VI. HOW TO SEARCH LIKE A PRO

A. What is the Difference between a Search Engine and a Directory?

As explained by Kimmons,

A search engine is a web site that collects and organizes content from all over the internet. Those wishing to locate something would enter a query about what they'd like to find and the engine provides links to content that matches what they want.

Google.com has become the most widely used search engine on the Internet. Other top engines include:

- Yahoo.com
- Dogpile.com
- Ask.com
- Bing.com

To understand why listings rise to the top of search engine results, we need to know the motivations of all of the players.

- The searcher: Someone is on the Web searching for information or a product or service. They want to enter some key words that represent to them the item for which they're searching and have relevant websites pop to the top of the search that are going to answer their question or meet their needs.
- The search engine: The search engines are making money selling ad space to websites, businesses and marketers. The more search traffic they can generate, the more eyes on their ads, and the more money that is made. Their goal is to have the most relevant sites pop to the top of search results so that the searchers find what they want and return to do another search.
- The website or marketer: They want these Web searchers to click to their site so that they can present their message and/or sell their products or services. They of course want to have the searcher arrive at a relevant page to their search so they are more likely to take the action desired by the site/marketer. (James Kimmons, Search Engine, The Balance, June 9, 2015, accessed 10/25/16.)

On the other hand, as defined by Wikipedia,
A web directory or link directory is a directory on the World Wide Web. A collection of data organized into categories. It specializes in linking to other websites and categorizing those links.

A web directory is not a search engine and does not display lists of web pages based on keywords; instead, it lists web sites by category and subcategory. Most web directory entries are also not found by web crawlers but by humans. The categorization is usually based on the whole web site rather than one page or a set of keywords, and sites are often limited to inclusion in only a few categories. Web directories often allow site owners to submit their site for inclusion, and have editors review submissions for fitness.


Additional clarification is provided by DirectoryOne.com,

Search engines and the directories are two different services available to the Web community. However, many people do not know the difference between them. Search engines have databases built up by "robots", which visit a websites and add information to their database. On the other hand, directories are human edited and build their indexes with editors who visit websites, and add to the directory the sites that they consider to be a valuable resource.

Some search engines and directories include both types of indexes, and are known as "hybrids". Some examples of search engines are Google, Gigablast, and Alltheweb. These search engines use programs (known as robots), with the following functions:

1. To find web pages.
2. To scan the contents of a web page.
3. Return its findings to the search engine's databases.

Most search engines update their databases frequently. When web searchers use a search engine to locate websites relevant to the keyword (or key phrases)
searched, they are searching the search engine's database. Therefore, a search engine with a frequently updated database should provide better search results.

The best known directories are Yahoo, Business.com, Dmoz.org, and Looksmart. These directories employ human editors to review websites that are submitted for possible inclusion into their directory. The directories usually include only the main page of a website, while search engines can include many pages from a website. The process of adding sites to a directory manually is much slower than the automated work of robots. Therefore, most of the time there are many more websites indexed by a search engine than in a directory. However, the directories have an advantage: The data organization.

Directories, unlike search engines, use a tree hierarchic structure to organize their database. This hierarchic organization allows the existence of specialized directories, by subject or by geographic location. One example is Checkhouston.com, a directory dedicated specifically for information and businesses in the area of Houston, Texas. (http://www.directoryone.com/articles/search-engines-vs-directories.htm, accessed 10/18/16).

Levitt and Davis provide additional information about portals and directories versus search engines as it relates to legal research.

Portals and directories are quite different from a search engine. Search engines return their results via automated programs that do not rely on human intervention. In contrast, legal portals and directories employ humans to create their products. These humans (usually law librarians or lawyers) have the subject expertise to be able to categorize the sites (just as a librarian would catalog a book by subject) and to judge whether a site is reliable before adding it to the portal or directory. This ensures that you will be able to easily pinpoint relevant and reliable sites. (Carole A. Levitt & Judy K. Davis, Internet Research on a Budget: Free and Low-Cost Resources for Lawyers. Chicago: ABA Law Practice Division, 2014)
B. How Do Search Engines Really Work?

Franklin provides a nice description of how Internet search engines work:

The good news about the Internet and its most visible component, the World Wide Web, is that there are hundreds of millions of pages available, waiting to present information on an amazing variety of topics. The bad news about the Internet is that there are hundreds of millions of pages available, most of them titled according to the whim of their author, almost all of them sitting on servers with cryptic names. When you need to know about a particular subject, how do you know which pages to read? If you're like most people, you visit an Internet search engine.

Internet search engines are special sites on the Web that are designed to help people find information stored on other sites. There are differences in the ways various search engines work, but they all perform three basic tasks:

- They search the Internet -- or select pieces of the Internet -- based on important words.
- They keep an index of the words they find, and where they find them.
- They allow users to look for words or combinations of words found in that index.

Early search engines held an index of a few hundred thousand pages and documents, and received maybe one or two thousand inquiries each day. Today, a top search engine will index hundreds of millions of pages, and respond to tens of millions of queries per day. In this article, we'll tell you how these major tasks are performed, and how Internet search engines put the pieces together in order to let you find the information you need on the Web. (Curt Franklin, How Internet Search Engines Work. How Stuff Works, http://computer.howstuffworks.com/internet/basics/search-engine.htm, accessed 10/18/16).

He also provides a very nice graphic of how search engines employ special software robots, called spiders, to build lists of the words found on web sites. When a spider is building its lists, the process is called Web crawling.
"Spiders" take a Web page's content and create key search words that enable online users to find pages they're looking for. (Id. at 2)
C. Learn Boolean Logic to Create the Best Search Strategies for Finding Relevant Documents

Franklin describes the various options for creating search strategies using Boolean logic:

Searching through an index involves a user building a query and submitting it through the search engine. The query can be quite simple, a single word at minimum. Building a more complex query requires the use of Boolean operators that allow you to refine and extend the terms of the search.

