

Lab Notes

Internet and Foreign Language Instruction: A Report from Behind the Front Lines, Part 2: Navigational Tools

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Introduction

Bill Wyman's first installment of "Internet and Foreign Language Instruction: A Report from Behind the Front Lines" appeared in the Winter 1993 issue of the *IALL Journal*. The initial article described electronic mail, bulletin boards and newsgroups, Internet Relay Chat and Telnet.¹ In his introduction Wyman mentions the workshop sessions for foreign language instructors held at the Anderson Language Technology Center (ALTEC) at the University of Colorado. Describing the participants in the workshop, he characterizes some as "almost defiant in their demeanor"—an appropriate description of my conduct at one of those very workshops!

I have always asked a lot of questions. When I first encountered the Internet through my job as a French teacher for Boulder Valley Schools and as an instructor in the Department of French and Italian at the University, the possibilities for foreign language instruction seemed too numerous to count. Each question, however, seemed to generate three or four more. Bill Wyman answered his share of my questions as did my husband, who endured hours of dinner conversations consisting of a list of words I wanted defined and explained. ("What is TCP/IP protocol? What does it mean to have direct connectivity to the Internet? What is Ethernet?

FTP?" etc.) At the same time, I began reading and exploring cyberspace² on my own. These clandestine explorations generally occurred on evenings when my husband was in class; during this time both my friends and parents constantly wondered why my telephone line was always busy.

The Internet is here to stay. Hardly a week passes without an article about the information superhighway in a popular journal or newspaper. The November 15, 1993 issue of *The Wall Street Journal*, for example, contained an entire pullout section for the neophyte with instructions on how to enter cyberspace. According to a recent article (March 1994) by Dinah Zeiger in *The Denver Post*, more than 21,000 networks in 60 countries are now connected to the Internet. Traffic on the Internet is increasing at a rate of seven to ten percent per month and there were an estimated 20 million users in early 1994.

The primary reason most academics use the Internet is for electronic communication (email) with their colleagues. While this continues to be the fundamental motive for my own use, there is also a world of information available on the Internet. This information is easily accessible once you become acquainted with some of the Internet's navigational tools. After mastering email, most people start wondering what else is out there in cyberspace. At this point it is necessary to learn about resources such as Gopher, Netfind, Archie, Veronica, WAIS and World Wide Web (WWW).

Gopher: The Place to Start

Gopher, with its menu-driven interface, is one of the most user-friendly navigational tools on the Internet. When I conduct introductory Internet workshops for foreign language instructors, we first explore email and then my next step is to show the participants how to get into their host's³ Gopher. On many systems you simply type "gopher" at the main prompt. From there, I can leave the teachers to investigate on their own because the Gopher is so easy to use. Most of the other navigational tools addressed in this article are available through your local Gopher. The Gopher shields the user from the complexity of the action as it works behind the scenes while you move up and down through its hierarchical menu structure.

The name "Gopher" is appropriate for three reasons. 1) It was developed at the University of Minnesota, which has a Golden Gopher as its mascot. 2) A gopher burrows and can find its way through a series of underground networks. 3) Finally, in American slang a "go-fer" is someone who goes and gets information for others. For all these reasons, the name

"Gopher" accurately portrays the job description of the Internet Gopher.

Gophers allow users easy access to a variety of resources located throughout the world. So, what *is* out there in "gopherspace"? Gophers provide, for example, a passageway to: texts from Dante's *Inferno*; a French pronunciation tutor; Telnet resources; searchable databases (Archie, WAIS, etc., which will be discussed later in this article); Usenet news; on-line library catalogs; and on-line email address directories such as Netfind. Once you find the information you are looking for with the Gopher, typing *m* will generally allow you to mail this information back to yourself.

