

INTERNET INVESTIGATIONS IN Electronics



Cynthia B. Leshin

INTERNET INVESTIGATIONS
In
ELECTRONICS

by
Cynthia B. Leshin



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DISCLAIMER

While a great deal of care has been taken to provide accurate and current information, the Internet is a dynamic and rapidly changing environment. Information may be in one place today and either gone or in a new location tomorrow. New sites come up daily; others disappear. Some sites provide forwarding address information; others will not. The publisher and author assume no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of this information.

As you travel the information superhighway and find that a resource you are looking for can no longer be found at a given Internet address, there are several steps you can take:

1. Check for a new Internet address or link, often provided on the site of the old address.
2. Use one of the search engines described in Chapter 5 with the title of the Internet resource as keywords.
3. Explore Internet databases such as Yahoo, Magellan, Infoseek, Galaxy or the World Wide Web Virtual Library, which have large directories of Internet resources on Web sites.

The author welcomes readers' feedback, correction of inaccuracies, and suggestions for improvements in subsequent editions. Cynthia Leshin can be contacted by e-mail at: **cleshin@xplora.com**

About the Author

Cynthia Leshin is an educational technologies specialist with her doctorate in educational technology from Arizona State University. Dr. Leshin has her own publishing, training, and consulting company. She has authored three books: *Internet Adventures — Step-By-Step Guide To Finding And Using Educational Resources*, *Netscape Adventures — Step-By-Step Guide To Netscape Navigator and the World Wide Web*, and *Instructional Design: Strategies and Tactics*. The last of these is being used in graduate programs. Her company, XPLORA, publishes the *Internet Adventures* quarterly newsletter to assist teachers with integrating the Internet into the curriculum. Additionally, she is currently writing discipline specific Internet books and Internet-based learning activities for Prentice Hall.






Dr. Leshin has taught computer literacy and Internet classes at Arizona State University West and Estrella Mountain Community College. She currently teaches Internet classes using distance learning technology for Educational Management Group, a Simon & Schuster company. The Internet serves as a tool for teaching and communicating with her students. Her World Wide Web site is a learning resource for students and is also used when making presentations.

Dr. Leshin consults with schools and businesses interested in connecting to the Internet. Her expertise in educational psychology and theories of learning provides her with a unique background for translating complicated technical information into an easy-to-use, easy-to-understand, practical learning resource.

Preface

Internet Investigations in Electronics meets the needs of professors, students, and others interested in learning how to use the Internet in the field of Electronics Technology. This cutting edge guide provides step-by-step, easy-to-follow practical information to help you begin using the Internet for finding valuable information.

In this guide you will learn how to easily travel along the information superhighway. As you travel, you will learn how to use

-  two Internet navigational tools: Netscape Navigator 2.0 and Microsoft's Internet Explorer.
-  the Internet for communicating with others.
-  search tools for finding information and locating electronic resources.
-  the Internet for career planning.
-  the Internet for improving your job opportunities.

Chapter 10 (Learning Adventures) provides hands-on activities for applying and using information and Web resources.

The Appendices provide valuable information for connecting to the Internet and finding an Internet provider.

In this guide you will travel to cool electronic and electrical sites in cyberspace where you will find that viewing multimedia resources is as easy as pointing and clicking your mouse. You will learn more about the practical applications of electronics by visiting leading manufacturing companies and electronic Web sites.

You will learn how to showcase your talents and skills and improve your chances for getting a job by creating an electronic résumé. And, most importantly, you will learn how to use the Internet as a valuable and important tool for your personal and professional life.

Your journey will be divided into two parts:

PART I: Understanding the Internet

- ❖ Chapter 1: What Is the Internet?
- ❖ Chapter 2: Guided Tour—Internet Browsers
- ❖ Chapter 3: Hands-on Practice
- ❖ Chapter 4: Chatting on the Net
- ❖ Chapter 5: Finding Information and Resources

PART II: The Web and Electronic Technology

- ❖ Chapter 6: Cool Electronic and Electrical Web Sites
- ❖ Chapter 7: Using Cyberspace for Career Planning
- ❖ Chapter 8: Using Cyberspace to Find a Job
- ❖ Chapter 9: Guided Tour—Using the Internet for Career Exploration and Job Opportunities in Electronics
- ❖ Chapter 10: Learning Adventures

Happy Internet Adventures

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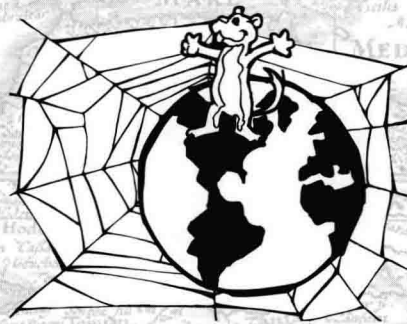
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PART I

Understanding the Internet



CHAPTER 1

What Is the Internet?