The Boolean operators most often seen are:

- **AND** - All the terms joined by "AND" must appear in the pages or documents. Some search engines substitute the operator "+" for the word AND.
- **OR** - At least one of the terms joined by "OR" must appear in the pages or documents.
- **NOT** - The term or terms following "NOT" must not appear in the pages or documents. Some search engines substitute the operator "-" for the word NOT.
- **FOLLOWED BY** - One of the terms must be directly followed by the other.
- **NEAR** - One of the terms must be within a specified number of words of the other.
- **Quotation Marks** - The words between the quotation marks are treated as a phrase, and that phrase must be found within the document or file. (Franklin at 5)

Some databases and search engines may substitute symbols and numbers for words. For example, proximity connectors may include *adj* (for adjacent), *before/#* (the first word is within whatever number of words that you select of the second word in that order) and *near/#* (specifies that the first word is within whatever number of words you select of the second word and in any order). (Levitt & Davis at 53) Wildcards can be indicated by a question mark (?) to replace one character before, within or after a search term and the asterisk symbol (*) to replace one or more characters before, within or after a search term. (*Id.*) The authors note that parentheses should be used when creating complex searches, especially searches with multiple proximity connectors and/or multiple field
operators. (Id.) Many databases and search engines will use field code or tags that let you restrict your search to just author, title, etc. Whatever search engine or database you are using, you will want to become familiar with the particular words, abbreviations and symbols it uses so that you can effectively increase the relevance of your search retrieval.

The National Library of Medicine provides some simple examples of using OR, AND or NOT in a search strategy:

**OR:**

- Used to retrieve a set in which each citation contains *at least one* of the search terms.
- Use OR when you want to pull together articles on similar topics.

**Example:** *football OR hockey OR soccer*

Each circle in the diagram to the right represents the retrieval for each term. The grey areas represent the retrieval for this example – all records that include any one of these terms.

The table below represents sample results for each term, then for the terms combined with OR.

<table>
<thead>
<tr>
<th>Search terms</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>football</td>
<td>4819</td>
</tr>
<tr>
<td>hockey</td>
<td>1058</td>
</tr>
<tr>
<td>soccer</td>
<td>2517</td>
</tr>
<tr>
<td>football OR hockey OR soccer</td>
<td>6090</td>
</tr>
</tbody>
</table>
NOT:

- Retrieves a set from which citations to articles containing specified search terms following the NOT operator are eliminated.

**Example:** *arthritis NOT letter*

Note in the diagram to the right and in the sample search results below that the retrieval is a portion of the total retrieval for arthritis – that portion not including the term letter.

<table>
<thead>
<tr>
<th>Search terms</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>arthritis</td>
<td>167,933</td>
</tr>
<tr>
<td>letter</td>
<td>617,646</td>
</tr>
<tr>
<td>arthritis NOT letter</td>
<td>159,681</td>
</tr>
</tbody>
</table>

AND:

- Used to retrieve a set in which each citation contains *all* search terms.

**Example:** *salmonella AND hamburger*

Note in the diagram to the right and in the sample search results below that the retrieval is only the overlap of the results for each term – those records in which both terms appear.

<table>
<thead>
<tr>
<th>Search terms</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>salmonella</td>
<td>64810</td>
</tr>
<tr>
<td>hamburger</td>
<td>2494</td>
</tr>
<tr>
<td>salmonella AND hamburger</td>
<td>12</td>
</tr>
</tbody>
</table>

- AND is the default operator used in PubMed. If you do not include Boolean operators in your search, PubMed will automatically use AND between terms.

**Example:** *diabetes mellitus phototherapy*

PubMed searches as: *diabetes mellitus AND phototherapy*
(Introduction to Boolean Logic, National Library of Medicine, July 8, 2015,
D. Which Search Engines Are the Best?


1. Relevant results (results you are actually interested in)
2. Uncluttered, easy to read interface
3. Helpful options to broaden or tighten a search

With this criteria, several reader favorite search engines come to mind. These 11 search sites should meet 99% of the searching needs of a regular everyday user.”

- Duck Duck Go Search
- Bing Search
- Dogpile Search
- Yippy Search
- Google Scholar Search
- Ask.com Search
- Mahalo ‘Learn Anything’ Search
- Webopedia Search
- Yahoo! Search (and More)
- The Internet Archive Search
- Google Search

The advice may be to try a number of different search engines to determine which you like the most and then to practice searching with them so that you are comfortable with the subtle nuances of each and proficient with the functionality and special features.
E. Search Engines That Think: The Future of Searching

On the other hand, there are newer types of search strategies being developed to more accurately capture what the user is searching for. Franklin reports on two opportunities that show promise in the future:

One of the areas of search engine research is concept-based searching. Some of this research involves using statistical analysis on pages containing the words or phrases you search for, in order to find other pages you might be interested in. Obviously, the information stored about each page is greater for a concept-based search engine, and far more processing is required for each search. Still, many groups are working to improve both results and performance of this type of search engine. Others have moved on to another area of research, called natural-language queries.

