to combine terms. Using *And* means the terms must appear together. *Or* means they can appear in either set and do not have to be together. *And* makes smaller sets, *Or* bigger ones.



Each search engine has its own way of handling Boolean operators. To insure that the engine uses the operators the way you want, read the instructions.

Most search engines also work with using the + (plus) and - (minus) signs. + Means the word must be in your results. - Means the word cannot be in your results.

To look for a phrase, place your terms between quotation marks in the correct order:
"american academy of pediatrics"

A Sampling of Search Engines

Each Search engine has its own features. Before using any search engine, you should read the instructions. In addition, here are a few sites that provide useful information about how to search the Internet:

Search Engine Watch
University of Albany

<http://searchenginewatch.com/>
<http://www.albany.edu/library/internet/>

Search Engines:

| | |
|-----------|---|
| Google | ht://www.google.com |
| Hotbot | http://www.hotbot.com/ |
| AltaVista | http://altavista.digital.com/ |
| Excite | http://www.excite.com/ |
| Lycos | http://www.lycos.com/ |

Meta Search Engine

We have suggested using multiple search engines when you search the Internet. Meta Search Engines do this for you. A Meta Search Engine takes your search strategy and sends it to a number of search engines. It takes the results from all the engines and then creates a ranked list. While they are very convenient, keep two things in mind. First, if they cannot reach one of the search engines in their list or that search engine is running slow, the Meta Search Engine skips that search engine. In addition, the Meta Search Engine only takes a limited number of results from each engine- typically 10 - 50 results.

| | |
|-------------|---|
| MetaCrawler | http://www.metacrawler.com |
| DogPile | http://www.dogpile.com |

Natural Language

Up to now, the search engines we have discussed require you to translate your question into a search strategy. Several services are taking a different approach. The Natural Language search engine simply asks you to enter you question as a normal sentence. For example: "Where can I find statistics on colon cancer in men over the age of 40." The Natural Language search engine parses your sentence, creates its own strategy and gives you the results.

| | |
|------------|---|
| Ask Jeeves | http://www.aj.com/ |
|------------|---|

Evaluating Information Found on the Internet

How can you trust the information you have found on the Internet? Nothing is fool-proof; however these tips may help*

Purpose

Audience:

Consider the intended audience of the page, based on its content, tone and style.
Does this mesh with your needs?

Consider the Source

Web search engines often amass vast results, from memos to scholarly documents.
Many of the resulting items will be peripheral or useless for your research

Source

Author/producer is identifiable.

Author/producer has expertise on the subject as indicated on a credentials page. You may need to trace back in the URL (Internet address) to view a page in a higher directory with background Information.

Mail-to link is offered for submission of questions or comments.

Sponsor/location of the site is appropriate to the material as shown in the URL Examples:

.edu for educational or research material

.gov for government resources

.com for commercial products or commercially-sponsored sites

~NAME in URL may mean a personal home page with no official sanction

Content

Accuracy

Don't take the information presented at face value

Web sites are rarely refereed or reviewed, as are scholarly journals and books

Look for point of view or evidence of bias

Source of the information should be clearly stated, whether original or borrowed from elsewhere

Comprehensiveness

Depth of information: determine if content covers a specific time period or aspect of the topic, or strives to be comprehensive

Use additional print and electronic sources to complement the information provided

Currency

Look to see if site has been updated recently, as reflected in the date on the page, and material contained on the page is current

Links

Links are relevant and appropriate

Don't assume that the linked sites are the best. Investigate additional sites on the topic

Style and Functionality

Site is laid out clearly and logically with well organized subsections

Writing style is appropriate for the intended audience

Site is easy to navigate, including clearly labeled Back, Home, Go To Top icons/links

Internal indexing links on lengthy pages

Links to remote sites all work

Search capability is offered if the site is extensive

* Created by Trudi Jacobson, Coordinator of User Education Programs and Laura Cohen, Network Services Librarian, University at Albany Libraries <http://www.albany.edu/library/internet/evaluate.html>

Need More Information?

To learn more about the features of your web browser, read the online help instructions. They can usually be found under the menu bar on the far right of your web browser.

Visit one of the Internet tutorial sites on the Internet. The University at Albany Library's web site has excellent information: <http://www.albany.edu/library/internet/>.

For help with a search engine, look for their online help link. Since search engines change rapidly, it is a good idea to check the instructions on a regular basis. To see tips on how to use search engines in general, visit Search Engine Watch at <http://www.searchenginewatch.com>. They provide information for all skill levels, beginner to advanced.

The Library has an excellent collection of books about using the Internet. Some of them specifically address using the Internet to find medical information. Please contact the Library or search the online catalog. Our home page, <http://www.lib.rush.edu/library>, provides valuable links for beginning a search.

Finally, please do not hesitate to contact the Reference Desk. We will gladly assist you with any questions you may have.

The Library of Rush University
(312) 942-5952
libref@rushu.rush.edu

Bonus: Connecting to the Library From Off Campus



The students, faculty, and staff of Rush University and Medical Center may access restricted Library resources such as our full-text journals, databases, and electronic textbooks from off campus by using a special computer account called a Proxy. A Proxy account only works with your *existing* Internet service provider: you must have a cable, DSL, or dial-up account first.

- The Proxy account does not give you access to the Internet- you must have your own Internet Service Provider such as AOL, AT&T, SBC, etc.
- The Proxy account works with America Online (AOL) service. However, it does not work with AOL's proprietary web browser. To use the Proxy account with AOL, please download/use the most current version of either Microsoft Internet Explorer or Netscape Navigator web browser.
- The Proxy account is compatible with Macintosh operating systems.
- Before using your Proxy account, you must make a one-time, simple set-up change to your web browser. Details are available at our web page:
www.lib.rush.edu/library/proxyins.html
- Your Proxy account allows you to access restricted Library resources including our full-text journals, databases, etc. You can also leave the Library web site and visit other internet sites. However, the Proxy account does not give you access to other restricted Rush web resources such as e-mail, the Rush Intranet (IRIS), patient information, lab results, etc. These are different accounts and are not related to the Proxy account.

To apply for a Proxy account, visit: www.lib.rush.edu/library/proxy.html

For help using your Proxy, visit: www.lib.rush.edu/library/contactpxy.html.

If you need an Internet Service Provider, you can apply for a Rush Dial-Up account at www.lib.rush.edu/library/dialup.html

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Fax: (312) (942)-3143
Home Page: www.lib.rush.edu/library