Internet Basics for Reference: An ILF Presentation

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Introduction

As one of the first public libraries to have an Internet presence, the St. Joseph County Public Library (SJCPL) has worked hard to find practical and unique uses for this great new information tool. Today we have thirteen public Internet workstations, introductory classes for patrons, and the same commitment as ever to offering high-level reference services. But like all libraries entering into this new information age, we struggle to make organizational sense of this gargantuan resource.

When we were asked by the Reference Division of the Indiana Library Federation (ILF) to come up with a program dealing with "reference and the Internet," we believed that an ultimately "practical" session highlighting some of the reference questions, search methods, and results arrived at using the Internet might be most appreciated by other reference librarians in the state. What follows is a description of the program we presented at the ILF annual conference (Indianapolis, April 1995) including some additional insights we have gained in working with the Internet since then.

The questions presented here and at the ILF conference are all actual queries received at the reference desk at the St. Joseph County Public Library during the past year.

Internet Basics

As the Internet grows, basic reference work is changing. The media is glutted with stories of home pages, chat groups, on-line classified ads, and government data to the point that some librarians feel overwhelmed as they try to keep up with this constantly evolving source of information. In addition, we have patrons coming to our desks with unrealistic ideas about getting their information from the Internet. However, we are seeing the changes: many of us use e-mail and listservs to keep up with our colleagues in a way none of us

could have imagined two years ago. Searching a library catalog in another town is only as difficult as finding its Telnet address. With the World Wide Web, many of the esoteric commands and hard-to-understand Internet concepts have become outdated and replaced with the easy-to-use, colorful, and dynamic Web browsers.

To generalize and simplify, we can define the Internet as a huge network of networks, all able to communicate by way of a set of standard protocols, or rules. These protocols allow computers of different types and on different networks to share information. Essentially, these protocols allow the Internet to function in three major ways: messaging, remote login, and file transfer.

Messaging
Electronic Mail (E-Mail)

The messaging function of the Internet includes e-mail, which consists of sending messages and subscribing to electronic mailing lists, termed LISTSERVs, in order to communicate with individuals or groups anywhere in the world. By subscribing to a listserv dedicated to a particular library interest, reference librarians can monitor trends, seek advice, and make their own ideas heard in ongoing discussions of current issues. Popular LISTSERVs in the SJCPL Reference Department are:

-- Publib: covers all topics of concern to public libraries. Mail to: LISTSERV@nysernet.org. Type: "Subscribe PUBLIB your name"

-- Buslib-L: of interest to business librarians. Mail to: LISTSERV@idbsu.idbsu.edu. Type: "sub BUSLIB-L your name"

-- Nettrain: Internet trainers discuss problems related to Internet training. Mail to: LISTSERV@UBVM.cc.buffalo.edu. Type: "Subscribe NETTRAIN your name."

Newsgroups

http://www.dejanews.com/
Illustration 1: Deja News: A Useful Place to Access Newsgroups

Another very popular type of messaging function is called Usenet. Usenet consists of more than 8,000 newsgroups which are more informal in character than LISTSERVs and focus on everything from hobbies like gardening to controversial issues such as the JFK assassination. Patrons often ask for particular newsgroups that relate to their favorite subject areas. A typical newsgroup would be Rec. Arts. Disney -- covering the latest news and developments at Disney World.

Note: Some Internet providers do not offer access to newsgroups. If you are using Netscape, you can access a public news server. Go to the menu bar, choose "Options" and then "Preferences." From the bar at the top choose "Mail" and "News." At the bottom of the "Mail" and "News" screen in the box for News (NNTP) Server, type "news.sisna.com." Then click on "OK." When you return to the Netscape screen, choose "Newsgroups" from the button bar.

Remote Login

The Internet function of remote login involves using one's own computer to log in to another computer -- a remote host. Once connected, the user's computer may be able to read files, run programs, and search databases. Remote login is the function behind such applications as telnet, Gopher, and the World Wide Web.

