

EXPLORING THE INTERNET WITH NETSCAPE® COMMUNICATOR 4



Robert T. Graver ■ Gretchen Marx

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Robert T. Grauer / Gretchen Marx

University of Miami

Saint Joseph College

Prentice Hall, Upper Saddle River, New Jersey 07458



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Development Editor: Cecil Yarbrough
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Interior and Cover Designer: Suzanne Behnke
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PREFACE

Exploring the Internet with Netscape Communicator 4 is the third edition of our Internet text. (A parallel version has been written for *Internet Explorer 4.0*.) Both books are aimed at the introductory concepts/applications course and develop the necessary skill set to use the Internet effectively. Chapter 1 begins with a discussion of the Internet and its relationship to the World Wide Web, and describes how to access its resources through Netscape Navigator. Chapter 2 explains how search engines work and presents effective techniques for doing research on the Web. Chapter 3 covers e-mail and news groups, through Messenger and Collabra, respectively. Chapter 4 discusses the impact of the Internet on society through examination of various legal, social, and commercial issues. Chapter 5 describes the Internet before the Web. Appendix A provides a non-technical overview of how the Internet works. Appendix B contains a list of suggested Web sites. Appendix C is an Internet glossary.

The detailed hands-on exercises (tutorials) within each chapter, coupled with the end-of-chapter problems, help the student to master the material. Each hands-on exercise is illustrated with full-color screen captures that are clear and easy to read. Each exercise is also accompanied with numerous tips that present different ways to accomplish a given task and/or suggest other avenues for exploration. The end-of-chapter review material is extensive. Each chapter has 15 multiple-choice questions (with answers) enabling students to test themselves quickly and objectively. Each chapter has a minimum of five computer-based practice exercises to build student proficiency. And finally, each chapter ends with less structured case studies that encourage the student to further exploration.

Exploring the Internet with Netscape Communicator 4 is one of several books in the *Exploring Windows* series. There is a separate text for each application in Microsoft Office 97—*Word 97*, *Excel 97*, *Access 97*, and *PowerPoint 97* as well as individual books for both Windows 95 and Windows 98. There are also two combined texts, *Exploring Microsoft Office Professional, Volumes I and II*. Volume I contains the introductory chapters from each application. Volume II consists of the advanced chapters from each application and was developed for the rapidly emerging second course in PC applications. A complete list of titles appears on the back cover.

Every book in the *Exploring Windows* series may be ordered with a tutorial CD from CBT Systems. The CDs have been certified by Microsoft to include all topics necessary to sit for the Expert level certification exam. In addition, multiple books may be shrink-wrapped with one another through the Prentice Hall ValuePack program. If, for example, you are teaching a course that covers Word, Excel, and the Internet, a ValuePack results in significant savings for the student. The *Exploring Windows* series is also part of the Prentice Hall custom binding program. And finally, every book in the *Exploring Windows* series is accompanied by an Instructor's Resource Manual with solutions to all exercises, PowerPoint lectures, and the printed version of our test bank. (The Instructor's Resource Manual is also available on a CD-ROM and contains a Windows-based testing program.)

FEATURES AND BENEFITS

Exploring the Internet is written for the computer novice and assumes no previous knowledge on the part of the reader. The student learns how to use a graphical browser, effective searching techniques, the essentials of e-mail and Internet News, and the impact of the Internet on society.

Annotated illustrations appear throughout the book to explain underlying concepts and increase the reader's overall understanding. These pages from Chapter 1 demonstrate the concept of hyperlinks by taking the student through the City.Net Web page.



WELCOME TO CYBERSPACE:
THE INTERNET AND WORLD
WIDE WEB

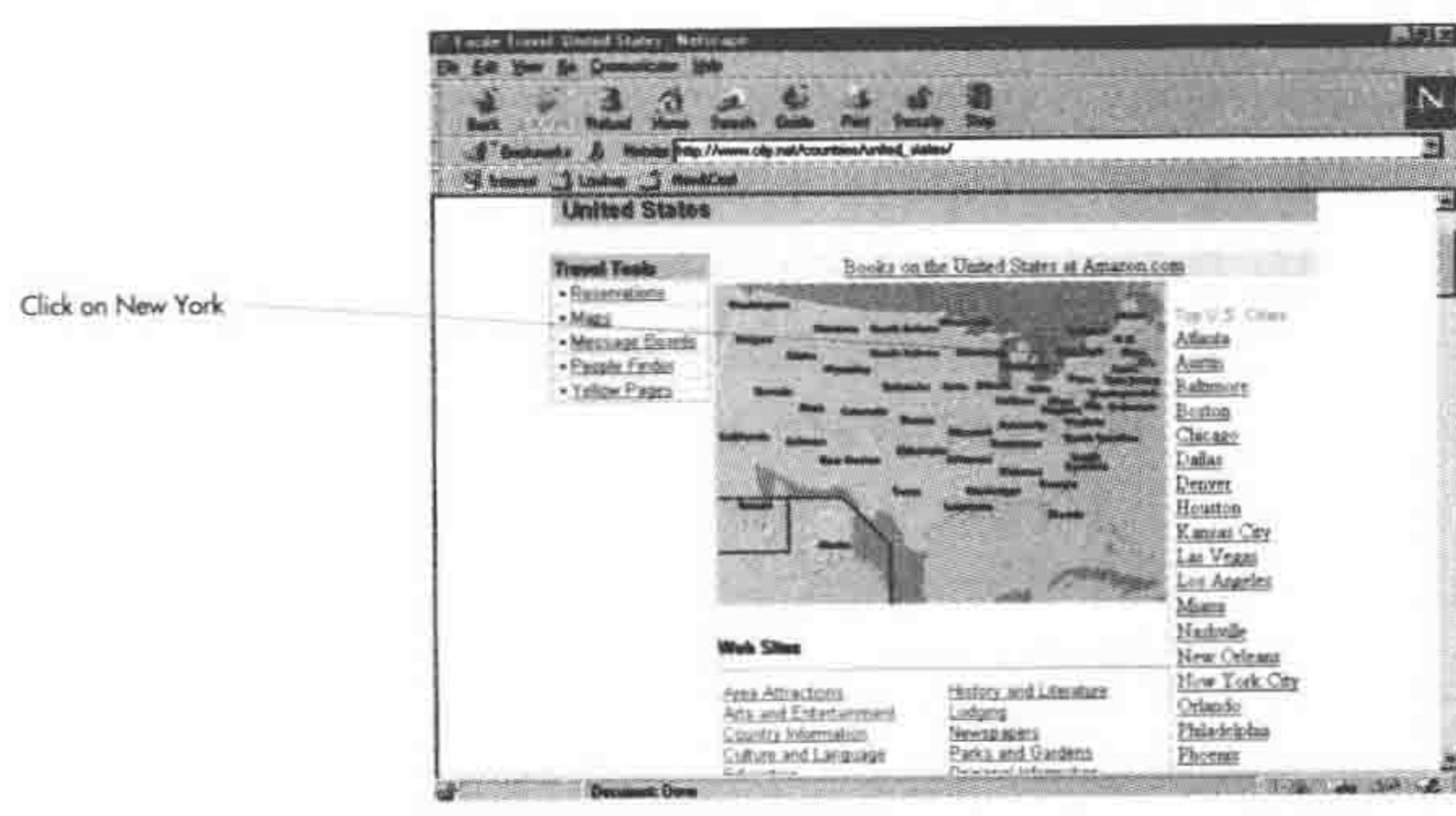
OBJECTIVES

- After reading this chapter you will be able to:
1. Describe the Internet and its history; explain how to access the Internet in your campus computing environment.
 2. Describe the World Wide Web in the context of hypertext and hypermedia; distinguish between a Web server and a Web client.
 3. Use Netscape Navigator to access the World Wide Web; describe several similarities between Navigator and other Windows applications.
 4. Define a URL and give several specific examples; describe how to enter a Web address in Netscape Navigator.
 5. Describe the various buttons on the Netscape Navigator toolbar.
 6. Explain how to save the address of a favorite Web site and return to it later.

OVERVIEW

The Internet. You see the word on the cover of half the magazines on the newsstand. The media make continual reference to the Information Superhighway. Movie ads provide Internet addresses so you can download and view movie clips. Your friends at other colleges want to know your Internet e-mail address. But what exactly is the Internet, and how do you use it? Is the World Wide Web part of the Internet, or is it a separate entity? This chapter will answer these and other questions as you begin your journey through *cyberspace*, the term used to describe the invisible realm of the Internet.