Subject-oriented Gophers

Recently I have noticed a proliferation of subject-oriented Gophers on the Internet. The University of Montreal, for example, has set up a literary Gopher (gopher.litteratures.UMontreal.ca 7070) which covers topics ranging from information on the Department of French Studies at the University of Montreal to archives of discussions from the discussion list BALZAC-L. The main menu showed an item named *Instruments de recherche en ligne* (on-line research tools) that looked interesting. After highlighting this item and hitting *return*, a series of menu items appeared, one of which was the ARTFL (American and French Research on the Treasury of the French Language) project. I browsed through the project looking for information which might interest French instructors. Although the Gopher I was using is located at the University of Montreal, the ARTFL project is headquartered at the University of Chicago. The Gopher at the University of Montreal took me to the computer at the University of Chicago without me having to do much more than press *return*.

Netfind: Finding Email Addresses

The most frequently asked question in my Internet workshops is "how do I find the address of so-and-so? I know s/he has email." Most colleges, universities, and community colleges in the United States now have an Internet connection. It is estimated that Netfind can locate more than 5.5 million people worldwide. One can search for Internet addresses by using any of a number of Netfind servers. If your host does not have a Gopher with Netfind, Telnet to bruno.cs.colorado.edu, and log on as *netfind*. Netfinds get a lot of use and if it's busy, try again in a few minutes.

I have spent a considerable amount of time trying to track down friends and colleagues using Netfind and have had varying degrees of success. If you are in contact with the

people you are looking for, you may find that the quickest way to locate their email addresses is to call and ask them! However, many of the instructors at my workshops have found long lost friends with email accounts. Remember though, Netfind seems to prefer fewer rather than more variables. Try *last name city state* when you do a search. It is also helpful to search machines at off hours when there is less activity. What time is it *chez toi* when it is midnight in Israel?

Veronica and Archie

Veronica—searching gopherspace

Cyberspace dwellers are humorous sorts, as evidenced by the names they give to computers and navigational tools. Veronica, a friend of the comic strip character Archie (another navigational tool to be discussed in this article), is also an acronym for “Very Easy Rodent Oriented Netwide Index to Computerized Archives.” Veronica is a tool for searching through names of items in gopherspace. When you perform a “Veronica search,” a menu of Gopher items is produced, each of which will point you to another Gopher. Generally you can access Veronica on the main Gopher menu of your host listed under “Other Gopher and Information Servers” or sometimes just “World.”

Archie—searching anonymous FTP sites

Archie, Veronica’s buddy, serves much the same purpose; but, rather than searching gopherspace, Archie keeps an updated catalog of more than 1,200 of the world’s anonymous FTP hosts. Each month Archie automatically updates this information.

Now you are perhaps wondering, “What are FTP sites? Was that mentioned in part one of this article last year?” To refresh your memory, FTP stands for File Transfer Protocol. The protocol allows you to move files between different machines. If there is a file on a machine in Hong Kong that interests me, I can use FTP to copy that file to my own computer. Various kinds of files are available via FTP, from software to informative documents such as archived discussions from your favorite mailing list (an Internet discussion group).

Great! So how do I find out if there are any files of interest for me out there? This is where Archie is helpful. I can access Archie from the Gopher on the Unix host at my university or I can Telnet to an Archie site and perform a search. Since I am a French teacher, my searches on the Internet tend to focus on information that would be helpful to me in teaching French. For example, the other day I typed the word *French* and received 53 different sites with programs that included *French* in their description. Unfortunately, about half of them were recipes ranging from “Decadent French Bread” to “French

Chocolate Mousse." It is easy to end up with the evening's dinner menu rather than the French pronunciation tutor you were looking for! Using Archie efficiently takes practice.

WAIS: The Library of Libraries

WAIS (Wide Area Information Server) was developed jointly by Thinking Machines Corporation, Apple Computer, KPMG Peat Marwick, and Dow Jones & Company. It provides a tool for searching the vast amount of information stored in different formats on computers worldwide. Many different types of materials are available through WAIS, including books, network addresses, traditional databases, Archie databases, library catalogs, bibliographies, archives of Usenet newsgroups, as well as Listserv lists and lists of Internet services.