Telnet, one of the early and most basic of the Internet applications, allows the user to connect to a remote computer by merely typing in the Internet address (IP) of that computer. A Telnet session is always text-based, requires a login word or string, and does not allow for graphics, sound, or video. At SJCPL, we often use Telnet to search the OPAC's at the University of Notre Dame and Indiana University South Bend.
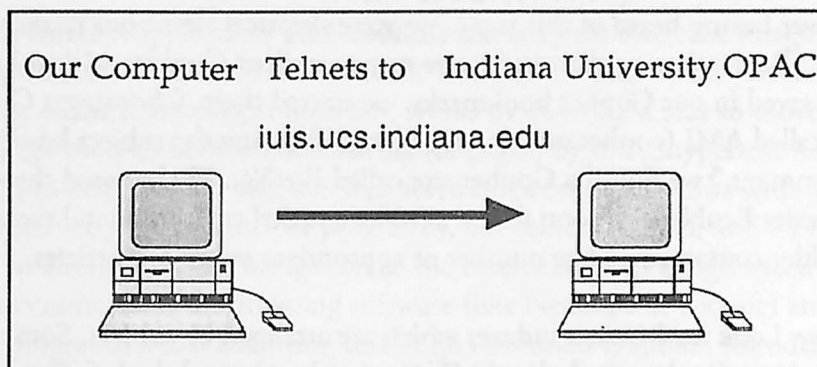
Our Computer   Telnets to   Indiana University OPAC

iuis.ucs.indiana.edu

Illustration 2: A Telnet Search

The Gopher software was created so that anyone could navigate the Internet. It was no longer necessary to remember the long, unfriendly IP addresses used in telnet. Displaying a user-friendly menu system, it was suddenly wonderfully easy to connect to remote computers all over the world.
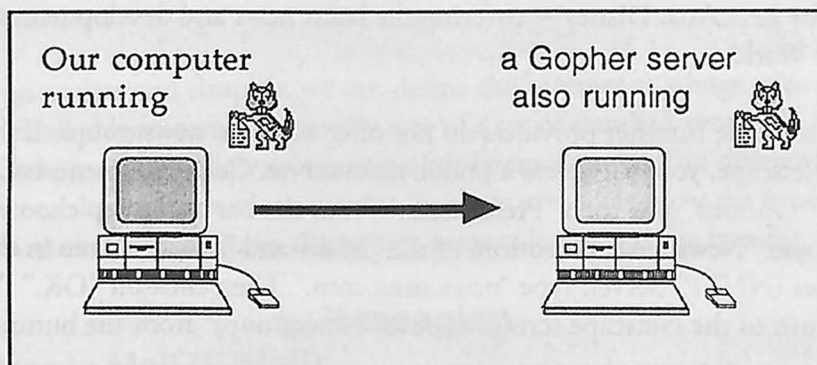

Our computer running

a Gopher server also running

Illustration 3: A Gopher Search

The Gopher application can be set to automatically open a connection to a host computer (also running the Gopher software and called a Gopher server) which will then present hierarchical menus that lead the searcher to text documents, links to other computer databases (using telnet), or more menus of related items. Gopher introduced multimedia (images, sound video) to Internet surfers. As our following question illustrates, information found on Gopher servers can be a valuable resource for even the most unusual topics.

Question 1:
A college student needing information on the subject of environmental racism asks to research it on the Internet.

Never having heard of this topic, we were skeptical about our chances of success. Remembering that there were some excellent Gophers with subject menus saved in our Gopher bookmarks, we started there. Choosing a Gopher server called AMI (gopher.mountain.net) and choosing the subject labeled "environment," we found a Gopher site called EcoNet. We browsed through titles under EcoNet and soon found a folder entitled environmental racism. The folder contained a large number of appropriate essays and articles.

Note: Look for Internet indexes which are arranged by subject. Some of the larger subject Gophers include: AMI, Gopher Jewels, and the InfoSlug at the University of California-Santa Cruz.
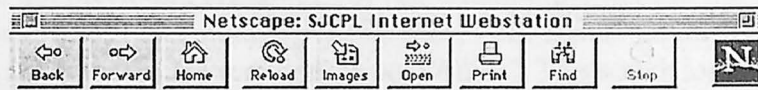
FTP (File Transfer Protocol)

The third function of the Internet is called FTP or file transfer protocol. It gives the user the ability to connect to a remote host computer and then download files stored in that computer's directories. The files available for downloading are usually located in a public directory set up specifically for outside users that do not have passwords -- this process of downloading files from a remote computer is known as anonymous FTP (file transfer protocol).

