

## When Google Doesn't Find It:

Web Search Strategies for the Classroom

### Workshop Notes:

- Copies of all this presentation and all materials from this session are available at:

<http://www.niu.edu/facdev/technology/handouts/html/evaluatingresources.htm>

### Acknowledgments

- Phelan, J. S. & Fry, C. Y. (2005, April). *Beyond basic Google: Keeping ahead of the search engine curve*. Presented at the annual conference of the Washington Library Association, Spokane, WA. Retrieved May 3, 2005 from [http://www.spu.edu/library/pres/google\\_files/frame.htm](http://www.spu.edu/library/pres/google_files/frame.htm)
- Dennis Mills, Ph.D. – Capella University

### Finding what you want

- Finding what you want on the Internet can be like trying to find a book in a library with all the catalog cards on the floor or looking for a needle in a haystack. You know it is there, but how can you find it?
- After you find information, how can you verify its validity?

### What search engines do you use currently?

- What frustrations do you face when you attempt to find information on the Internet?
- What are some topics or specific information that you'd like to find online?

### Not all search engines are alike

- There are numerous search engines and they are not alike
- Google has references over eight billion web pages
- What do you do when Google doesn't find what you need?
- What if you DO find information on Google? How can you evaluate the validity of the information?

## What is invisible to search engines?

- Vast expanses of the Web are completely invisible to search engines
- This “invisible web” is in all likelihood growing significantly faster than the visible web

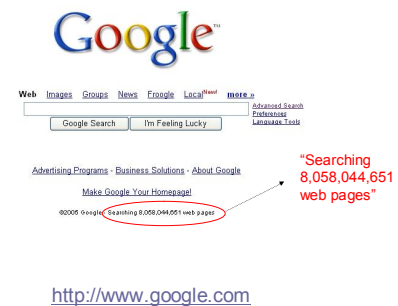
## Workshop objectives

- Learn tips & tricks for improving Google search results
- Utilize various search engines
- Send queries to a number of Internet search engines and receive the results compiled into a single page
- Locate information stored in databases, but hidden from most search engines
- Explore ways to implement search strategies for the students in your class

## Why Google™ so popular?

- Size
- Result Relevancy
- Ease of Use

## Google : Size



## Google: Result Relevancy

- Page Ranking
  - Google examines links from one page to another
    - Consider a link a “vote” for the linked page
    - Pages with lots of “votes” are ranked as more important
  - Google ranks the pages that cast “votes” based on popularity
    - More weight is given to heavily linked pages
  - Google then assigns a “PageRank” or status that calculates on a scale from one to ten

## Google: Result Relevancy (cont.)

- Text Matching
  - Google matches your search terms to the text content on first layer pages
  - Google then matches your terms to pages linking to the first layer pages
  - Google also looks at the position of your search terms on each matching page

## Google: Result Relevancy (cont.)

### ■ Search Criteria

- Your results are filtered through the limiting criteria you have incorporated into your search

Source: Milstein, S. & Dornfest, R. (2004). Google: The missing manual. North Sebastopol, CA: O'Reilly Media, Inc.

## “~” searches

- This technique allows a search not only for a particular keyword, but also for its synonyms. Indicate a search for both by placing the tilde sign (~) immediately in front of the keyword

• Synonym search

~CPR

## Phrase searches

- Search for complete phrases by enclosing them in quotation marks.
- Words enclosed in double quotes (“like this”) will appear together in all results exactly as you have entered them.
- Especially useful when searching for famous sayings or proper names

• Phrase search

“instructional design”

Hint: second “ may be omitted for phrase searches on Google

## Google Advanced Search

The screenshot shows the Google Advanced Search page with various filters. The 'Find results' section has four radio buttons: 'with all of the words', 'with the exact phrase', 'with at least one of the words', and 'without the words'. The 'Language' section has a dropdown for 'any language'. The 'File Format' section has a dropdown for 'any format'. The 'Date' section has a dropdown for 'anytime'. The 'Numeric Range' section has two input fields for 'between' and 'and'. The 'Occurrences' section has a dropdown for 'anywhere in the page'. The 'Domain' section has a dropdown for 'any domain'. The 'SafeSearch' section has two radio buttons: 'No filtering' and 'Filter using SafeSearch'.