WAIS, which can be thought of as the library of libraries, is most easily accessed through your local Gopher. Once you are in, a list of searchable sources will be displayed. (You could think of sources as individual libraries, such as the science library or government documents.) If you do not know the best source for your search, begin with a keyword search in the **directory-of-servers**, a centralized information site for the WAIS servers themselves. Once you find the best sources for your search, select one or more of them and enter the keywords you have chosen for that particular search. WAIS then connects to these remote servers and calculates a score from 0 to 1000 based on the frequency of keywords in the retrieved documents. The higher the number, the more likely you've found something that can provide you with the information you want.

WAIS searches, like Archie searches, take practice. It is sometimes necessary to make your search more specific if your search returns too little. At other times you will need to limit your search by using additional keywords in order to find the information you seek.

Hytelnet and WWW: Hypertextual Searching of Internet Sites

Hytelnet

Hytelnet, like Gopher, offers a single point entry onto the Internet using a hypertextual⁴ approach rather than the hierarchical one of a Gopher. Hytelnet, available free via anonymous FTP, was developed at the University of Saskatchewan Libraries at Saskatoon, Canada. Through Hytelnet one can connect to WAIS servers, bulletin board systems, gophers, public libraries, Free-Nets and much more. Hytelnet can be accessed by Telnetting to access.usask.ca and logging in as **hytelnet**. No password is required.

WWW The World-Wide Web (WWW, W³ or simply “the Web”) also uses hypertext to present, search, and organize its information. It was developed at CERN (*Conseil Européen pour la Recherche Nucléaire*), the high-energy physics research center based in Geneva, Switzerland. The goal of WWW is to provide a single point of access to as much information as possible on the Internet. Documents marked with its HTTP (HyperText Transfer Protocol) format as well as other sources of information available through FTP, Gopher and WAIS can be linked according to a person’s needs. Traffic on the Web continues to increase because of its simplicity and its ability to incorporate data from almost any source on the Internet.

Be warned, however, that hypertext systems are sometimes frustrating to use. WWW is huge and includes so many services that it can be confusing. It is easy for the novice to get lost in the Web without the slightest idea how to get out of the maze. Persevere. It just takes a little time and practice.

Mosaic: Hypermedia Searching Tool

One of the newest tools for exploring the Internet is Mosaic, a graphical front end client⁵ that is designed to search and retrieve information on the Internet. It is based on the World Wide Web project, but includes hypermedia (text, images, sound and video sequences) as well as hypertext. Mosaic was created by a team of researchers at NCSA (The National Center for Supercomputing Applications) at the University of Illinois to provide a seamless interface to the various file formats found on the Internet.

Mosaic offers the browser a non-sequential way to access a variety of information. Words, phrases or images that are highlighted or underlined are linked to other items that can be located anywhere on the Internet. A click of the mouse allows the user to jump from site to site without the need to be aware of the site location. A wealth of information can be found, from the texts of the Dead Sea Scrolls to articles from *Mother Jones* magazine. Mosaic is available for Windows, X Windows and Macintosh platforms free of charge by anonymous ftp from <ftp.ncsa.uiuc.edu>. Because it is graphical, this tool has much promise, but it also surely has the potential to tax the capacity of the Internet.

Conclusion

If you are new to the Internet, you will find that most of these navigational tools take some time to master. Once again, I would recommend beginning with Gopher. It is straightforward and basically requires no training to use. After mastering Gopher, try using Veronica to search the names of items in the menus throughout gopherspace.

As you become more familiar with the Internet, try accessing some of the other navigational tools, such as Archie and WAIS. Archie is extremely helpful for locating files, in particular freeware and shareware. WAIS, on the other hand, offers access to Internet databases throughout the world. If you have direct connectivity or certain types of modem connections (ARA, SLIP, or PPP) and a high-endish Mac with a color monitor or a PC with enhanced graphics and sound capabilities, take a look at Mosaic. Once installed on your computer, it is simple to use—a click of the mouse and you are viewing a dinosaur exhibit in California. For those of you with some knowledge of the navigational tools mentioned in this article, I encourage you to investigate further by reading one of the books listed in the bibliography of Internet resources in the “Network Update Column” on page 109. ■

Many thanks to Bill Wyman for his assistance in the preparation of this article.