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F1040AS2.PDF    35K 10/13/95 1995 Form 1040A (Schedule 2)
                             Child and Dependent Care Expenses for Form
                             1040A Filers
F1040AS3.PDF    32K 10/13/95 1995 Form 1040A (Schedule 3)
                             Credit for the Elderly or the Disabled for
                             Form 1040A Filers
F1040C.PDF     107K 12/19/94 1995 Form 1040C
                             U.S. Departing Alien Income Tax Return
```

Illustration 4: Directory From the FTP Server That Has Tax Forms to be Downloaded: ftp://ftp.fedworld.gov/pub/irs-pdf/irs-pdf.htm

Beginning in January, reference librarians at SJCPL will be busy identifying and downloading those tax forms which don't come in the reproducible book from the above FTP. We use a helper program called *Acrobat* (Adobe) which formats the tax forms to look exactly like the originals (the PDF in the file names identifies them as *Acrobat* documents). We then print them out on a laser printer for our grateful patrons.

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Netscape: SJCPL Internet Webstation
Back  Forward  Home  Reload  Images  Open  Print  Find  Stop
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World Wide Web (WWW)

The Internet application that has most assuredly captured the imagination of the public and the media is the World Wide Web. The "Web," while only a variation of the remote login function, works by allowing a user to move quickly (or browse) between documents (or pages) by using hypertext links. In addition to being easy to use, the Web software (a browser) works with many other Internet programs (helper programs), like telnet, Gopher, and FTP, giving an almost seamless navigation of the Internet. With a high speed Internet connection, the browsing software (like Netscape or Mosaic) and the helper programs, a user can bring text, high resolution graphics, sounds, video clips and more to their computer.

In the past year, we have begun to use the WWW extensively to answer a variety of reference questions where traditional resources were inadequate. The following is a sampling of some of our successes. All addresses are given in URL (universal resource locator) style. (http:// will take you to Web pages, gopher:// will take you to Gopher servers accessible through the Web, and telnet:// will connect you to telnet databases via the Web.)

Question 2:
How did our local federal representative (Tim Roemer) vote on the Welfare Reform Bill (HR4)?

Commercial companies like Time Inc. are sponsoring or developing information services on the Internet. While it may be a form of advertising for them, often their "sites" prove to be a valuable information resource. A Web site that will display congressional votes by entering a zip code is available free from Time Inc. (http://www.timeinc.com/cgi-bin/congress-votes).

Note: We heard about this site on the LISTSERV called NETTRAIN. (See earlier discussion for subscription information.)

Question 3:
A student comes to the library looking for information for a paper about the rock star Stevie Nicks.

In the days before the Internet, this type of question would not have been easy. We have no biographies on Stevie Nicks, our rock music books might have a page about her, and there might be one or two magazine articles. But this type of question is perfect for the Internet. Music is one of the most popular and prolific subjects on the Web. We went to the subject directory known as Yahoo (http://www.yahoo.com), chose "Entertainment/Music/ Artists/Stevie Nicks" and found a wealth of information about her, her musical discography, lyrics from many of her songs, and even the full-text of an article from a journal.

Note: The World Wide Web offers several excellent subject-oriented lists. These include Yahoo, the Internet Public Library, the World Wide Web Virtual Library, EINET's Galaxy, and GNN.

Question 4:

A woman arrives at the reference desk stating that her boss had sent her to the library to get some census information on two counties in Michigan — Cass and Berrien. She needed the number of households, median household income, and the median value of a home.

Although we could have used the *County City Data Book* (US Dept. of Commerce), going onto the Internet to US Census bureau site (http://www.census.gov/cdrom/lookup) allowed her to create a customized table for just those counties and just those parameters. We chose 1990 Census Data -- STF3A.

Note: For assisting patrons who are relocating, a site offered through the University of Missouri provides wonderful census summaries for most cities with populations of more than 25,000 (Gopher://coins0.coin.missouri.edu:70/11/reference/census/us/basictables/us.text).

Question 5:

A woman from a local social service agency comes in and needs to know the status and see the full-text of a bill called the Personal Responsibility Act of 1995.

One of the joys of having the Internet at reference is that patrons now have access to pending legislation and many other types of government information that were not previously available. For this question, we went to the House Web server (http://www.house.gov). We chose "Bill Status" under "Legislative Process" and typed in "personal adj responsibility." This search looks for records that have these two words adjacent to each other. Looking through the first entries, we found the bill (HR 4) and a complete record of its progress through the House.

Note: Other government Internet sources we use frequently are: The Federal Resister, the White House Web site, the Catalog of Federal Domestic Assistance, Supreme Court Decisions, and the ever popular Library of Congress (telnet://locis.loc.gov).