We begin with a brief history of the Internet and World Wide Web. We describe how Web documents are accessed and created, and define basic terms such as HTTP (HyperText Transfer Protocol) and HTML (HyperText Markup Language). The World Wide Web cannot

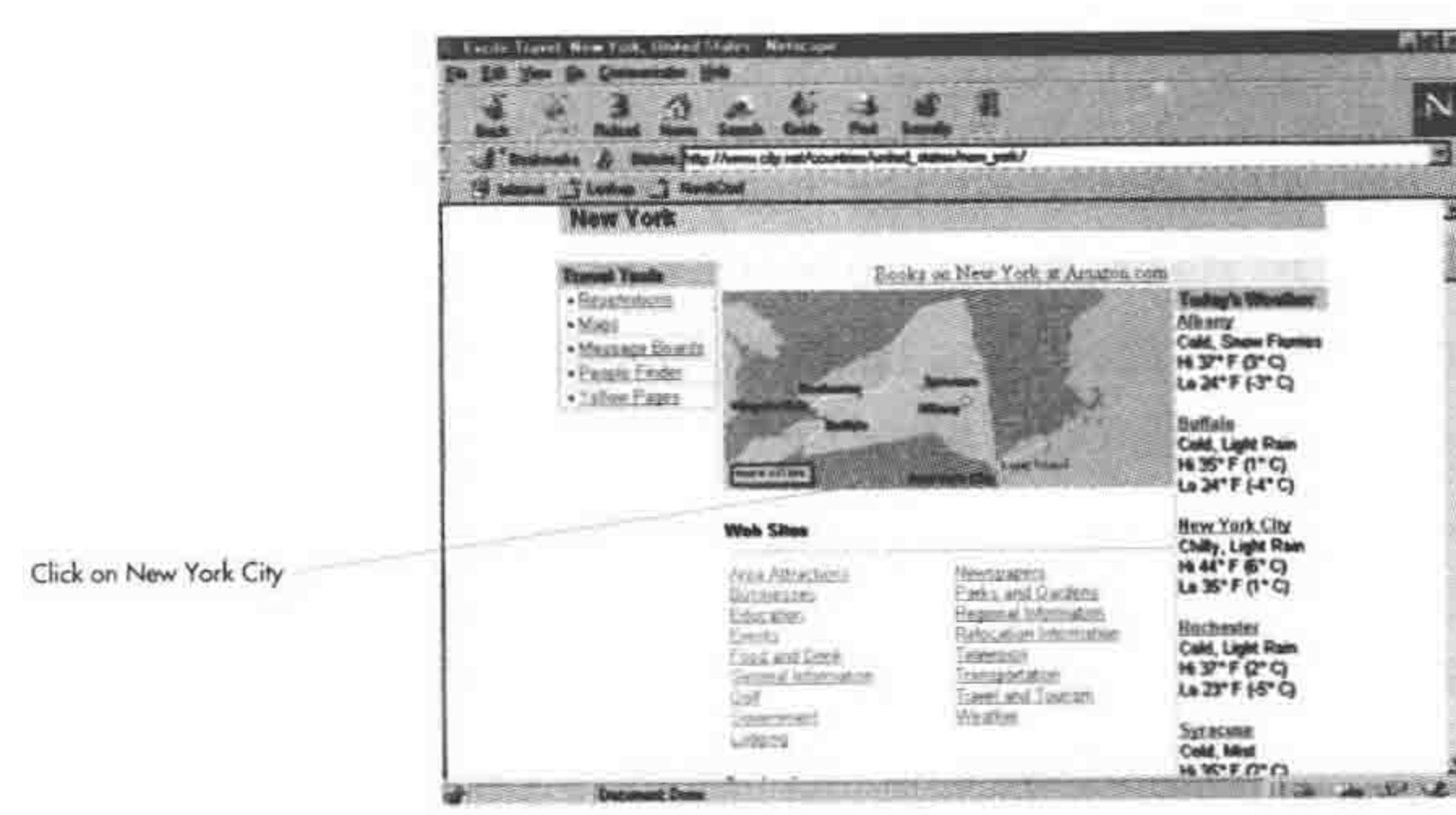


Click on New York

(c) United States

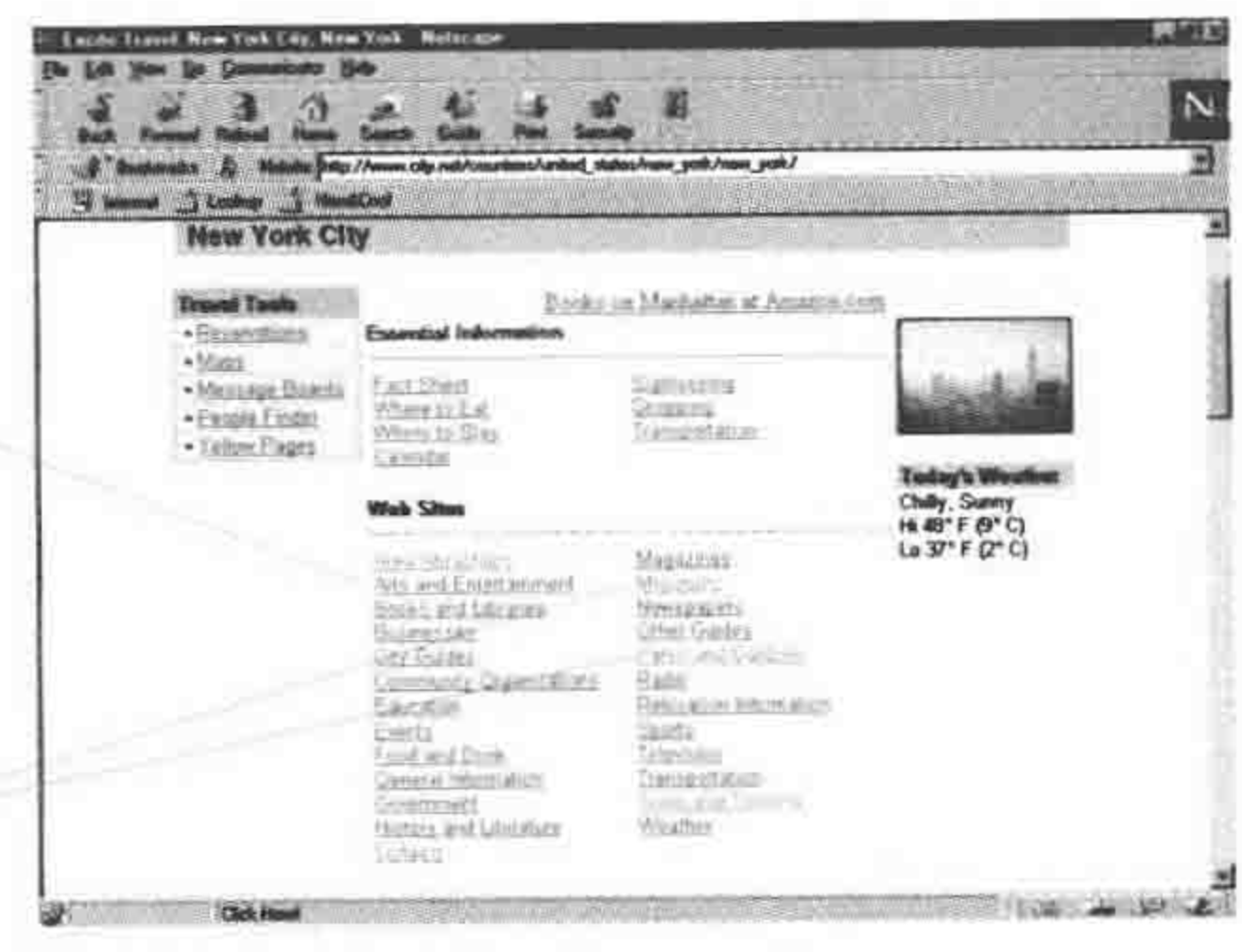
Links in blue indicate that link has not been selected

Links in magenta indicate that link has been previously selected



Click on New York City

(d) New York



(e) Attractions in New York City

Title bar displays name of open document

Menu bar

Navigation toolbar

Location toolbar

Personal toolbar

Address of open document is shown in the Location toolbar's text box

Vertical scroll bar

Status bar



(f) The Brooklyn Museum

FIGURE 1.1 Hyperlinks for City.Net (continued)

FIGURE 1.1 Hyperlinks for City.Net (continued)

Right click the graphic to display a shortcut menu

Click Save Image As



(d) Save Image As Command

FIGURE 2.3 Research on the Web (continued)

Once you locate the Mona Lisa, you can download the graphic to your PC in order to include the picture in a document of your own. The easiest way to do this is to right click the graphic to display a context-sensitive menu, as shown in Figure 2.3d. Select the **Save Image As** command, which in turn displays a dialog box in which you specify the drive and folder in which to save the graphic. Then, after the picture has been downloaded to your machine, you can use the Insert Picture command to include the picture in a document of your own, perhaps on the cover page of your paper about Leonardo da Vinci.

