The World Wide Web: a Web Even a Fly Would Love

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Abstract

Ever since my introduction to the World Wide Web (WWW), it's been love at first byte. Searching on the WWW is similar to being able to go to a public library and allow yourself to be transported to any other book or library around the world by looking at a reference or index and clicking your heels together like Dorothy did in "The Wizard of Oz", only the clicking is done with a computer mouse. During this presentation, we will explore the WWW protocols which allow clients and servers to communicate on the Internet. We will demonstrate the ease with which users can navigate the virtual tidal wave of information available with a mere click of a button. In addition, the workshop will discuss the revolutionary aspects of this network information system and how it's impacting our libraries as a primary mechanism for rapid dissemination of knowledge.

I come today to share my enthusiasm about this thing called the World Wide Web. Today, you will discover how you can <u>move</u> through the rich landscape of the Internet, <u>find</u> its wealth of resources, and <u>contribute</u> to its growth by becoming an information publisher on your own. The emergence of the World Wide Web is the most exciting computing development in a decade. Within three years, the number of Web sites has risen from one-hundred to more than ten thousand, and by the end of this year it is estimated more than forty thousand sites will be accessible. In fact, according to Matt Grey, a research technician at MIT, if this rate of growth continues, it is conceivable that *everyone* on Earth could have their own personal page on the Web in four years time. And, equally amazing is the amount of traffic that has traveled the Web. An article I read last year in *New Scientist*, said over eight hundred gigabytes of information had circumnavigated the globe. Now let me put that in librarian's terms: that is equivalent to twenty-three hundred copies of *Encyclopedia Britannica* of information!

However, before we enter this strange and fascinating land of hypertext and color graphics, we need to understand some basic WWW specifications and principles to the process. The World Wide Web (or WWW) originated at the European Particle Physics Laboratory in Geneva, Switzerland and was invented by Tim Berners-Lee in 1990. In fact, much of the fundamental notions proposed at that time still define the Web as we know it today.

Let's examine some of the WWW terminology: "Server" is a program that sends information to other computers in response to their queries. "Browser" is a program that runs on the computer used by the person looking for information. For example, the two most prevalent (and popular) non-commercial browsers available today are NCSA Mosaic and Netscape. My personal preference is Netscape for its speed and ease of use. "URL" is the "address of a file". For example, ESO's URL is: http://www.eso.org/eso-homepage.html. This URL can be interpreted as follows:

- Protocol=http
- Separator= ://
- Server= www.eso.org
- Directory Path= /
- File Name= eso-homepage.html

It is interesting to note that ".org" (at the end of "server") may also be represented in North America as ".com" (commercial site), ".edu" (educational site), ".mil" (military site), and ".net" (network providers). In addition, foreign countries may substitute ".uk" for United Kingdom, ".fr" for France, etc. Furthermore, it is significant to understand that the World Wide Web is not only a Web browser, but also an integrated interface for the entire Internet including gopher, WAIS, ftp and most newsgroups, all of which can also can be accessed accordingly. "HTTP" represents the term "hypertext transfer protocol". This is a transaction of messages that take place between the client and the server. "HTML" represents the term "hypertext transfer markup language". Just as computer programmers may use the "C" programming language to communicate, the Web language is in html and spells out how a document should be formatted in order to work on the Web. "Homepage" is the graphical door to the information a server provides. It is a windowful or screen of information in which all links to related information are included. It is written in plain text, or html language, which is words with tags around them. Hypertext is like reading the table of contents of a book. Each name is linked to a catalog entry that describes the server and what it offers. Often likened to cards in the library catalog system, it describes on-line information services instead. Since the beginning of time, man has had to deal with navigation whether it be on sea or land. This is no less true today when you attempt to learn how to use a computer. You need to ask the following questions in order to understand how to maneuver around the Web:

(i) How do you find the servers that have the most pertinent information?
(ii) How do you learn more about them and where they are located?
(iii) How do you know when a new server comes on-line that might interest

you?