The idea behind natural-language queries is that you can type a question in the same way you would ask it to a human sitting beside you -- no need to keep track of Boolean operators or complex query structures. The most popular natural language query site today is AskJeeves.com (now Ask.com), which parses the query for keywords that it then applies to the index of sites it has built. It only works with simple queries; but competition is heavy to develop a natural-language query engine that can accept a query of great complexity. (Franklin at 6)

Massive amounts of information are now being generated in digital form in a wide variety of formats and file sizes. The era of “big data” is clearly upon us. And that is where we will turn to technology to help solve the problem. Data mining, algorithms, tags, etc. are all being developed and tested, by entrepreneurs and vendors as well as by faculty researchers in my own school. (See Mathew Palakal, Ph.D., http://soic.iupui.edu/people/mathew-palakal/, accessed 10/18/16.) Some resources on big data and data analytics in the context of law include:


An excellent handout from FindLaw, which was distributed at the State Bar of Michigan’s Solo & Small Firm Institute helps us visualize how the web has impacted the search for legal services and information by the public.
F. Learn Browser Tricks – The Power of the “Find” Function to Scan Web Pages Quickly

Each browser – and version of a browser - will have a different mechanism for quickly locating information. The Find command [CTRL] + [F] – and its variations - can be a powerful tool because it enables you to search for information within a specific website. The process is very easy. Once you have located a website that you believe may have the information you want, simple use the pull-down menu under Edit and select Find on this page. You will be provided with a search box to type your keywords.
On this website, you can see that the word I searched for, “Data,” is highlighted in yellow. This can be a quick way to scan large amounts of information. It is a great device for finding that “needle in a haystack”. Fortunately, most websites now provide their own search boxes (typically at the top right of the screen or as part of More …), which is even more convenient, and it will search the entire website, rather than just one page at a time. If I search “forensics” on Sensei Enterprises, Inc., here is what I locate.
The equivalent of a Find command is also available in other software. Rather than print and review an entire PDF document, you can use the Find feature on the top left side of the screen. For example, if I have a question about whether a lawyer can benefit from a client’s literary rights, I will open the PDF version of the Indiana Rules of Professional Conduct. I merely use the pull-down menu under Edit, select Find and then fill out the text box at the top of the screen.
Indiana Rules of Court
Rules of Professional Conduct

Including Amendments made through April 30th, 2015

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I can then see all instances of the keyword “literary” within the document and move seamlessly to each of them by clicking on Next or Previous. Other versions of
PDF readers may use a binoculars symbol on the left-hand side or the document or a pull-down menu at the top.
F. Managing Bookmarks

There is no need to continually re-invent the wheel when conducting legal research or competitive intelligence on the Internet. One of the best tools available is the “bookmarks” or Favorites (Microsoft Explorer) feature of website browsers. If you find a website that is useful, simply add it to your list. You can organize bookmarks into a variety of categories or folders, which is particularly helpful when your list contains more websites than you can easily remember.

As time goes on, you may notice that you have accumulated a long list of bookmarks or Favorites. It is useful to periodically weed through and delete bookmarks that you are no longer using. It is also a good idea to periodically go through your list and make sure all of the websites are still in operation. Delete those that are no longer active or update your list when the URLs change. Re-alphabetizing your list is also a good habit to get into. You can place your most-used bookmarks onto a Favorites bar. Another strategy is to have two separate lists. The top list can be for websites that you will use again and again. The bottom list can be for websites that you are only using for a short-term project that can be deleted later. You can organize your bookmarks into folders.

To keep my list of Favorites at a manageable size, I try to find very comprehensive websites that are likely to have links to other sites I might be most interested in. For example, if I can get to chapters of an organization through its national headquarters website, I will add the national headquarters website to my Favorites.
G. Effectively Using RSS Feeds, Blogs and Podcasts

RSS Feeds

RSS stands for Really Simple Syndication. According to the USA.gov website, RSS is an easy way to keep up with news and information that's important to you. By subscribing to an RSS feed, you can have content delivered directly to you without receiving an e-mail.

RSS feeds, (which have the extension ".xml", ".rss", ".sfm", ".cfm", ".rdf", ".aspx", or ".php"), require installation and use of RSS aggregator software. An RSS aggregator allows you to subscribe to an RSS feed. There are many aggregators available; some are free and some are available for sale. RSS feeds are commonly used on weblogs (blogs), news websites, and other places with frequently updated content. An RSS aggregator gathers material from websites that you tell it to scan, and it brings new information from those sites to you. It's a convenient format because it allows you to view all the new content from multiple sources in one location on your desktop.

As defined by Cornick,

RSS is a group of formats that are used to publish and distribute news feeds, blogs, and podcasts. RSS allows users to “push” news, blogs, updates, and other information to RSS readers and web pages. Users can subscribe to RSS feeds and access the updated information as soon as it comes in. Free RSS readers are widely available on the Internet. (Matthew S. Cornick, Using Computers in the Law Office, 7th ed. Boston, MA: Cengage Learning, 2015, pp. 621)

Free RSS reader programs are available on the Internet. See the following websites for information, free RSS readers and reviews:

- Heinz Tschabitscher, Top 8 Free Windows RSS Feed Readers / News Aggregators, Lifewire, October 9, 2016,

Some helpful RSS feeds covering legal topics include:


o U.S. government provides dozens of RSS feeds through its many agencies. For example, the U.S. Department of Housing and Urban Development (HUD) provides a links to number of RSS feeds at [http://portal.hud.gov/hudportal/HUD?src=/rss](http://portal.hud.gov/hudportal/HUD?src=/rss), accessed 10/18/16.

o Through the Legal Information Institute (LII) at Cornell University, [http://www.law.cornell.edu/nyctap/subscribe.html](http://www.law.cornell.edu/nyctap/subscribe.html), accessed 10/18/16.
  - Daily decisions: [http://www.law.cornell.edu/nyctap/rss/nyctap_today.rss](http://www.law.cornell.edu/nyctap/rss/nyctap_today.rss)
  - Recent decisions: [http://www.law.cornell.edu/nyctap/rss/nyctap_recent.rss](http://www.law.cornell.edu/nyctap/rss/nyctap_recent.rss)


**Blogs**

As defined by Cornick, ‘[a] blog (short for weblog) is a website with information contained in “posts” that are arranged in reverse chronological order. Blog postings resemble diary or journal entries and may contain links to other websites or articles.”