Explore the URL

In searching the Web, there is no substitute for common sense and imagination on the part of the researcher. You will find, for example, that a server (Web site) often contains additional documents that may be relevant to your search if only you take the time to look. Consider, for example, the URL of the document in Figure 2.3d:

<http://sunsite.unc.edu/wm/paint/auth/vinci/joconde/joconde.jpg>

Document

Path (direction)

Server (computer)

Means of access (HyperText Transfer Protocol)

A URL consists of several components in the following sequence: the means of access (typically http), the server (computer on which the document is located), the path on that computer (if any) to travel to the document, and finally the document itself. In other words, we found a specific server (whose address is sunsite.unc.edu) that contained a picture of the Mona Lisa. It's logical to think that the same computer may contain other pictures or information in which we would be interested.

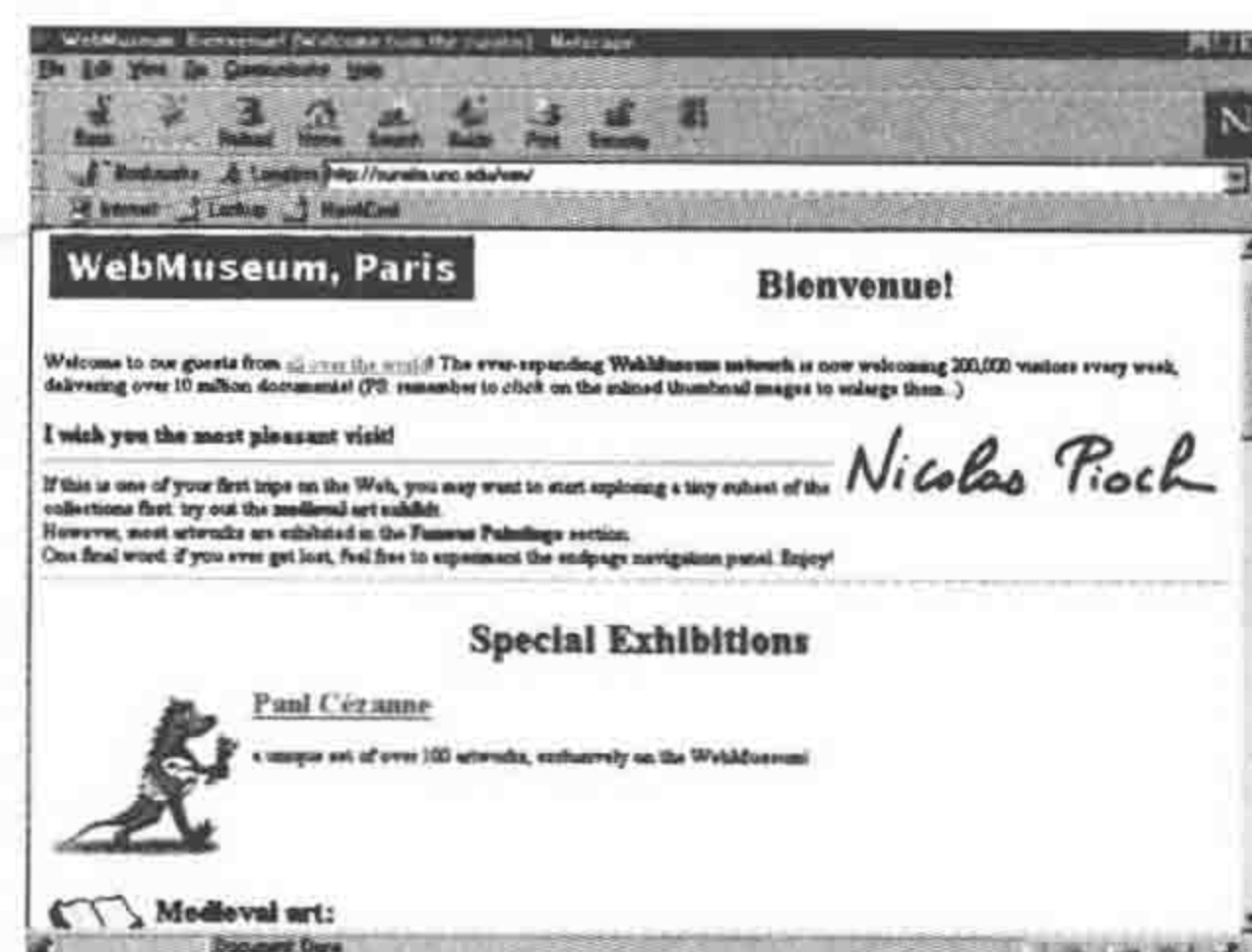
On a hunch (born out of experience) we backed up one level at a time within the address for the Mona Lisa until we came to the document shown in Figure 2.3e. This proved to be a bonanza as it placed us in the Web Museum, from which we had access to all types of art by a host of other artists.

Aside from being a wonderful way to browse, it may also be a boon to your research, because you are often searching for a concept rather than a specific term. You might, for example, be interested in Renaissance artists in general, rather than just Leonardo da Vinci, and you have just discovered an invaluable resource.

Use Specialized Engines

There are many ways to search for information. Typically, you begin with a generalized search of the entire Web, which often leads to a specific site that you search in depth. The flight reservation example at the beginning of the chapter fell into this pattern. We began by searching for information about "airline reservations," which led to a specific site that contained a database with information about flights from many airlines. The latter site was what we really wanted and would be a logical starting point for all future searches on flight availability. This database is one of many specialized databases that exist on the Web.

URL of the document



(e) Explore the URL

FIGURE 2.3 Research on the Web (continued)

Chapter 2 explains how search engines work and presents effective methods for doing research on the Web. These pages describe the use of more sophisticated techniques such as exploring the URL and specialty search engines.

A variety of exercises are found at the end of every chapter. There are objective multiple-choice questions, guided computer exercises, and less structured case studies that encourage the reader to further exploration and independent study.

the engine returns. Choose a different engine, enter the identical query, and record the number of hits you get with that engine. Select the more promising result, then submit a new query which limits your search through inclusion of additional key words or other logical operators. Summarize the results in a one- or two-page Word document that you will submit to the instructor. The document should contain all the information you recorded manually in the preceding steps.

File Compression

Photographs add significantly to the appearance of a document, but they also add to its size. Accordingly, you might want to consider to acquisition of a file compression program to facilitate copying large documents to a floppy disk in order to transport your documents to and from school, home, or work. You can download an evaluation copy of the popular WinZip program at www.winzip.com. Investigate the subject of file compression, then submit a summary of your findings to your instructor.

Copyright Infringement

It's fun to download images from the Web for inclusion in a document, but is it legal? Copyright protection and infringement is one of the most pressing legal issues on the Web. Search the Web for sites that provide information on current copyright law. One excellent site is the copyright page at the Institute for Learning Technologies at www.ilt.columbia.edu/projects/copyright. Another excellent reference is the page at www.benedict.com. Research these and other sites, then summarize your findings in a short note to your instructor.

Frequently Asked Questions (FAQs)

The Internet and the World Wide Web can be very intimidating to the newcomer. However, it doesn't have to be for long. All the information you need to understand the Web is on the Web! General information about popular subjects is often kept in files titled Frequently Asked Questions (FAQs). Compose a search to find out more about the World Wide Web; something like WWW FAQs should work. Follow the hyperlinks until you feel comfortable with the terms you're reading. Set up bookmarks to return to any interesting sites. Summarize your results in a one-page memo to your instructor.

The Annual Report

America's public corporations spend a small fortune creating annual reports to report on the status of a company to its shareholders. You can write to a corporation and request a traditional printed report or you can go online to view the report on the Web if it is available. Choose any public corporation, search the Web for its home page, then see if you can find the annual report. Another way to search for the same information is to structure a query to look for the words "annual report." Summarize what you find in a one-page report to your instructor.