If you are trying to find a particular site or document on the Internet, or just looking for a resource list on a particular subject, you can use one of the many available on-line search engines. These engines allow you to search for information in different ways. For instance, some search titles of document headers, others search the documents themselves, and still others search indices or directories. The better search engines offer a composite of all three; however, there is *no* one ultimate search tool for the Web. Many of the searching databases are constructed and updated by programs called "robots" or "spiders" that continually travel the net finding documents. As they encounter documents, they record information about each document, which is then used to update the database. In addition, many computer hackers have developed their own browsers, and in my travels I have discovered ones with names like: The NorthStar Robot, Momspider, HTML Gobble, and the Webfoot Robot. If you are interested in pursuing this field further, you can access the URL, http://web.nexor.co.uk/mak/doc/robots.html. One of the more popular launch pads is called "Yahoo". With this database users can submit new sites and automated robots seek out others, making this a good place to find new sources. The URL for this subject index is: http://www.yahoo.com/.

Today, I would like to share with you a couple of my favorite library homepages. I keep the URLs in the "bookmark" section of Netscape's pull-down menu. With a "hot list" in place, one no longer has to deal with long command lines with arcane details. Two special library homepages are "Ms. Acquisitions Homepage" developed by the Vanderbuilt Law University librarian (http://libdev1.lib.vanderbilt.edu/law/acqs/acqs.html) and the Cal State Fresno University library (http://athena.lib.csufresno.edu). Note that in developing your own homepage you must keep in mind the users – both you and the person connecting. You need to ask, How much time have you got for maintenance and upkeep? Are your graphics overwhelming? And, will it take forever to download the information?

A good place to start learning how to create your own homepage is by looking at the homepage constructed by the Center for Advanced Instructional Media, Yale Medical School (URL – http://info.med.yale.edu/caim/StyleManual_Top.HTML). And, if you want a good idea of what NOT to do, you need to examine Mirsky's homepage entitled "The Worst of the Web" (http://turnpike.net/metro/mirsky/Worst.html).

Lastly, for those of you not acquainted with the zine world, "zine" is short for either "fanzine" or "magazine" depending on your point of view. Zines are generally produced by one person or a small group, done often for fun or personal reasons, and they tend to be different in that they generally do not contain advertisements. One magazine I'd like to call your attention to is *Netsurfer Di-*

gest (http://www.netsurf.com/index.html). This magazine is also an e-zine or a zine that is distributed partially or solely on electronic networks like the Internet. There are now estimated to be around 250+ zines around the world. For further information, one might want to try http://www.ora.com:8080/johnl/e-zine-list/, which is a reasonably comprehensive list of electronic magazines published on the net, or, Rosalind Resnick's 50 reviews of major electronic publishing journals – http://www.gate.net/~rosalind.

Twenty-five years ago, when I was about to graduate from college, I read the book entitled <u>The Medium is the Message</u> by Marshall McLuhan whose then dream of a global village dependent on information technology has become a reality. Today, three everyday household technologies – the telephone, the computer, and the video – are being combined into one extraordinary medium which will carry the message or information. As we hurtle toward the 21st century, this technology promises us both grief and pleasure. On the one hand, we are faced with the dilemma of converting the astronomical community to become end-users, and at the same time we worry about our fate that as librarians we could become just another set of nodes on the net. And, as our universities and observatories spend more money on electronic gizmos and network access fees, will this mean we are to abandon the process of getting good books into the hands of our readers? Recently a poll was taken in the U.S., and people were asked their perception of what word most aptly described their idea of a library. Ninety-nine percent of those surveyed said a library is the very thing an Internet junky would deny us – books, magazines, and the librarian. Will this flood of information be the enemy of intelligence? What can we do?

I offer three modest proposals: First, information professionals must ensure and manage relationships with vendors, thus providing input into standards for everyone's use. As an IBM technician recently said, let us together design this information technology from the perspective of the people who will use it. I like the phrase he coined for this concept. He calls this a "human centric" approach to computer technology. We librarians have become "information sanitation engineers." We must develop expertise in network management to optimize efficiency and the use of information. Let us disseminate information <u>better</u>, not more. Databases such as NetFind by OCLC and AstroWeb are starts in the right direction. And finally, information professionals who do not have this technology at their workplace at least should know it exists and it can be used.

There *is* no going back.
We are in this together.
Take the plunge.

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