There are a number of search engines for blogs. For example:
There are also blogs for law, sometimes referred to as blawgs. An index of blawgs is available through Justia’s BlawgSearch. (http://blawgsearch.justia.com/blogs, accessed 10/18/16) Another source for blawgs is through the ABA Journal’s Blawg Directory. (http://www.abajournal.com/blawgs, accessed 10/18/16) In addition, you can try the following websites:

- Blogs offered by various agencies within the federal government, such as the Federal Trade Commission (FTC): https://www.ftc.gov/news-events/blogs, accessed 10/18/16.

See also the ABA’s Blawg 100, the annual ranking of that year’s top legal blawgs:

- One blawg that is always at the top of the list is myShingle.com, by Carolyn Elefant, who is also an excellent speaker. (http://myshingle.com/, accessed 10/18/16).

Podcasts

According to Wikipedia, ‘[a] A podcast is a form of digital media that consists of an episodic series of audio or digital radio, subscribed to and downloaded through web syndication or streamed online to a computer or mobile device. The word is portmanteau of "pod" and "broadcast." (Podcast, Wikipedia, http://en.wikipedia.org/wiki/Podcast,
(Matthew S. Cornick, *Using Computers in the Law Office*, 7th ed. Boston, MA: Cengage Learning, 2015, pp. 621) Podcasting is very popular in educational settings, especially with the increased use of mobile devices. I record and upload a weekly podcast for all of my courses at the School of Informatics and Computing, which students really enjoy and which is a nice complement to text-based information.

- Podcasts from the American Bar Association through many of its sections, for example: [http://www.americanbar.org/portals/solo_home/cle/podcasts.html](http://www.americanbar.org/portals/solo_home/cle/podcasts.html) (for solo practitioners), accessed 10/18/16.

Of course, there are additional opportunities to follow trends and capture up-to-the-minute information and events through Twitter and other social media sites. For example, here is the Twitter site for one of my graduate students, whose expertise is in
social media and journalism, with more than 20 years of service at *The Indianapolis Star* and its website.

Many people may prefer to watch a video rather than read or listen to information. Thus, YouTube can be an excellent source of information. YouTube may be especially useful for training, for example, if you are trying to learn a new piece of software. In one of my legal informatics courses, we teach SmartDraw software for use in courtroom presentations. YouTube has many tutorials available on how to use this software.
One other source of information, although not necessarily legal information, is the Library of Congress. For example, its Digital Collections can be an excellent place to find old maps, photographs, presidential papers, etc. (https://www.loc.gov/collections/, accessed 10/18/16).
VII. FINDING FREE LEGAL RESEARCH SITES AND FREE CASE LAW

A. Finding the Shortcuts to Legal Research: Free Legal Portals and Meta-Sites

According to Roper, “searching the Internet and finding the exact information you are looking for is many times not easy due to the breadth and depth of information on the web. By some accounts, there are more than 9,000,000 different web sites and more than 1,000,000,000 web pages on the Internet.” (Roper, B.D. Using Computers in the Law Office, 5th ed. Clifton Park, NJ: Delmar Learning, 2008, p. 704). Since this quote was from the 2008 edition of his book, we can only imagine that the challenge to find quality, relevant information has increased significantly, especially with the proliferation of social media and other forms of digital content, such as Twitter, YouTube videos, podcasts, blogs and blawgs, Pinterest, Instagram, Facebook and LinkedIn, to name but a few.

At that time, Roper noted that “some search engines are better at finding particular kinds of information than others. Which search engine you use should depend on the particular information you are looking for.” (Roper, p. 704, see also Matthew S. Cornick, Using Computers in the Law Office, 7th ed. Boston, MA: Cengage Learning, 2015, pp. 616-637 for an excellent discussion of how to do research on the Internet.) He classifies search engines as:

- Individual search engines, such as Google
- Specialty search engines, such as FindLaw
- Metasearch engines, such as Metacrawler or Dogpile
- Subject directories, such as Yahoo
Library gateways, such as the Lilly Law Library at the McKinney School of Law, [http://mckinneylaw.iu.edu/library/research/frequently-used.html](http://mckinneylaw.iu.edu/library/research/frequently-used.html), accessed 10/18/16) or the Internet Public Library – ipl2 ([http://www.ipl.org/](http://www.ipl.org/), accessed 10/18/16)


Levitt and Davis list of number of free commercial portals and directories for legal research. (Levitt & Davis at 35-46)

- HR.org (formerly Hieros Gamos) [http://hg.org](http://hg.org), accessed 10/18/16.

Some additional websites for legal research that I like are:

- Legal Information Institute: [https://www.law.cornell.edu/](https://www.law.cornell.edu/), accessed 10/18/16.
- Washburn University’s WashLaw: [www.washlaw.edu](http://www.washlaw.edu), accessed 10/18/16.
- Public Legal - Internet Legal Research Group: [www.ilrg.com](http://www.ilrg.com), accessed 10/18/16.
- WWW Virtual Library: [http://vlib.org/admin/AboutVL](http://vlib.org/admin/AboutVL), accessed 10/18/16.
Many of my research projects for presentations and publications involve electronic discovery. Whenever I have a question regarding electronic discovery, the first place I start is a review of the Electronic Discovery Reference Model (EDRM) and the information provided on the EDRM website. (EDRM, http://www.edrm.net/, accessed 10/18/16) By visualizing the steps in handling a piece of electronically-stored information (ESI) from the left-hand side of the model (which starts with proper information governance) to the presentation of the ESI in court, the EDRM also reminds me of the potential for ethical breaches at each step.

Another excellent resource for cases, statutes, guidelines and other materials for electronic discovery is the K&L Gates Electronic Discovery Law website. (http://www.ediscoverylaw.com/, accessed 10/18/16) The website contains a very
helpful database of over 2000 cases that is searchable by keyword as well as having a number of pre-determined case attributes. ([http://www.ediscoverylaw.com/e-discovery-case-database/](http://www.ediscoverylaw.com/e-discovery-case-database/), accessed 10/18/16) Many of the cases have very short summaries that include the case citation, the nature of the case, the electronic data involved, the electronic discovery issue and searchable attributes. A number of the cases have more robust summaries that also may have links to additional materials.