Going Abroad

Congratulations! You have just won a scholarship to spend your junior year abroad. You need a passport, and you need it quickly. Search the Web to learn how to apply for a passport. You should be able to find a site that enables you to

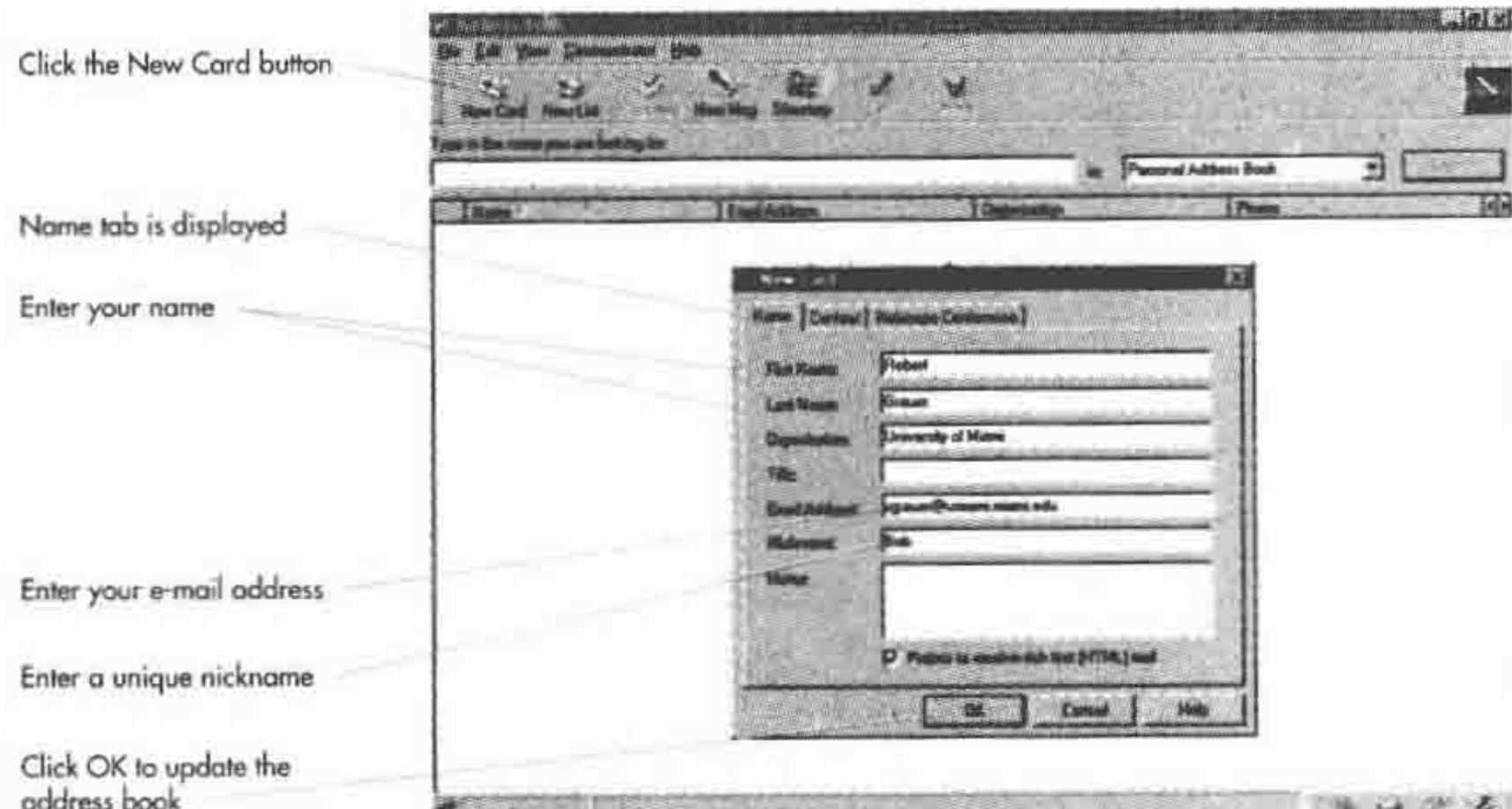
HANDS-ON EXERCISE 2

Beyond the Basics in E-mail

Objective: Create an address book and a distribution list; send an attachment; subscribe to a mailing list; create a new mail folder and move messages to it. Use Figure 3.5 as a guide in the exercise.

STEP 1: Add Names to the Address Book

- Start Netscape Messenger as described in the previous exercise. Pull down the **Communicator** menu and click **Address Book**. The Address Book window in Figure 3.5a is displayed.
- Click the **New Card** button on the toolbar to display the New Card dialog box shown in Figure 3.5a. The **Name** tab is displayed. Type your first name at the insertion point, then press the **Tab** key to move to the next text box. Enter your last name and press the **Tab** key again.



(a) Add Names to the Address Book (step 1)

FIGURE 3.5 Hands-on Exercise 2

- Enter appropriate information in the next two boxes or leave them blank, pressing the **Tab** key to move on. Enter your complete e-mail address. In the Nickname text box enter a unique shorthand address to use when sending yourself e-mail; for example, JD if your name is John Doe. (Messenger doesn't let you give the same nickname to two persons.)
- Enter notes if you like (they are just for your own use).
- Check the box **Prefers to receive rich text (HTML) mail**. (See the boxed tip "HTML or Plain Text?")

- Click the **OK** button to update the address book, then repeat this procedure using contact information for several of your classmates. Close the Address Book window when you are finished.

HTML OR PLAIN TEXT?

Netscape Messenger and most other modern mail programs support HyperText Markup Language formatting, but not all e-mail programs do so. If your correspondents complain that your messages are full of strange-looking codes inside angle brackets, you can send them unformatted text by leaving the HTML check box on their address-book card unselected. (Variations of this option are available using the Edit Preferences command. In the Messages category, click the More Options command button.)

STEP 2: Use the Address Book

- Click the **New Msg** button (or press **Ctrl+M**) to display the Message Composition window in Figure 3.5b.
- Type the first letters of the nickname of a person to whom you want to send the message. Messenger fills in rest of the nickname. Press **enter** and Messenger completes the address and moves the insertion point to the next address line.
- To enter the second recipient, assume you have forgotten his or her nickname and want to find the e-mail address in the address book. Click the **Address** button on the toolbar. The Select Addresses dialog box in Figure 3.5b is displayed.

Click to open address book

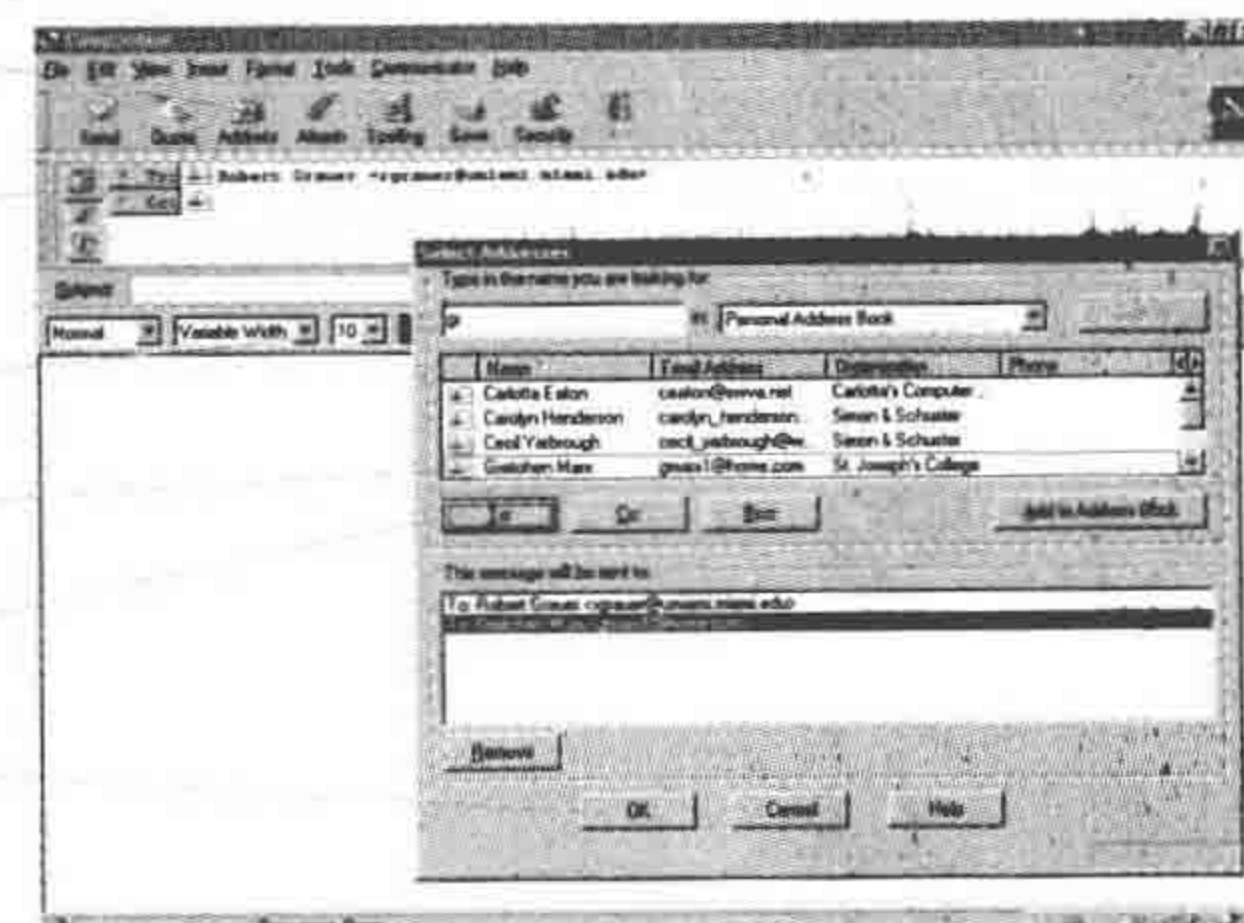
Messenger replaces nickname with e-mail address

Enter first two characters of recipient's name or nickname

Click to select recipient's name

Click To to add selected name to recipient list

Click OK to insert names in message window



(b) Use the Address Book (step 2)

FIGURE 3.5 Hands-on Exercise 2 (continued)

In-depth tutorials guide the reader in every chapter as seen from this example on e-mail. Each exercise is illustrated with large, full-color screen captures that are clear and easy to read. Each tutorial is also accompanied by boxed tips, which extend the material in the exercise.