Search Engines

The size of the Internet makes it imperative to have a way to search for particular items or sites. Search engines are the applications that can perform searches through a large portion of the Internet. These searching programs vary in the way they work. Some look for search words in the URL's or addresses of

the sites or may even find the words in the text of Web pages. Some return results ranked in order of relevancy. A search on the word "unabomber" may result in links to the full text manifesto or to news postings simply commenting on the unabomber. A recent survey found that based on the extent of coverage and performance, two of the best are Lycos (http://lycos.cs.cmu.edu/) (searches more than 10 million URL's) and Infoseek (http://home.netscape.com/home/ internet-search.html). A new natural language search engine called Excite (http://www.excite.com) has been receiving rave reviews. You can search by concept or keyword.

Question 6:
A patron asked us to find her a recipe for Peanut Butter Cream Pie.

She had already done the hard work of looking through cookbooks and cookbook indexes. We chose the Lycos search engine and entered the word "pies." Since this search engine displays the most relevant hits first, we were able to spot an archive (an FTP site searchable from the web) devoted to pie recipes. Upon opening the site and scrolling through the alphabetical list of pies, we found a recipe for Peanut Butter Cream Pie.

Note: This recipe archive is excellent but often busy and unavailable: http://www.neosoft.com/recipes/index.html

Question 7:
Recently, we had to give a local high school debate team some ideas on where to get information about the topic: US Trade with China.

Using Excite and the keywords "trade, china, united states" gave us at least five excellent hits, one of which was a Web site at the University of Michigan called United States-China Policy, Michigan National High School Debate Institute -- 1995 (http://asa.ugl.lib.umich.edu/libhome/Documents.center/ debate.html). This Web page had links to all kinds of online documents and sites having to do with US-China policy.

Question 8:
A patron that is a member of an investment club needs a copy of the quarterly report on a local company called National Steel.

Two years ago, we would have had to turn this patron away because quarterly reports were simply out of the question. Thanks to many librarians who wrote letters and the head of the SEC (Securities and Exchange Commission), there is a free database called SEC Edgar (http://www.sec.gov) that has the SEC

filings for almost all public companies.

Note: We also use annual reports and quarterly reports from this site for patrons with job interviews (the more you know about a company the better the interview) and student assignments.

Question 9:
Recently Fox TV did a special on the unabomber.
Someone mentioned that he might live in the South Bend-Elkhart area.
Is there a copy of his manifesto on the Internet?

This question illustrates another of the exceptional features about the Internet -- the ability to download large files for the patron to access at home. In this case, we went into Infoseek, typed in "unabomber" and found a site with the full text. We downloaded it to a disk (it was 200k) which was a more inexpensive and efficient method than photocopying, and the patron left to read it on his computer at home.

Question 10:
Where can I look for job listing in inorganic chemistry?
I am willing to relocate and have looked in all of the regular sources.

The Internet is becoming inundated with jobs databases. Some are more regional in scope or restricted to certain industries, but two excellent sites have comprehensive coverage. The On-line Career Center (http://www.occ.com/occ), has been available for quite some time. The site we used in order to answer this question was the America Job Bank (http://www.ajb.dni.us). The database includes all jobs listed with state unemployment offices and is well designed. We were able to find four or five jobs in Ohio and Michigan that were compatible with the patrons skills and education.

More Topics
As a supplement to the reference questions discussed above, we have prepared a list of additional topics received at our reference desk and answered with Internet sources. Addresses for searching the items are below:

— Lycos: http://lycos.cs.cmu.edu (note: choose "search options" if your search includes more than one keyword

— SJCPL Hotlist: http://sjcpl.lib.in.us/homepage/Reference/InternetLinks.html

— Infoseek: http://home.netscape.com/home/internet-search.html

— Excite: http://www.excite.com

   *Body piercing shops -- Infoseek--keywords--body piercing
   *Song lyrics -- SJCPL Hotlist/Music/Mammoth Music Meta-List
   *Information on the 1993 blizzard --Lycos--keyword--blizzard
   *A database by model and year of repairs to defective auto parts --
      Lycos, keywords--Chrysler, New Yorker automatic transmission
   *Info on the Sierra Club's Legal Defense Fund --
      Infoseek--keywords—sierra club legal
   *Company addresses -- SJCPL Hotlist/Business/Business Yellow
      Pages
   *An article on force field analysis -- SJCPL Hotlist/Books
      Magazines/CARL UnCover
   *Info on the Catholic church in Latin America -- Infoseek --
      keywords — catholic church latin america
   *Pope John's apostolic letter: Ordinatio Sacerdotalis (On Reserving
      Priestly Ordination to Men Alone; 1994) -- SJCPL Hotlist/
      Religion/Catholic Resources on the Net
   *Jobs teaching English in Japan -- Lycos--keywords--japan teaching
   *Complete annotation of the song American Pie -- Search Gopher
      using Veronica -- keywords -- american pie