[http://www.google.com/advanced\\_search](http://www.google.com/advanced_search)

## Google Help Center – Cheat Sheet

<http://www.google.com/help/cheatsheet.html>

- Search only one website  
site:www.ala.org chicago
- Search within a range of numbers  
fashion 1920..1929 or  
ipod \$100..\$300
- Exclude adult-content  
safesearch:sex education
- Linked pages  
link:www.uiuc.edu
- Wild cards  
"William \* Clinton" or  
"top \* causes of mortality"
- Info about a page  
info: www.uiuc.edu

## Google Web Search Features

<http://www.google.com/help/features.html>

### Reference:

- Calculator: 50+142\*6
- Definitions: define:Internet
- Number Searches  
(phone #s, tracking #s, VINs)
- Google Zeitgeist  
(current top searches)

### Special Searches

- Google Sets
- Google Suggest

### Subset Searches:

- Google Uncle Sam :  
google.com/unclesam
- University Search :  
google.com/options/universities.html
- Froogle : froogle.com
- Google Images : images.google.com
- Google Maps : maps.google.com
- Google Scholar : scholar.google.com
- Google Local : local.google.com

Google Labs: <http://labs.google.com>



## Individual Search Engines

- Exalead: [beta.exalead.com](http://beta.exalead.com) (IF, RS, TN)
- Find Sounds: [findsounds.com](http://findsounds.com) (AV)
- Ice Rocket: [icerocket.com](http://icerocket.com) (TN)
- Lycos: [lycos.com](http://lycos.com) (IF, RS, AV)
- Singing Fish: [singingfish.com](http://singingfish.com) (AV)
- Teoma: [teoma.com](http://teoma.com) (IF, RS)

### Features Key

**IF** Interesting Search, Refine or Display Features

**RS** Suggests terms to refine search

**TN** Includes thumbnails of pages found

**AV** Includes AV searching

## Meta Search Engines

- All the Web: [alltheweb.com](http://alltheweb.com) (RS, AV)
- Clusty: [clusty.com](http://clusty.com) (IF, RS)
- Vivisimo: [vivisimo.com](http://vivisimo.com) (IF, RS)
- Dog Pile: [dogpile.com](http://dogpile.com) (RS, AV)
- Kartoo: [kartoo.com](http://kartoo.com) (IF, RS)
- SurfWax: [surfWax.com](http://surfWax.com) (IF)
- ZapMeta: [zapmeta.com](http://zapmeta.com) (IF, RS)

### Features Key

**IF** Interesting Search, Refine or Display Features

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**AV** Includes AV searching

## Creating Access Points

- Toolbars
  - Google Toolbar
  - Groove Toolbar
  - Yahoo Toolbar

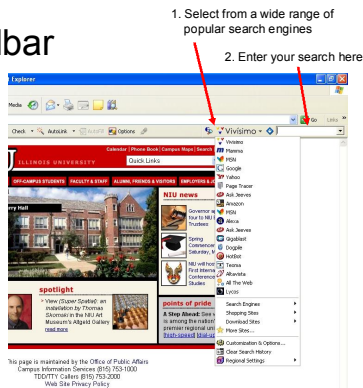
## Google Toolbar

- Search the web, images, news, etc. Plus page ranking indicator, and pop-up blocking.
- V.3 Beta includes SpellCheck, WordTranslator, AutoLink <http://toolbar.google.com/T3/index>



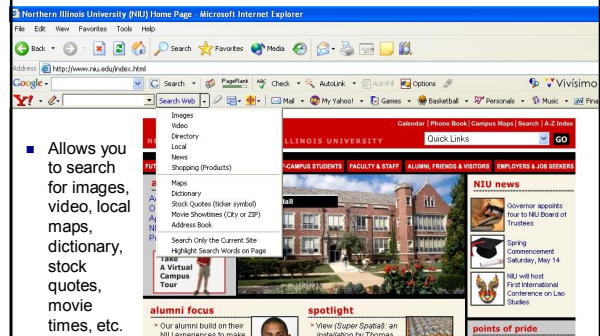
## Groove Toolbar

- One toolbar that allows you to choose from 18+ search engines



## Yahoo Toolbar

- Allows you to search for images, video, local maps, dictionary, stock quotes, movie times, etc.