Chapter 3 discusses global communication through e-mail and news groups. It includes in-depth coverage of virtually every e-mail capability including attached files, address books, and distribution lists. The chapter also shows how Collabra is used for Internet News.

3 MESSENGER AND COLLABRA: GLOBAL COMMUNICATION WITH MAIL AND NEWS

OBJECTIVES

After reading this chapter you will be able to:

- Describe Netscape Messenger and Collabra and their relationship to Netscape Communicator; describe the components of the Messenger and Collabra windows.
- Distinguish between a mail server and a mail client; explain the use of a username and password in conjunction with e-mail.
- Use Netscape Messenger to send and receive e-mail; attach a file to an e-mail message.
- Explain how an address book facilitates entering the recipient's e-mail address when you compose an e-mail message.
- Create a distribution list to send the same e-mail message to many people.
- Subscribe to an Internet mailing list; differentiate between the list server and the actual list.
- List the mail folders that are created by default for Netscape Messenger mail; create a new mail folder and move a message to it.
- Describe the Internet news facility; use Netscape Collabra to subscribe to newsgroups; read and reply to newsgroup postings.
- Explain netiquette; use smiles and NetSpeak in e-mail and newsgroup postings.

OVERVIEW

The World Wide Web brought the Internet to the attention of the media, corporations, and millions of home users. But long before the advent of browsers and hyperlinks, Internet users sent messages via computer using e-mail and news. These are still two of the most widely used Internet services, and you use them through two Netscape Communicator applications, Messenger and Collabra.

Chapter 4 covers the impact of the Internet on society through examination of various legal, social, and political issues. It also describes the commercial potential of the Internet and takes the reader on a virtual shopping spree in cyberspace.

Chapter 5 describes the Internet before the advent of the World Wide Web and includes a discussion of traditional Internet services such as Telnet and FTP. It also contrasts a Windows-based e-mail client such as Netscape's Messenger with a UNIX-BASED program such as PINE.

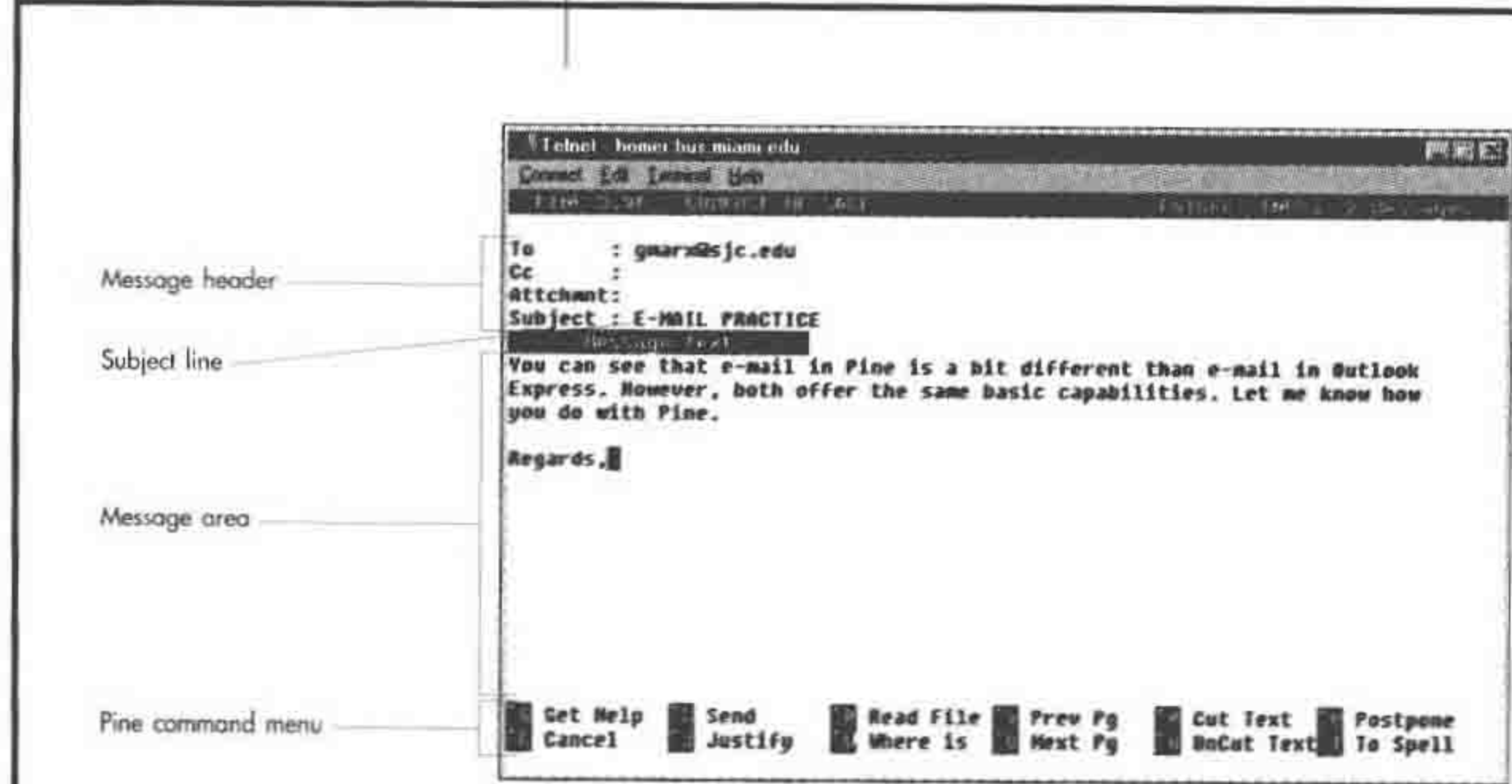
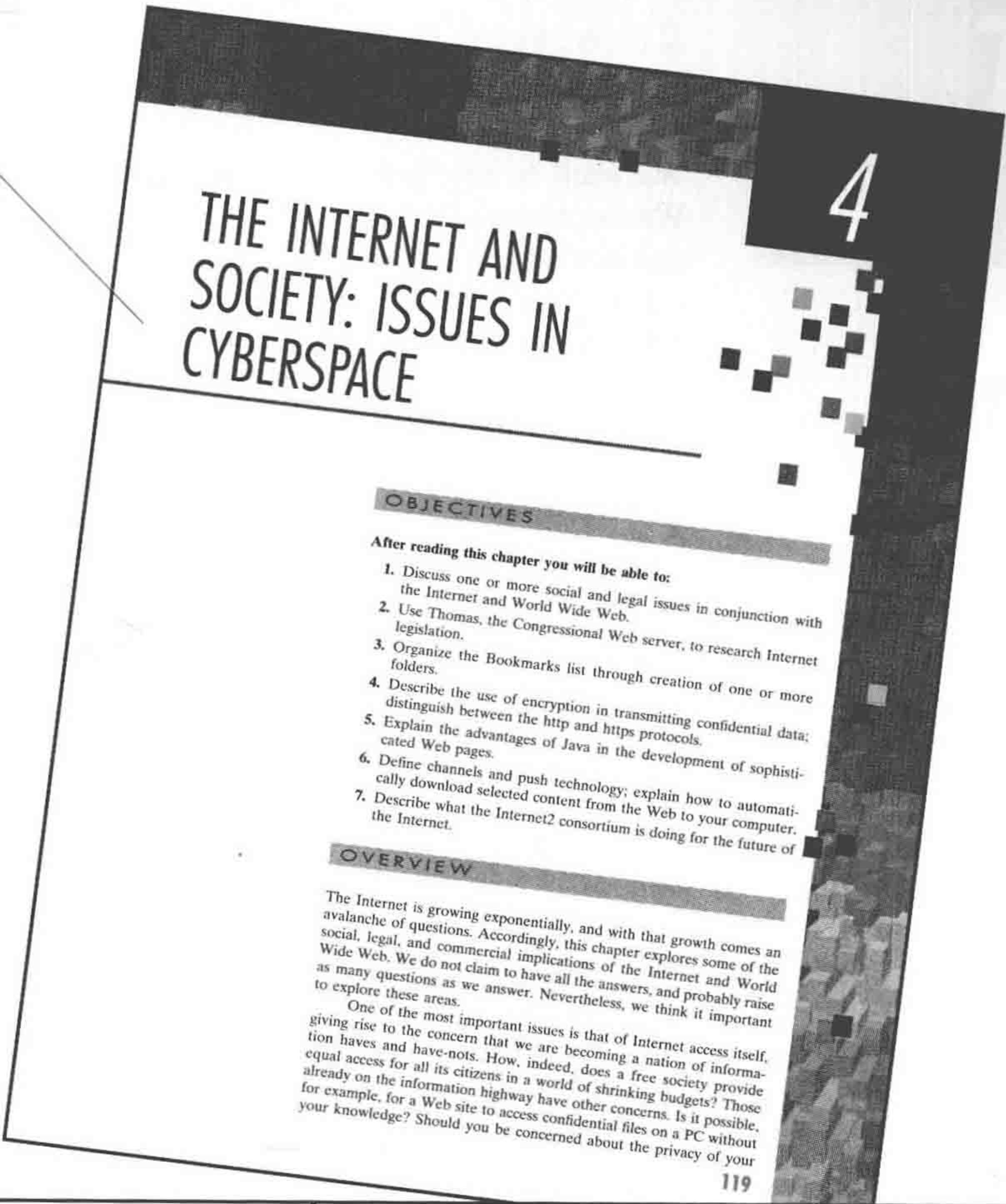