   *1995 NCAA football schedule -- SJCPL Hotlist/Sports
   *Information on breast cancer and AIDS -- Yahoo/Medicine/
      Diseases/AIDS/ and Cancer/Breast Cancer
   *The most current CPI (consumer price index) with detailed tables
      -- SJCPL Hotlist/Business & Economics/CPI
   *Relocation salaries -- give your current salary and find out the
      salary equivalent in your new location -- SJCPL Hotlist/Business
      & Economics/Salary Relocator
   *The type of law practiced by a specific lawyer -- SJCPL Hotlist/
      Directories/West's Law Directory
   *Three-day forecast of weather for Myrtle Beach, Florida -- SJCPL
      Hotlist/Weather/University of Michigan's Weather Underground
   *Info on the 4th Conference on Women in Beijing -- Infoseek --
      keywords -- Beijing conference women
   *Current info on the Peace Corp and AmeriCorp -- Excite --
      keywords -- americorp peace corp
   *Recall of Disney Squeeze Me books -- Infoseek -- keywords --
      disney recall

Making the Web Part of the Reference Service

Since Web pages are relatively easy to create, it is possible for a library to

publish all kinds of information concerning the functions and services offered. A home page -- an organization's welcome page to any number of Web pages -- may be created to promote, publicize, or even organize information. (See the SJCPL home page at http://sjcpl.lib.in.us). One helpful type of Web page for both patrons and librarians might be a "hotlist" page which would list and link to Web sites you find helpful in your reference work. Many of the sites listed above have been added to the SJCPL Hotlist page (http://sjcpl.lib.in.us/homepage/Reference/InternetLinks.html) that librarians here use every day. If you opt to create such a page, remember that your creation needs tending. Sites on the Internet change addresses, are redesigned, or simply disappear rapidly. In addition to adding sites, you will need to keep checking the links to keep your hotlist current and useable.

Libraries interested in Web publishing might find that this is the best time to forge new relationships with community organizations. Some public libraries are providing links from their pages to local government offices, social service agencies, or other community groups. As an example, this summer the SJCPL home page added information concerning the College Football Hall of Fame -- a major new attraction in South Bend -- and was able to provide a link directly to that organization's home page.

Free-Nets

As publishing on the Internet becomes easier, information once only published by or for local organizations can now be made globally accessible. The governor of Indiana has allocated one million dollars in grant money for community networks to be established all over the state. As the state's infrastructure grows, communities will become connected electronically, and the most current state and local information will be available to anyone with an Internet connection. The type of information made available on a community net is exemplified in the following question.

Question 11:
A patron needs to finds statistics on the number of babies born
to teenagers in our county (St. Joseph).

Before Free-Nets, this question would have required the patron to call the local County Health Department or possibly some other local organization which may not have had the time or motivation to provide the answer. Because we have a local Free-Net, this was not necessary. We looked in the main menu of the Michiana Free-Net (http://freenet.sjcpl.lib.in.us) under "health" and found a section of local health data collected by an organization called Healthy Communities. One of their statistical charts was exactly what we needed.

Conclusion

The Internet is creating a revolution in the field of information science, in public libraries, and in particular in the nature and scope of reference services. No one working in the field today can clearly predict the future even five years from now, but it is fairly certain it will require reference librarians to approach their jobs in new and challenging ways. Perhaps what is needed most is the ability to remain flexible in the face of constant change, to be accepting in the wake of new technology, and to see these times as an exciting and historic adventure in the evolution of libraries as information centers.

A Note About Equipment and Network Capability

At the time of the ILF conference, SJCPL was fortunate to have a direct Internet connection by way of a 56kb line running to the University of Notre Dame, approximately 1.5 miles away. This type of connection allowed us to connect to sites on the Internet at the speed of 56,000 bps, a speedier and more convenient way to connect than by modem.

In our telephone reference area (our typical locus for Internet search questions) we have a Macintosh 8100 PowerPC equipped with 16 mg of memory and a laser printer. Internet software includes *Telnet*, *TurboGopher* (a Macintosh Gopher program), *Fetch* (a Macintosh FTP program), and the Netscape browser for accessing the World Wide Web. In addition we have downloaded programs and utilities that help in the usual Internet activities.

Illustration 6: One of the PowerPoint Slides from One of Our Sessions for the ILF annual conference session

For our conference session, we relied on a software package called *Microsoft PowerPoint* (Macintosh version) to help us produce a slide show by capturing screen shots and presenting them in a specified order. We then projected the program on a wall screen using a Proxima projector hooked up to one of the computers brought from the library.

End Note

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