## Staying Current with Search Engines

- Locating other search engines
  - Search Engine Watch's "Search Engine Listings"  
[searchenginewatch.com/links](http://searchenginewatch.com/links)
  - Extensive annotated list of available search engines created by Laura Cohen at SUNY-Albany  
[library.albany.edu/internet/engines.html](http://library.albany.edu/internet/engines.html)

## Staying Current with Search Engines (cont.)

- Search Engine Watch – Danny Sullivan  
[searchenginewatch.com](http://searchenginewatch.com)
- Search Engine Showdown – Greg Nottess  
[searchenginesshowdown.com](http://searchenginesshowdown.com)
- Search Engine Guide – Jennifer Laycock  
[searchengineguide.com](http://searchengineguide.com)

## Search Engine Blogs

- Search Engine Lowdown – Andy Beal  
[searchenginelowdown.com](http://searchenginelowdown.com)
- Google Blog – various Google staff  
[google.com/googleblog/](http://google.com/googleblog/)
- Search Engine Blog – Jennifer Laycock  
[searchengineblog.com](http://searchengineblog.com)

## Searchable Databases

- Searchable databases are excellent sources for information.
- These databases are on the WWW and each database website gives you, the user, instructions.

## “Invisible Web” or “Deep Web”

- A vast reservoir of Internet content that is 500 times larger than the known “surface” of the World Wide Web.
- The “Deep Web” contains billions of high-quality documents in about 350,000 specialty databases – all hidden from view of standard search engines

## The “Invisible Web”

- Vast expanses of the Web are completely invisible to search engines
- The “Invisible Web” is comprised of information stored in databases
- Databases are generally inaccessible to software spiders and crawlers that compile search engine indexes
- Usually stores specialized, niche information

## Invisible Web – Keep in mind

- A good subject directory will link to database sites on the Web
- Websites of searchable databases can also be retrieved via search engines
- Many search engines and commercial portals feature searchable databases as part of their package of services

## I-Sleuth

- Directory of more than 3,000 searchable databases
- Every listing includes both a description of the database, and a form that allows you to search the database directly from I-Sleuth

<http://www.isleuth.com>

## Infomine Multiple Database Search

- “academic” search engine, focused on scholarly resource collections, electronic journals and books, online library card catalogs, and directories of researchers

<http://infomine.ucr.edu>

## CompletePlanet

CompletePlanet  
The Deep Web Directory

Discover over 70,000+ searchable databases and specialty search engines.

Find databases relevant to:  All of these words:  A comprehensive listing of directly accessible databases. Not databases with highly relevant documents that cannot be accessed through search engines.

**All Topics >>**

- Agriculture
- Arts & Design
- Business
- Computing & Internet
- Education
- Energy
- Environment
- Family
- Finance & Economics
- Food & Drink
- Games & Hobbies
- Government
- Health
- Home & Garden
- Humanities
- Jobs & Careers
- Law
- Literature
- Movies/TV/News
- Music & Journals
- Media & Entertainment
- Military
- Music
- News
- Newspapers
- People
- Politics
- Products & Technology
- Recreation
- References
- Religion
- Science
- Search Engines
- Shopping
- Social Sciences
- Sports
- Transportation
- Travel
- Weather

Technical White Papers: [The Deep Web](#)  
[Why is Standard Search Alone Inadequate to Meet Real Business Needs?](#)

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- Global Gateway: World Culture & Resources
- America's Library: Link Up, Play Around, Learn Something
- More Online Collections

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- Advanced Search
- Historical Catalogs
- Indexes
- Site Map
- Ask a Librarian
- Tolerance History

**Especially for ...**

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- Law Researchers
- Librarians & Archivists
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- Educators
- Students
- Patrons with Disabilities
- Blind Patrons
- Newcomers

**Information & Services**

- US Copyright Office
- National Digital Preservation Program
- About the Library
- Visit a Tour
- Philanthropy
- Staff Fellowships
- Shop

**News & Events**

- Veterans History and "Voices of War"
- New Book Tells Veterans' Stories
- Katherine Dunham Collection
- New Site on Dancer, Choreographer
- Enchanted Webcast
- Authors at the 2004 Book Festival

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<http://www.lib.umi.com/dxweb/gateway>

## Terra Server – World Imagery Database

TerraServer USA

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Advanced Find  
Famous Places  
Web Services  
About

TerraServer  
Click the green areas to zoom-in on the map.

TerraServer contains 3.3 tera-bytes of high resolution **MSGS aerial imagery** and **USGS topographic maps**. You can locate imagery by clicking on the map above, **entering a city or town name** in the Search TerraServer form at the top of the page, or **entering a U.S. street address**. Click on **Advanced Find** to see other methods for searching our imagery database.

Below are sample thumbnail images of famous places contained in the TerraServer database. Click on a thumbnail image to see a famous place or click on **more famous places** to see a complete list of famous sites.