A second excellent resource for materials on electronic discovery is the Kroll Ontrack. ([http://www.krollontrack.com/](http://www.krollontrack.com/), accessed 10/18/16) This website includes blogs on electronic discovery and data recovery, white papers, case studies and industry news. It also offers a searchable database of electronic discovery cases that complements what is provided by K&L Gates and is searchable by keyword as well as by e-discovery-related topics and jurisdiction. ([http://www.ediscovery.com/pulse/case-law/](http://www.ediscovery.com/pulse/case-law/), accessed 10/18/16) I find it comforting when both of these databases provide summaries of the same case, but they may also cover different cases, which broadens my collection of cases.

Depending on the area of law you practice in – or have research questions about – there are excellent websites with free databases available. For example, the U.S. Patent and Trademark Office provides a wonderful website with information about how to apply for patents and trademarks, manuals and guides, law and policy, and other helpful material, including information for the general public and for kids. ([http://www.uspto.gov/](http://www.uspto.gov/), accessed 10/18/16). From this website, you can also search the
patent database (http://www.uspto.gov/patents/process/search/index.jsp) and the trademark database (http://www.uspto.gov/trademark). For copyright information, including the copyright database, forms and assistance for filing copyright applications and other documents, current and proposed legislation, fee schedules and other information, use the website for the U.S. Copyright Office. (http://www.copyright.gov/, accessed 10/18/16)

Another outstanding source of information can be found on the websites of professional organizations devoted to specific areas of the law. For example, for intellectual property law, the American Intellectual Property Law Association (AIPLA) as a very nice website. (http://www.aipla.org/Pages/default.aspx, accessed 10/18/16) For legal technology, the website of the International Legal Technology Association (ILTA) can be very helpful. (http://www.iltanet.org/, accessed 10/18/16). For electronic discovery, litigation support and legal project management, try the Organization of Legal Professionals (OLP) website. (http://www.theolp.org/, accessed 10/18/16) Finally, a variety of vendor websites may include access to lots of terrific information. In addition to Kroll Ontrack and K&L Gates for electronic discovery mentioned above, I recommend the website for Sensei Enterprises, Inc. Two of my favorite authors are Sharon Nelson and John Simek, who have been on the cutting edge of security, digital forensics, electronic discovery and legal technology for many years through their company, Sensei Enterprises. (Sensei Enterprises, Inc., http://www.senseient.com/, accessed 10/18/16). I use their materials extensively in several of the courses I teach at the School of
Informatics and Computing (Indiana University). One suggestion is that all paralegals and lawyers register for their free article distribution service.

**Legal Dictionaries:**


In terms of legal dictionaries, there is probably an “app” for that so that content can be accessed on mobile devices. For example,

B. Finding and Using Free Full-Text Case Law Sites

There are many web sites that provide access to the full-text of case law as well as other helpful information about state and federal courts. Levitt and Davis provide the following list: (Levitt & Davis at 71-114)

o Justia’s U.S. Supreme Court Center:  http://supreme.justia.com, accessed 10/18/16 and links to cases from other courts:  http://law.justia.com/cases/, accessed 10/18/16.
Other websites that are useful when doing legal research are:

- American Law Sources On-line (U.S., Canada, Mexico): [http://www.lawsource.com/also](http://www.lawsource.com/also), accessed 10/18/16.
- SunEthics.com: [http://sunethics.com](http://sunethics.com), accessed 10/18/16.

In terms of Indiana, more of the state court case records are available online, depending on when the county and its courts begin using the new electronic filing system called the Odyssey Case Management System. ([https://mycase.in.gov/default.aspx](https://mycase.in.gov/default.aspx), accessed 10/06/15)
For a list of the courts that use Odyssey and how far back their records go, see


Another importance resource for legal research is Indiana State Bar Association’s Casemaker system, which is free to ISBA members: http://www.inbar.org/, accessed 10/18/16. Casemaker has become even more useful with its expanded features, including CaseCheck+, CiteCheck and Casemaker Digest.
C. **Learn about the Free (Poor Man’s) “Shepards”**

Shepardizing is an important step in legal research. According to the LexisNexis website,

The Shepard's Citations Service provides a comprehensive case citation and treatment history to verify the validity of case law, statutes, agency opinions, and other legal documents. **Only case law is covered in LexisNexis Academic.**

Shepardizing™ is the practice of using the Shepard's Citations Service to validate a citation.

When you Shepardize® a case, LexisNexis provides a report showing every opinion where that case has been referenced, all treatments of the case, and, most importantly, whether or not the case is "good law." If the case has been overruled, it is considered "bad law" and may no longer be cited as a legal precedent. ([http://www.lexisnexis.com/communities/academic/w/wiki/105.shepard-s-citations.aspx](http://www.lexisnexis.com/communities/academic/w/wiki/105.shepard-s-citations.aspx), accessed 10/18/16)

However, Shepardizing requires either consulting bound volumes or an online service through LEXIS for a fee. It can be a tedious and expensive process. **See also** Westlaw’s KeyCite feature.