FIGURE 5.2 An E-mail Message in Pine

recipients (if any), and nature of the message. The message area contains the text. You can attach a file, create an address book or distribution list, or store mail in different folders just as you can with any Windows-based program. What you can't do is change the font or background color or embed a hyperlink in a message the way you can under Windows.

Netscape Messenger versus Pine

The difference between Windows-based e-mail programs such as Netscape Messenger and Pine goes beyond the graphical user interface and has to do with where mail is stored. All Windows e-mail programs use a *protocol* (a set of rules for communication between computers) known as the *Post Office Protocol (POP)* to send and receive mail. Incoming mail is stored on the mail server initially, but the POP protocol transfers the mail from the server to your PC when you connect to the server.

In other words, the POP client acts as a mail carrier and delivers the mail to your PC. The POP client sends the server your username and password; then it downloads the messages into your mailbox (e.g., the Inbox folder on your PC). You can read the messages immediately after they are downloaded, or you can read them later, *without* being logged into the mail server because once they are downloaded, they are stored locally on your hard drive. Using a POP client (a fancy name for a Windows-based e-mail program) is analogous to reading regular mail in the comfort of your home, after the mail carrier has come and gone. The concept is illustrated in Figure 5.3a.

In a similar fashion, you can compose messages using a POP *mail client* without being connected to the server. You complete the message in the usual way; then you execute the Send command, which places the message in your Outbox or Unsent Messages folder for pickup. You can compose multiple messages offline, but you must eventually connect to the mail server in order to actually mail the letters. At that point the POP client uploads the messages in your Unsent Messages folder to the mail server for delivery. The mail server sends the outbound

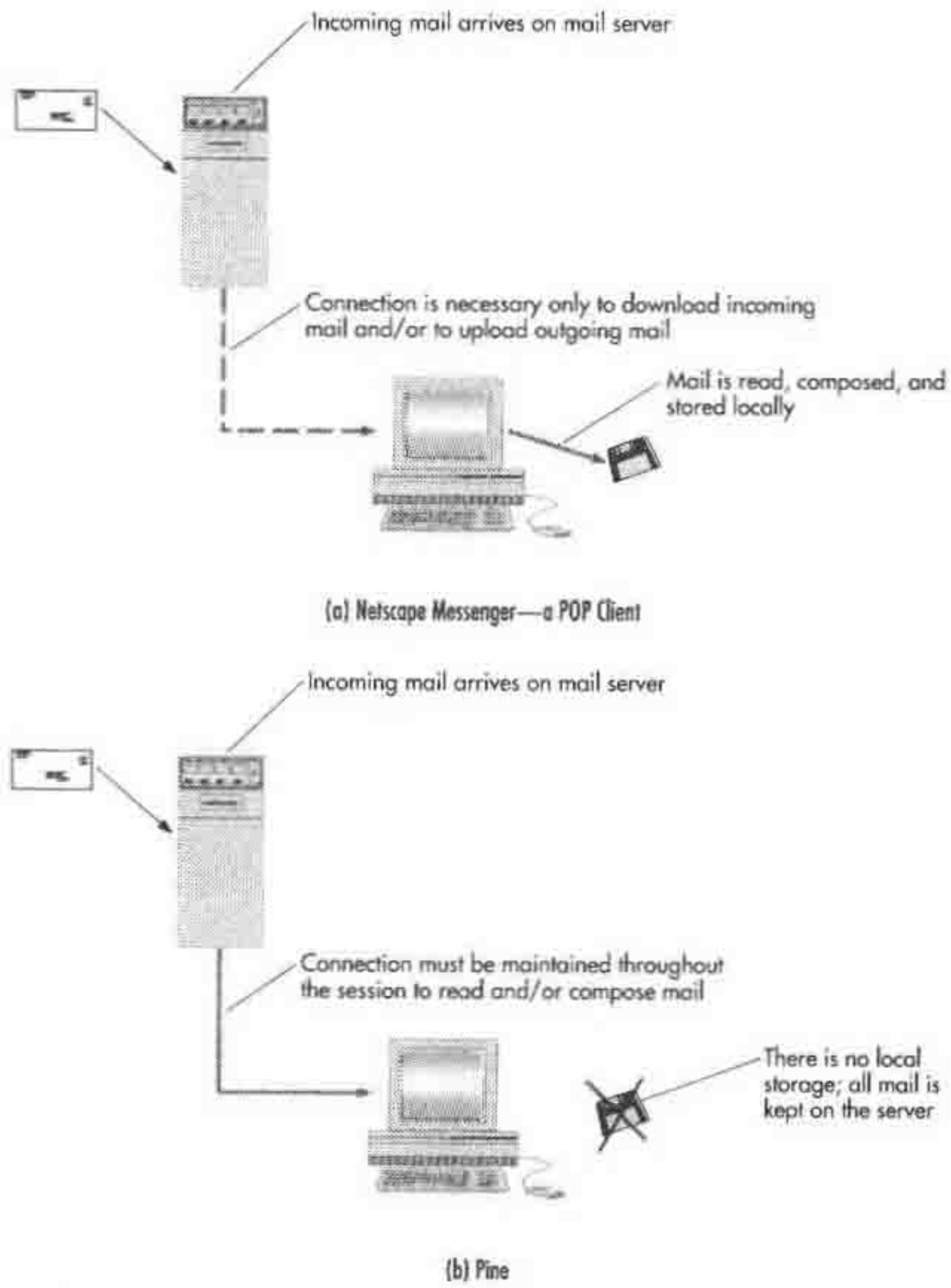


FIGURE 5.3 Netscape Messenger Versus Pine

messages to the Internet using a protocol known as *Simple Mail Transfer Protocol (SMTP)*. Hence the mail server is known as an SMTP server.

Pine functions differently from a POP e-mail client in that it (the Pine program) is installed on the mail server itself, not on your PC. All of your e-mail messages are also stored on the server rather than your PC. Thus, you must be connected to the mail server in order to read your mail and/or to compose new mail. In the post office analogy it is similar to having a post office box and being forced to remain in the post office while you are reading your mail or writing a letter. The concept is illustrated in Figure 5.3b.

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Alok Charturvedi, Purdue University
Jerry Chin, Southwest Missouri State University
Dean Combellick, Scottsdale Community College
Cody Copeland, Johnson County Community College
Larry S. Corman, Fort Lewis College
Janis Cox, Tri-County Technical College
Martin Crossland, Southwest Missouri State
Paul E. Daurelle, Western Piedmont Community College
David Douglas, University of Arkansas
Carlotta Eaton, Radford University
Raymond Frost, Central Connecticut State University
James Gips, Boston College
Vernon Griffin, Austin Community College
Michael Hassett, Fort Hays State University
Wanda D. Heller, Seminole Community College
Bonnie Homan, San Francisco State University
Ernie Ivey, Polk Community College
Mike Kelly, Community College of Rhode Island
Jane King, Everett Community College
John Lesson, University of Central Florida

David B. Meinert, Southwest Missouri State
Bill Morse, DeVry Institute of Technology
Alan Moltz, Naugatuck Valley Technical Community College
Kim Montney, Kellogg Community College
Kevin Pauli, University of Nebraska
Mary McKenry Percival, University of Miami
Delores Pusins, Hillsborough Community College
Gale E. Rand, College Misericordia
Judith Rice, Santa Fe Community College
David Rinehard, Lansing Community College
Marilyn Salas, Scottsdale Community College
John Shepherd, Duquesne University
Helen Stoloff, Hudson Valley Community College
Margaret Thomas, Ohio University
Mike Thomas, Indiana University School of Business
Suzanne Tomlinson, Iowa State University
Karen Tracey, Central Connecticut State University
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Robert T. Grauer
rgrauer@sba.miami.edu
www.bus.miami.edu/~rgrauer
www.prenhall.com/grauer

Gretchen Marx
gmarxl@home.com

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WELCOME TO CYBERSPACE: THE INTERNET AND WORLD WIDE WEB

OBJECTIVES

After reading this chapter you will be able to:

1. Describe the Internet and its history; explain how to access the Internet in your campus computing environment.
2. Describe the World Wide Web in the context of hypertext and hypermedia; distinguish between a Web server and a Web client.
3. Use Netscape Navigator to access the World Wide Web; describe several similarities between Navigator and other Windows applications.
4. Define a URL and give several specific examples; describe how to enter a Web address in Netscape Navigator.
5. Describe the various buttons on the Netscape Navigator toolbar.
6. Explain how to save the address of a favorite Web site and return to it later.