More Famous Places

Italy Class  
Battleship

Naples Falls

Lambert Field

St. Louis Gateway

<http://www.terraserver.microsoft.com>

## The Quotations Page

- Links to quotes of the day, quotes of the week, and searchable quotations
- Established in 1994, the Quotations Page has over 19,000 quotations online from over 2,400 authors

<http://www.quotationspage.com>

## Scirus

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for scientific information only

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<http://www.scirus.com>

## U.S. Congressional Record

GO! Access

Legislative | Executive | Judicial

Resources by Topic: GO | Site Search: Advanced

A-Z Resource List | Find a Federal Depository Library | Bill Publications | HSP | About

Home Page | Legislative Branch | Congressional Bills

### Congressional Bills: Main Page

GO! Access contains all published versions of bills from the 103rd (1993-1994) Congress onward. The 108th Congress database is updated by 6 a.m. (EST) daily when bills are published and approved for release. The documents in these databases are available as ASCII text and Adobe Portable Document Format (PDF) files.

Current Congress Only -- 108th Congress (2003-04)

- Quick Search (e.g. "H. 1096", "107", "hearing order")
- Browse All Bills by the 108th Congress
  - House Bills: HB | HR | H.R. | H.R. | H.R.
  - Senate Bills: SB | S. | S. | S. | S.

Previous Congresses -- 103rd (1993-94) through 108th (2003-04) Congress

- Search Bills by Congress
- Browse Bills by Congress and/or Year of Introduction
- Search Tips
- Congressional Bills Glossary: Provides an explanation of abbreviations, types of legislation, and bill numbers
- Added and Deleted Text within Congressional Bills for ASCII Text and PDF files

<http://www.gpoaccess.gov/cris/index.html>

## World Intellectual Property Organization

WIPO International Property Digital Library

Home Page | News & Information Resources

Intellectual Property Digital Library

Search:

Database:

The Intellectual Property Digital Library Web site provides access to intellectual property data collections hosted by the World Intellectual Property Organization. These collections include PCT (Patents, Marks, Trademarks), Hague (Industrial Designs), Article 6ter (State Emblems, Official Trademarks, and Emblems of Intergovernmental Organizations) and [Paris](#).

Access a detailed index of all IPDL data collections.

The form above allows you to conduct a simple search for terms occurring within any field of a given database. For a more advanced interface allowing fielded term searches, please select a database from the left-hand menu. Frequent users who would like to maintain a search query history across consecutive sessions should setup a [free user account](#).

<http://www.wipo.int/ipdl/en/>

## Google Desktop Search

Find your email, files, media, web history and chats instantly

- View web pages you've seen, even when you've not online
- Search directly from your desktop with the deskbar

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English

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[www.desktop.google.com](http://www.desktop.google.com)

## The classroom...

- How could you incorporate your new web search skills into your educational environment?
- How can you tell whether you can trust a source you've found online?

## Evaluating Sources Activity

- Evaluating Sources Worksheet:  
<http://www.niu.edu/facdev/technology/handouts/pdfs/evalworksheet.pdf>
- Evaluating Sources Activity Links:  
<http://www.niu.edu/facdev/technology/handouts/html/webevallinks.htm>

## Questions to Consider

- In your class, how can you help your students learn to evaluate the information found online?
- What specific strategies or activities might you seek to implement in your course to aid students to be more informed consumers of online information?

## Great reference for more info

**The Invisible Web:  
Uncovering Information  
Sources Search Engines  
Can't See**

Chris Sherman and Gary Price

ISBN: 0-910965-51-X

## www.invisible-web.net

The Invisible Web Directory

<ul style="list-style-type: none"> <li>Art and Architecture</li> <li>Bibs/Library Catalogs</li> <li>Business and Investing</li> <li>Computers and Internet</li> <li>Education</li> <li>Entertainment</li> <li>Government Info</li> <li>Health and Medical</li> <li>Legal and Criminal</li> </ul>	<ul style="list-style-type: none"> <li>News and Current Events</li> <li>Public Records</li> <li>Real-Time Information</li> <li>Reference</li> <li>Science</li> <li>Searching for People</li> <li>Social Sciences</li> <li>Transportation</li> <li>U.S./World History</li> </ul>
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<http://www.invisible-web.net>

Select a category to drill-down through the database.

For more information, including all the materials presented in this session...

- Log-on to:  
[www.niu.edu/facdev/technology/handouts/html/evaluatingources.htm](http://www.niu.edu/facdev/technology/handouts/html/evaluatingources.htm)