Notes

- ¹ Telnet allows a user to log in to a remote computer from the user’s local computer.
- ² Bill Wyman’s definition of **cyberspace**: the imaginary realm created by the Internet which a computer user can enter to interact with other computer users. Computer users can be said to “meet” in cyberspace in the same way that telephone users can “meet” on the phone.
- ³ In the context of networks, a **host** is a networked computer that directly provides service to a network user.
- ⁴ **Hypertext** is text that is stored in a non-hierarchical structure. Each piece of hypertext is joined to other pieces of text by “links.”
- ⁵ In this context a **client** is a program that allows the user to request services from another computer.

Jane Backer is a French teacher for Boulder Valley Schools. She spends her afternoons working at ALTEC (Anderson Language Technology Center), eating Ashley’s Pepperidge Farm chocolate chip cookies while helping foreign language instructors become familiar with the Internet and Minitel. Please send your questions and comments to her at backerj@spot.colorado.edu.

IALL '95 at Notre Dame

International Association for Learning Laboratories
May 23-28

Language Labs on the Leading Edge

Theme of the conference:

Advancements in electronic technologies have placed many language labs at the forefront of the technological revolution in education. Computers, digital media, and satellite communications are now commonplace in many labs around the world. New labs and renovated labs often include many or all of these technologies, and at many institutions it is the lab directors who are the most knowledgeable about them. Often it is lab directors who are the keepers of technological memories; who, while constantly informing themselves of advancements, at the same time maintain an experience file of the good and the not-so-good of years past. The goal of IALL '95 at Notre Dame is to share that experience, provide information about the latest technologies along with an opportunity to develop familiarity with them, to provide opportunities for professional growth, and to continue to assess and evaluate the role of technology in the language learning process.

Founded in 1842, the University of Notre Dame has a rich traditional heritage. The campus, located on a scenic 1250 acres on the north side of South Bend, Indiana, is home to about 10,000 undergraduate and graduate students from all over the United States and some 72 foreign countries. Right next to Knute Rockne football stadium is perhaps the most technologically advanced classroom building in the United States, DeBartolo Hall. Its 84 classrooms are all connected to Media-On-Call, a centralized media distribution network for images, sound and data. Over the Internet and via satellite, the world can be

brought into meeting rooms that vary in size from 20-seat seminar rooms to a 450-seat auditorium. Uplink capability makes worldwide broadcast of some IALL '95 proceedings a possibility to consider. Make plans now to attend for sure, perhaps to present, at IALL '95 at Notre Dame.

Put it on your calendar. Pre-conference workshops in video editing, computer applications, instructional design, lab design and management begin May 23 and 24; conference sessions begin May 25 and finish May 27 in the afternoon. Board and council meetings are scheduled on May 28. The call for proposals will appear in September 1994.

IALL '95 at Notre Dame is for you if you are:

- ◆ managing a language lab, learning lab, or media lab...
- ◆ interested in the role of the language lab...
- ◆ planning a new lab or renovating an old one...
- ◆ new to the profession...
- ◆ a teacher or researcher in language learning methodologies
- ◆ interested in the role of technology in teaching and learning...

Exhibits PLUS! IALL '95 at Notre Dame will feature:

- ◆ Language Lab Equipment, Hardware, Software
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Perennial conference favorites:

- ◆ Teaching Languages with Technology: What's new?
- ◆ Language Labs Around the World
- ◆ Designing new labs and renovating older labs
- ◆ Managing people, resources and money
- ◆ Getting money: •budgets •grants
- ◆ Pre-conference workshops: •computer applications •video editing •multi-media •networks •and more
- ◆ Keeping it legal: copyright issues

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