OVERVIEW

The Internet. You see the word on the cover of half the magazines on the newsstand. The media make continual reference to the Information Superhighway. Movie ads provide Internet addresses so you can download and view movie clips. Your friends at other colleges want to know your Internet e-mail address. But what exactly is the Internet, and how do you use it? Is the World Wide Web part of the Internet, or is it a separate entity? This chapter will answer these and other questions as you begin your journey through *cyberspace*, the term used to describe the invisible realm of the Internet.

We begin with a brief history of the Internet and World Wide Web. We describe how Web documents are accessed and created, and define basic terms such as HTTP (HyperText Transfer Protocol) and HTML (HyperText Markup Language). The World Wide Web cannot

be appreciated, however, until you visit it yourself. Thus the chapter also introduces Netscape Navigator, the browser that is the anchor of the Netscape Communicator 4 suite of Internet applications. As always, learning is best accomplished by doing, and so we include two hands-on exercises and provide our own guided tour so that you can experience first hand what the excitement is all about.

THE INTERNET

The **Internet** is a network of networks that connect computers across the country and around the world. It grew out of a U.S. Department of Defense (DOD) experimental project begun in 1969 to test the feasibility of a wide area (long distance) computer network over which scientists and military personnel could share messages and data. The country was in the midst of the Cold War, and the military imposed the additional requirement that the network be able to function with partial outages in times of national emergency (e.g., a nuclear disaster), when one or more computers in the network might be down.

The proposed solution was to create a network with no central authority. Each **node** (computer attached to the network) would be equal to all other nodes, with the ability to originate, pass, and receive messages. The path that a particular message took in getting to its destination would be insignificant. Only the final result was important, as the message would be passed from node to node until it arrived at its destination.

The experiment was (to say the least) enormously successful. Known originally as the ARPAnet (Advanced Research Projects Agency Network), the original network of four computers has grown exponentially to include tens of millions of computers at virtually every major university and government agency, and an ever increasing number of private corporations and international sites. To say that the Internet is large is a gross understatement, but by its very nature it's impossible to determine just how large it really is. How many networks there are, and how many users are connected to those networks, is of no importance as long as you yourself have access.

The Internet is a network of networks, but if that were all it was, there would hardly be so much commotion. It's what you can do on the Internet, coupled with the ease of access, that makes the Internet so exciting. In essence, the Internet provides two basic capabilities, information retrieval and worldwide communication, functions that are already provided by libraries and print media, the postal system and the telephone, television, and other types of long-distance media. The difference, however, is that the Internet is interactive in nature, and more importantly, it is both global and immediate.

The Internet enables you to request a document from virtually anywhere in the world and to begin to receive that document almost instantly. No other medium lets you do that. Television, for example, has the capability to send information globally and in real time (while events are unfolding), but it is not interactive in that you cannot request a specific program. Federal Express promises overnight delivery, but that is hardly immediate. The stacks in your university library provide access to the information that is physically in that library, but that is not global access. Indeed, the Internet and, in particular, the World Wide Web are truly unique.

TCP/IP

Data is transmitted from one computer to another across the Internet through a series of standards, or protocols, known collectively as TCP/IP (Transmission Control Protocol/Internet Protocol). You can progress quite nicely through our text without knowing anything more about TCP/IP. We do, however, provide Appendix A in case you are curious about the internal workings of the Internet.

THE WORLD WIDE WEB

The original language of the Internet was uninviting and difficult to use. The potential was exciting, but you had to use a variety of esoteric programs (such as Telnet, FTP, Archie, and Gopher) to locate and download data. The programs were based on the Unix operating system, and you had to know the precise syntax of the commands within each program. There was no common user interface to speed learning. And, even if you were able to find what you wanted, everything was communicated in plain text, as graphics and sound were not available. All of this changed in 1991 with the introduction of the World Wide Web.

The **World Wide Web** (WWW, or simply the Web) can be thought of as a very large subset of the Internet, consisting of hypertext and/or hypermedia documents. A **hypertext document** is a document that contains a link (reference) to another hypertext document which may be on the same computer or even on a different computer located anywhere in the world. **Hypermedia** is similar in concept, except that it provides links to graphic, sound, and video files in addition to text files.

Either type of document enables you to move easily from one document (or computer) to another. And therein lies the fascination of the Web, in that you simply click on link after link to go from one document to the next. You can start your journey at your professor's home page in New York, for example, which may link to a document in the Library of Congress, which in turn may take you to a different document, and so on. So, off you go to Washington, DC, and from there to a reference across the country or perhaps around the world.

Any computer that stores a hypermedia document anywhere on the Web and, further, makes that document available to other computers is known as a **server** (or Web server). Any computer that is connected to the Web and requests a document from a server is known as a **client**. In other words, you work on a client computer (e.g., a node on a local area network or your PC at home) and by clicking a link in a hypermedia document, you are requesting a document from a Web server.

HyperText Transfer Protocol (HTTP)

In order for the Web to work, every client (be it a PC or a Mac) must be able to display every document from every server. This is accomplished by imposing a set of standards known as a protocol to govern the way data is transmitted across the Web. Thus, data travels from client to server, and back, through a protocol known as the **HyperText Transfer Protocol** (or http for short). In addition, in order to access the documents that are transmitted through this protocol, you need a special type of program known as a **browser**. Indeed, a browser is aptly named because it enables you to inspect the Web in a leisurely and casual way (the dictionary definition of the word "browse"). **Netscape Navigator** is the browser we

use throughout the text, but the concepts are also applicable to Internet Explorer, the browser provided by the Microsoft Corporation.

Consider, for example, the hypermedia document in Figure 1.1 as it would appear in Netscape Navigator. In order to display the document shown in Figure 1.1 on your computer, you need to be connected to the Internet and you need to know the address of the document you are looking for, in this case, www.city.net. (Yes, it helps to know the addresses of interesting Web pages, and we suggest several sites to explore in Appendix B.) We describe the structure of Internet addresses in detail later in the chapter, but for the time being it is sufficient to realize that every server, and every document on every server, has a unique address. Note, too, the “http” which precedes the address to indicate that the document is being transferred according to the hypertext transfer protocol we discussed earlier.

The first document you see at a Web site is its *home page*, and that is where your journey begins. The document in Figure 1.1 is the home page of City.Net, and it is one of our favorite sites on the Web. Not only does it demonstrate the concept of hypertext, but by its very nature it elegantly shows the global nature of the World Wide Web. Once you arrive at a home page, you can click any link that interests you.

Consider, for example, our path through Figure 1.1. We began by clicking on the image of North America in Figure 1.1a, which in turn displayed the document in Figure 1.1b. Note how the address of this document is different from that of the document in Figure 1.1a. Indeed, that is what the Web is all about as you move effortlessly from one document to another. Thus, we clicked on the image of the United States to display the map in Figure 1.1c. We clicked the state of New York to display the map of New York in Figure 1.1d. We clicked the link to New York City, which in turn displayed the list of links in Figure 1.1e, where we chose museums, then eventually chose the link to the Brooklyn Museum of Art. This brought us to our “final” destination in Figure 1.1f, where we arrive at the home page for this fabulous museum.