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In this chapter, you will learn

- what it means to "be on the Internet."
 - the difference between the Internet and the World Wide Web.
 - Internet addressing protocol—the URL.
 - the three standards used by the World Wide Web.
-

What Is the Internet?

in'ter-net n

1. world's largest information network 2. global web of computer networks 3. inter-network of many networks all running the TCP/IP protocol 4. powerful communication tool 5. giant highway system connecting computers and the regional and local networks that connect these computers
syn information superhighway, infobahn, data highway, electronic highway, Net, cyberspace

The term most frequently used to refer to the Internet is "information superhighway." This superhighway is a vast network of computers connecting people and resources around the world. The Internet is accessible to anyone with a computer and a modem.

The Internet began in 1969 when a collection of computer networks was developed. The first network was sponsored by the United States Department of Defense in response to a need for military institutions and universities to share their research. In the 1970s, government and university networks continued to develop as many organizations and



companies began to build private computer networks. In the late 1980s, the National Science Foundation (NSF) created five supercomputer centers at major universities. This special network is the foundation of the Internet today.

Computer networks were initially established to share information among institutions that were physically separate. Throughout the years these networks have grown and the volume and type of information made available to people outside these institutions has also continued to evolve and grow. Today we can exchange electronic mail, conduct research, and look at and obtain files that contain text information, graphics, sound, and video. As more and more schools, universities, organizations, and institutions develop new resources, they are made available to us through our computer networks. These networks make it possible for us to be globally interconnected with each other and to this wealth of information.

What Does It Mean To "Be on the Internet"?

"Being on the Internet" means having full access to all Internet services. Any commercial service or institution that has full Internet access provides the following:

- Electronic mail (e-mail)
- Telnet
- File Transfer Protocol (FTP)
- World Wide Web

Electronic Mail

Electronic mail is the most basic, the easiest to use, and for many people, the most useful Internet service. E-mail services allow you to send, forward, and receive messages from people all over the world, usually at no charge. You can then easily reply to messages, save, file, and categorize received messages.

Electronic mail also makes it possible to participate in electronic conferences and discussions. You can use e-mail to request information from individuals, universities, and institutions.



Telnet

Telnet provides the capability to login to a remote computer and to work interactively with it. When you run a Telnet session, your computer is remotely connected to a computer at another location, but will act as if it were directly connected to that computer.

File Transfer Protocol (FTP)

File Transfer Protocol is a method that allows you to move files and data from one computer to another. File Transfer Protocol, most commonly referred to as FTP, enables you to download magazines, books, documents, free software, music, graphics, and much more.

World Wide Web

The World Wide Web is a collection of standards and protocols used to access information available on the Internet. World Wide Web users can easily access text documents, images, video, and sound.

The Web and the Internet

The World Wide Web (WWW or Web) is a collection of documents linked together in what is called a *hypermedia system*. Links point to any location on the Internet that can contain information in the form of text, graphics, video, or sound files.

Using the World Wide Web requires "browsers" to view Web documents and navigate through the intricate link structure. Currently there are between 30-40 different Web browsers. In this guide you will learn how to use two of the premiere Web browsers—Netscape Navigator and Microsoft's Explorer. Both of these browsers combine a point and click interface design with an "open" architecture that is capable of integrating other Internet tools such as electronic mail, FTP, Gopher, WAIS, and Usenet newsgroups. This architecture makes it relatively easy to incorporate images, video, and sound into text documents.

The World Wide Web was developed at the European Particle Physics Laboratory (CERN) in Geneva, Switzerland. Originally it was developed as a means for physicists to share papers and data easily. Today it has



evolved into a sophisticated technology that links hypertext and hypermedia documents.

The Web and the Internet are not synonymous. The World Wide Web is a collection of standards and protocols used to access information available on the Internet. The Internet is the network used to transport information.

The Web uses three standards:

- URLs (Uniform Resource Locators)
- HTTP (Hypertext Transfer Protocol)
- HTML (Hypertext Markup Language)

These standards provide a mechanism for WWW servers and clients to locate and display information available through other protocols such as Gopher, FTP, and Telnet.

URLs (Uniform Resource Locators)

URLs are a standard format for identifying locations on the Internet. They also allow an addressing system for other Internet protocols such as access to Gopher menus, FTP file retrieval, and Usenet newsgroups. URLs specify three types of information needed to retrieve a document:

- the protocol to be used;
- the server address to which to connect; and
- the path to the information.

The format for a URL is: **protocol//server-name/path**