Back in 2006, Hilyerd commented that

In some circles an even lower cost alternative is mentioned for checking to see if a particular opinion is still part of the law of a jurisdiction. This method is known as the ‘poor man's Shepard's.' It consists of using free case law databases such as LexisOne to determine if the courts in a jurisdiction are still relying on a particular opinion in their newer opinions. This is done by using the name of the opinion the researcher wishes to check as a search term in the database and seeing if new opinions can be located. While this method is available, it is very sloppy research and should only be used if no access is available to other methods. (Hilyerd, W.A. *Education Law Research: Using the Law Library: A Guide for Educators. Part VI: Working With Judicial Opinions and Other Primary Sources.* 35 Journal of Law & Education 67 January 2006.)
Rather than relying totally on a “poor man’s” approach, a hybrid strategy may be in order. Use the Internet and free case law databases as a first step. If more recent cases or materials are located, utilize the Shepard’s service, either online (through LexisNexis or using Westlaw’s KeyCite) or through the printed volumes if available. This will save costs and time without sacrificing the unique information and peace of mind that Shepardizing or using Westlaw’s KeyCite feature can provide. Levitt and Davis devote Chapter 18 to several free alternatives to using either LexisNexis or Westlaw. (Levitt & Davis at 291-300) Among these options are Google Scholar and FindLaw as well as a party name or case number as a keyword search. In terms of my electronic discovery research, this is often the first thing I try after I have located a case summary through either the K&L Gates or Kroll Ontrack case database.

Members of the Indiana State Bar Association have free access to Casemaker. When a most recent contract for Casemaker was negotiated, the ISBA was able to add a number of premium features at no additional cost to members. Per the Casemaker marketing flyer, these features include:

- **CaseCheck+:** a negative citator system that lets you know instantly if the case you are reading is still good law. CaseCheck+ returns treatments instantly as you search. It allows you to link to negative treatments and quickly review the citation history for both state and federal cases.

- **CiteCheck:** If you upload a brief or pleading, within 90 seconds Casemaker will provide a report stating whether your case citations continue to be good law.
- Casemaker Digest: A daily summary of appellate decisions for all state and all federal circuits, categorized by subject. Casemaker Digest will email or send you an RSS feed of the latest cases in your selected jurisdictions and subject areas of interest.

To learn more about Casemaker and the tools available to you as an ISBA member, please contact the ISBA at (317) 639-5465.

These are some of the research strategies I have developed over the years to keep my process as streamlined, organized and effective as possible. Perhaps one or more of these suggestions will be helpful for you as you think about how to make your legal research project as quick and comprehensive as necessary while keeping it free – or as close to free – as possible.

One of the best bargains in Indiana is the INSPIRE system at http://www.inspire.net (accessed 10/18/16). This collection of databases is a cooperative project of libraries throughout Indiana and its funding is provided by the Indiana General Assembly. INSPIRE databases are free to all Indiana citizens and they can be accessed from any library as well as from home or office. It is easy to register for a username and password. INSPIRE provides access to over two dozen databases that contain the full-text of journals, newspapers and magazines. In addition to material for students of all ages, there are several databases that offer access to scholarly and peer-reviewed materials on a number of topics. Training materials and user support are available.

Through INSPIRE, you can search multiple databases at the same time and it will eliminate duplicates. You can request that you retrieve only material in full-text. You
can tailor your search by time period, peer-reviewed, publication type, audience level, language and a host of other specifications. You can combine keywords and search phrases and confine your search only to author names, titles or subject headings. With INSPIRE, your search can be general or very specific. By having your search retrieve only material that is in full-text, you can have immediate access to resources without having to go to the library or use interlibrary loan. You can choose to print the abstracts to materials – this may be all of the information you need for your research or the abstracts will at least be a clue as to whether you really want the full-text of the material. You can examine the subject headings of material you retrieve and use these to further refine your search.

There are several reasons why your Internet research may be failing you. There is the sheer size of the Internet – the number of websites is in the millions and continues to grow daily. There is no quality control. Anyone can create a website, blog, etc. Regardless of improvements made, the existing search engines are not as powerful, user-friendly or sophisticated as databases you might be familiar with, such as LexisNexis, WESTLAW or MEDLINE. Websites are not indexed like databases and library catalogs; there is no helpful list of subject headings that you can use to add precision and control to your search. You may have used only one search engine. You may not have taken full advantage of some of the advanced search features that can help you narrow your search and tailor your retrieval to just what you need. The sheer amount of information to digest may be too much; it is wearying to face the prospect of wading through hundreds of documents or websites. You may not be delving beyond websites themselves into some
of the free services, such as databases, that are available and that do have the necessary
indicia of quality, authority, ease of use and special search features and capabilities.

Here are some of my own research strategies:

- For quick information or background, I try to find one or two good sites on the
  Internet. If there is a professional association, government agency, nonprofit
  organization or support group devoted to that topic, I will start with its website.
- For quick information or background material, I will also try to find a good, short
  textbook on the topic through either the libraries on the IUPUI campus or the
  Indianapolis Public Library or Fishers Public Library. There are five excellent
  libraries on the IUPUI campus: IUPUI University Library, Ruth Lilly Medical
  Library, Lilly Law Library, the School of Dentistry Library and the library at the
  Herron School of Art & Design. These libraries are open to the public. Indiana
  University has a common catalog called IUCAT, which can be accessed at any of
  the libraries or through the websites of these libraries. You can access the
  Indianapolis Public Library’s catalog through its website. If an item you want is
  not available at your local branch, you can place a hold on it through the website
  and you will be notified when it is available. The Indianapolis Public Library has
  a terrific collection and its librarians and staff members are very helpful.
- If I need information on patents or trademarks, I use the website for the U.S.
  Patent and Trademark Office, which includes databases, forms, basic information,
  FAQs, manuals and legislative information.
- Reading the Help or Search Guides for the search engine or database you want to
  use can be especially helpful, since each may have its own search commands and
  conventions.
- If I need copyright information, I turn to the U.S. Copyright Office website.
For searches on legal topics, I use both LexisNexis (available through the IUPUI University Library) and Casemaker (free to members of the Indiana State Bar Association).

For searches about medicine and health, I visit websites for professional organizations, support groups and government agencies. I also rely heavily on MEDLINE (available through INSPIRE), CINAHL and related health care databases.

For other topics, I turn to INSPIRE in addition to some simple searches on the Internet.

If I cannot find books locally, I will search either the Library of Congress catalog or OCLC’s WorldCat (available through the IUPUI University Library’s website). If I have time, I will order the material through interlibrary loan. I also look at WorldCat to see what has been published around the world and what publications are forthcoming.