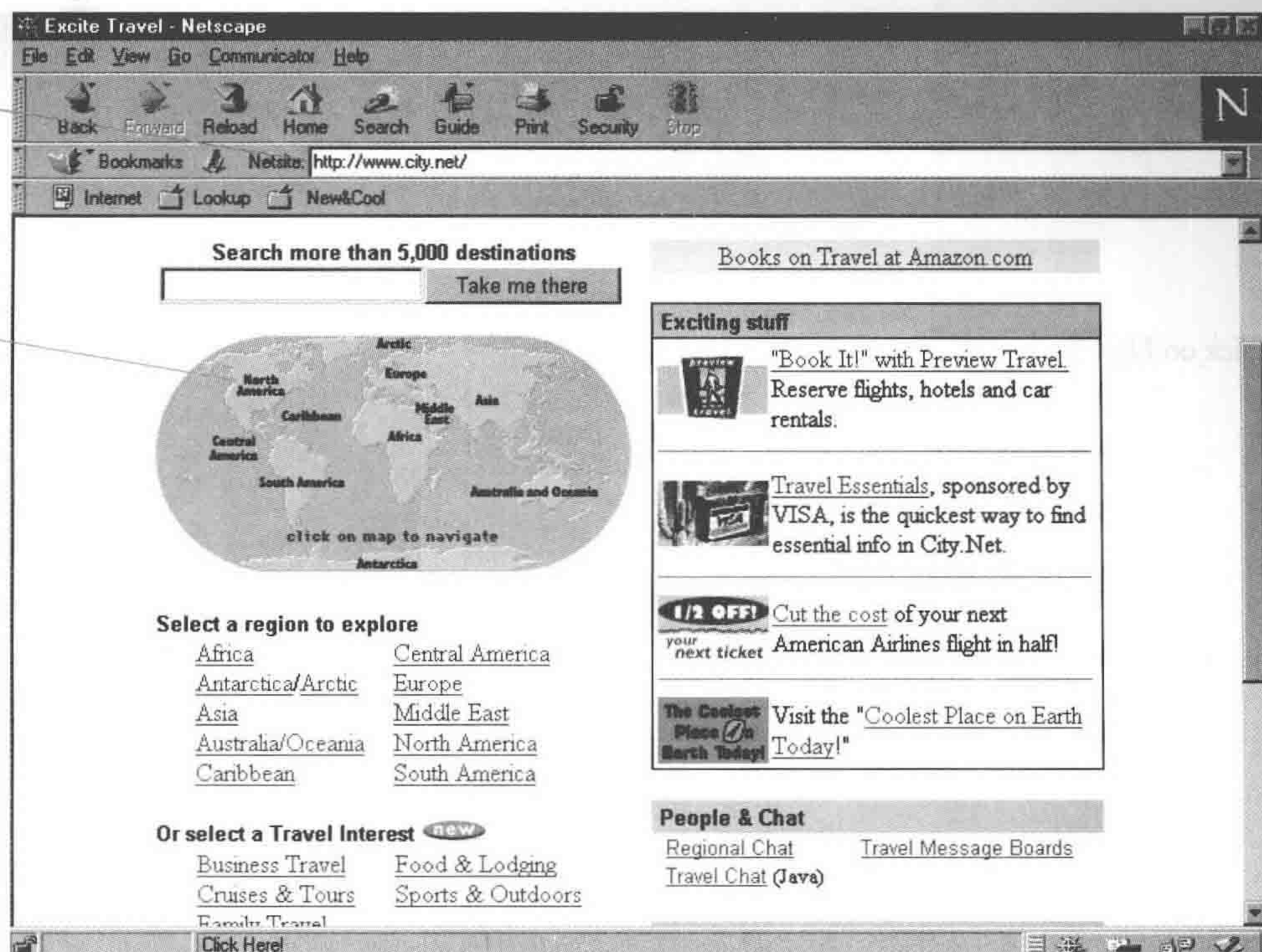
As you review our trip, notice that a link may be embedded within a graphic, as in the maps of Figures 1.1a, 1.1b, 1.1c, and 1.1d, or it may appear as underlined text as in Figure 1.1e. Underlined text appears in one of two colors, blue or magenta, depending on whether the link has been previously selected. Any link in blue (the majority of links in Figure 1.1d) indicates the document has not yet been viewed. Links in magenta, however (e.g., Museums in Figure 1.1e), imply the associated document has been retrieved earlier in that session or in a previous session.

Think for a moment of what we have just accomplished. We began with a map of the world. From there we went to North America, then to the United States, to New York, to New York City, and finally to a specific attraction. There is no beginning (other than the starting point or home page) and no end. You simply read a hypermedia document in any way that makes sense to you, jumping to explore whatever topic you want to see next. All of this is accomplished with a graphical browser such as Netscape Navigator and a connection between your computer and the Internet.

Netscape Navigator is easy to use because it shares the common user interface and consistent command structure present in every Windows application. Look, for example, at any of the screens in Figure 1.1 and you will see several familiar elements. These include the title bar and the minimize, maximize (or restore), and close buttons. Commands are executed from pull-down menus or from command buttons that appear on a toolbar under the menu bar. A vertical and/or horizontal scroll bar appears if the entire document is not visible at one time. The title bar displays the name of the document you are currently viewing.

Address of document

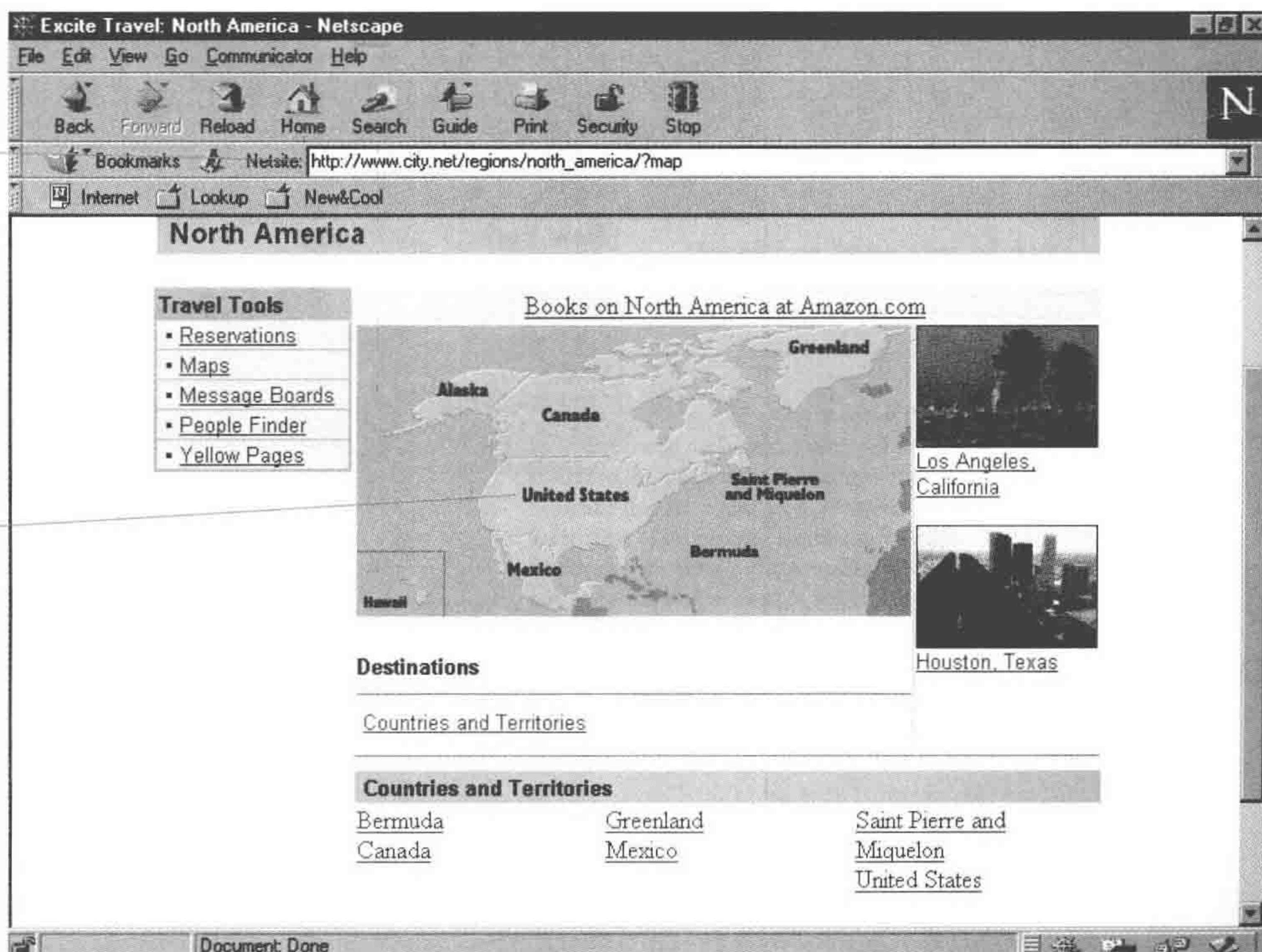
Click on North America



(a) World Map

Address of document is different from address of document shown in Figure 1.1a

Click on United States



(b) North America

FIGURE 1.1 Hyperlinks for City.Net