If I want journal articles, I turn to the appropriate databases in the field: MEDLINE for health, LexisNexis and/or Casemaker for law, ERIC for education. Fortunately, Indiana citizens can access the INSPIRE suite of databases free of charge. Using INSPIRE, you can search in multiple databases at the same time and the system eliminates duplicate records. INSPIRE also has databases for specific age groups if you need material for children as well as resources for teachers and other professional groups. Access to many databases is also provided through the IUPUI University Library website.

I use Advanced search options whenever possible so that I can combine keywords, author names and words in the title and limit my search by time period, language, type of publication, etc.

If I am short on time, I select the full-text option when searching. In fact, I do this routinely.
o If there is no full-text available, I print the abstract. You can get a lot of good information from an abstract – perhaps this will be enough. Reading an abstract will often help you decide whether you need to obtain a copy of the entire article.

o I limit by time period as much as possible, especially for fast-changing topics like technology. Often, for law or technology topics, I might limit the search to only the past two years.

o In order to reduce retrieval, I often ask for only scholarly or peer-reviewed articles. This cuts out the “newsy” stuff and letters to the editor, commentary, etc.

o Some databases contain lots of different kinds of material. ERIC is a good example. This database is composed of journal articles and ERIC documents, which may have to either be in your library’s collection or ordered through ERIC. So I always limit my search to just journal articles. Many databases let you be even more specific about the kind of material you want to retrieve – CDs, videos, musical scores, etc. In many cases, you can specify audience level, geographic location, etc.

o I pay special attention to the “fields” in databases and catalogs and try to limit my search accordingly.

o Searching phrases – put terms in “quotation marks”.

o To get more specific, I restrict my search to subject headings and descriptors when available.

o To get even more specific, I restrict my search to just the title field – this can really narrow retrieval.

o In summary, the more specific I can make my search query, the more likely it is that my search will be both more precise and provide more relevant materials.

o I make sure I have the complete citation for everything I find. Often journals will not print all of the information at the bottom of the page, such as volume number, issue number or date. One of my favorite professional journals does not put the volume, issue, month/season or year at the top or the bottom of the page; it is so irritating to have to look for this later, especially if I have a deadline to meet. It is
well worth it to make sure the information is there or take five seconds to write it down. For books and other items that I find in library catalogs (IUCAT, OCLC’s WorldCat), I keep the printout with the information. Nothing is more frustrating than trying to finalize a journal article, PowerPoint presentation, abstract or bibliography and not have the complete citation.

- I keep a file folder (either paper or online, depending on the project) with everything in it, such as printouts, search strategies, etc. That way I know how I found something, what steps I have taken in my research, what avenues were fruitful and which steps were blind alleys. I can also identify gaps in my research and consider new paths as well as prove the comprehensiveness of my research if I need to later. I will scan some of these materials and save them on my computer for future use.

- When I start working on a research project, I make a folder and then when I see things in journals, online, etc., I tear them out or make a copy and just put these in the folder. Later I am surprised by how much I have accumulated already, so that I’m already well on my way in my research.

- I look at the references of any articles, books or website material that I retrieve – and then try to obtain those materials if they look helpful.

- I look for a good review article.

- If a website has a section for Links or Other Resources, I review it.

- I use a building blocks strategy, starting broadly, then adding increasingly narrower concepts.

- I use Boolean operators AND and OR. I avoid NOT as a Boolean operator because I don’t want to risk eliminating something that may be useful.

- I look for websites with good design that are easy to use. With so many great websites available, it is usually not necessary to struggle with a website that is not well-designed and usable.
o If I still can’t find what I am looking for, I take a break, contact a colleague or contact an expert in the field – it is so easy with email and LinkedIn. Most people are happy to help and are flattered to be asked.

o Contact a librarian – that is what they are there for – and many have special subject expertise.

o Often, NOT finding something can be good news, particularly if you are hoping that your project is something new and unique or presents a view or treatment of a topic that has not been expressed before.

o After I give a presentation/poster or publish a journal article, abstract, paper in a conference proceeding or chapter, I post the full-text of my materials to IUPUI ScholarWorks. Many faculty, staff and students at IUPUI provide their materials through this source, which can provide a wealth of content as well as lead you to an expert in the field/discipline you are interested in. (IUPUI ScholarWorks, https://scholarworks.iupui.edu/, accessed 10/31/16.)

An excellent service called a PLAC card is offered for public libraries throughout Indiana. This is especially helpful if you would like access/borrowing privileges for the Indianapolis Public Library (if you live outside of Marion County), which has an outstanding collection that is recognized nationally. A PLAC (Public Library Access Card) card costs $65.00 a year, but allows you to use all of the public libraries in Indiana. To obtain a PLAC card, go to your local public library (in the city/town/county you reside in). Request a PLAC card and pay the $65.00. You should get a paper card; be sure that you keep your receipt. Then visit the public library you are interested in. They will create a borrower’s card for you for that library, which should be valid for one year. I had to do this recently, having moved out of Marion County, so that I could maintain my borrowing privileges for the Indianapolis Public Library. By using the Indianapolis Public Library, as well as the public library I have access to as a citizen (Fishers Public Library), I have been able to find information on nearly any topic I am interested in – and saved a considerable amount by not having to purchase the books myself.

- Forms and Court Rules, Indiana: [http://www.in.gov/judiciary/2684.htm](http://www.in.gov/judiciary/2684.htm), accessed 10/31/16.
- Forms, Indiana Courts Self-Service Legal Center: [http://www.in.gov/judiciary/selfservice/2333.htm](http://www.in.gov/judiciary/selfservice/2333.htm), accessed 10/31/16.
- For examples of *Amicus Curiae* briefs, see the ABA’s website: [http://www.americanbar.org/groups/committees/amicus.html](http://www.americanbar.org/groups/committees/amicus.html), accessed 10/31/16.
- Accessing PACER will provide materials that will be of assistance in drafting motions and complains.

• Civil Cases and Settlements, EPA: [https://cfpub.epa.gov/enforcement/cases/](https://cfpub.epa.gov/enforcement/cases/), accessed 10/31/16.


As indicated by DeAngelis, her research revealed that several sites that once provided jury verdict research for free now require a fee for access. (*Id.* at 76.) When I have prepared my section of the manual when I covered this topic in previous years, I also struggled to find any sites that offered jury research for free. However, DeAngelis
did report that Kent Morlan, the editor and publisher of MoreLaw, continues to be willing to provide jury research for free: https://www.morelaw.com/verdicts/, accessed 10/31/16.
Check the website of the U.S. District for the district in which your matter arises to see if that court compiles that information and makes it available. For example, DeAngelis notes that the U.S. District Court for the District of New Hampshire compiles jury verdict reports that are available with PACER access. (Id. at 76.) She also recommends searching Google Scholar for articles on jury verdicts or statistics about them. (Id.)

F. News and Information About Companies, Products and Executives (accessed 10/25/16)

- Hoover’s: [http://www.hoovers.com](http://www.hoovers.com)
- Corporate Information: [http://www.corporateinformation.com](http://www.corporateinformation.com)
o Justia.com Virtual Chase: http://virtualchase.justia.com/research-resources/business-research
o D&B - Dunn & Bradstreet: www.dnb.com
o Kompass: www.kompass.com
o ThomasNet: www.thomasnet.com
o The Public Register’s Annual Report Service: http://www.prars.com/
o Better Business Bureau: http://www.bbb.org

See also INSPIRE.net databases:

**Corporate ResourceNet:** Provides access to the full text of more than 1,120 journals and magazines, 377 of which are peer-reviewed. Greater than 760 of the 1,900 plus titles indexed are peer reviewed. It also includes company profiles and trade publications.

**Business Wire News (formerly Regional Business News):** Incorporates 75 business journals, newspapers and newswires covering all metropolitan and rural areas within the United States. Included in this database are Arizona Business, Business North Carolina, Crain's New York Business (and other Crain Communications editions), Des Moines Business Record, Enterprise Salt Lake City, Fort Worth Business Press, Orange County Business Journal, Westchester County Business Journal, etc.

G. Information from Government Agencies Regulating Companies

There are many reasons to use government websites and other resources as a starting point for your research. I routinely turn to websites from federal and state government agencies to begin my research.

o Free
o There are generally no copyright concerns
o Credible
Comprehensive
Content rich
Lots of links
Lots of forms
Usually use good website design principles
Usually easy to navigate
Maps, charts, graphs, statistics
Information for the professional as well as the general public
Content usually overseen and approved by experts and staff
FAQs and contact information – I have had very good experience when I have contacted agencies through their websites for additional information, clarification or assistance in using a web site or forms
Often contain links to free databases
Can also order and/or print free pamphlets and brochures that can be given to clients, your boss or the general public

Here are a few of my favorite government websites and others sites suggested in some of the material I read in preparing for this seminar:

Federal Government: (accessed 10/25/16.)

- U.S. Copyright Office: [www.copyright.gov/](http://www.copyright.gov/)
- SCORE: [http://www.score.org/](http://www.score.org/)
- Federal Aviation Administration: [www.faa.gov/](http://www.faa.gov/)
- U.S. Environmental Protection Agency: [www.epa.gov/](http://www.epa.gov/)
- National Labor Relations Board: [www.nlrb.gov/](http://www.nlrb.gov/)
- Library of Congress: [http://www.loc.gov/index.html](http://www.loc.gov/index.html) - be sure to consider the digital collections available through the American Memory Project
o Thomas (legislative information):  http://thomas.loc.gov/


o FedWorld:  http://fedworld.ntis.gov/

o USA.gov:  https://www.usa.gov/

o U.S. Census Bureau:  https://www.census.gov/

o Fedstast:  https://fedstats.sites.usa.gov/

State Government and Related Organizations: (accessed 10/25/16.)

 o IN.gov:  http://www.state.in.us/
 o Indiana Economic Development Corporation:  http://www.in.gov/iedc/
 o INSPIRE (free access to databases for Indiana citizens):  www.inspire.net
 o Indianapolis-Marion County Public Library:  http://www.indypl.org/
 o Indiana State Bar Association – includes free access to Casemaker for ISBA members:  www.inbar.org/
 o State and Local Government on the Net:  www.statelocalgov.net

Other websites I search often are those of educational institutions, which often post research reports and links to faculty and staff experts as well as information on courses, curriculum, programs and degrees. I use websites with lots of images – museums, historical societies and archives – which I need for my own history research and in my teaching efforts for the School of Liberal Arts. Lots of websites now feature audio and video along with images. On the other hand, websites do come and go. I was surprised in updating this content from the 2015 seminar manual how many websites had changed their URLs or their focus – and some which had been discontinued altogether, such as Zimmerman’s – see Farewell to Zimmerman’s Research Guide at
One of the best ways to become a better searcher is to practice. Developing expertise in searching is no different than any other skill or talent. It is fun to just think up a topic and see how fast you can find information, what kinds of sources are available and what creative search strategies you can try. File these efforts away in your mind – or make a notebook or log of your efforts. Be sure to bookmark or designate as Favorites those websites that you find especially useful. In addition, the web has made it possible for even small groups of people with obscure interests and causes to make information available. For example, a musician colleague needed a viola d’amour for a performance – see http://www.violadamoresociety.org/ for the web site of The International Viola d’amore Society. There are lots of Listservs, discussion groups and online newsletters that you can subscribe to. There is information and assistance available – free and fast - through the Internet no matter how narrow or obscure the topic might be! 😊