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the best book on the Internet."

—*Information Today*

# The Web Navigator™

PAUL GILSTER

Author of *The New Internet Navigator*™

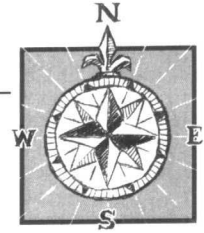
Master and  
customize the leading  
Web browsers

—  
Learn cutting-edge  
Web multimedia  
technologies

—  
Create personal  
Web pages

—  
Find and receive the  
information you want,  
when you want it





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# THE WEB NAVIGATOR<sup>TM</sup>

Paul Gilster

WILEY COMPUTER PUBLISHING



John Wiley & Sons, Inc.

NEW YORK • CHICHESTER • WEINHEIM • BRISBANE • SINGAPORE • TORONTO

Executive Publisher: Katherine Schowalter  
Editor: Philip Sutherland  
Assistant Editor: Kathryn A. Malm  
Managing Editor: Carl Germann  
Text Design & Composition: North Market Street Graphics, Lancaster, PA

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***Library of Congress Cataloging-in-Publication Data:***

Gilster, Paul, 1949–

The Web navigator / Paul Gilster.

p. cm.

Includes index.

ISBN 0-471-16495-X (alk. paper)

1. World Wide Web (Information retrieval system) I. Title.

TK5105.888.G55 1997

004.67'8—dc21

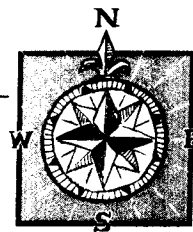
97-3517

CIP

Printed in the United States of America  
10 9 8 7 6 5 4 3 2 1

# Acknowledgments

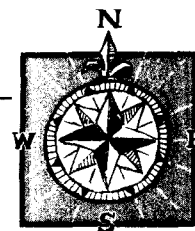
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*The Web Navigator* owes much to the labors of Kathryn Malm, this book's editor, whose insights helped me see what most needed explanation of today's complicated Net. Janice Borzendowski, whose close reading of all my books has flagged the trouble spots and made the rough places smooth, provided the needed check against verbal extravagance. I would also like to thank the many people responsible for this book's production, including Phil Sutherland, under whose guidance the book was conceived, and Carl Germann, whose unenviable chore was to decipher my marginal notes as we edited the manuscript. Working with the Wiley team on this book proved to be unusually smooth sailing. Special thanks to Frank Taylor, Web guru extraordinaire, for last minute course corrections. And I'd like to thank my wife Eloise for her patience, a debt so long-standing that I almost forgot to mention it.

# Introduction

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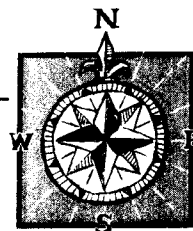
*The Web Navigator* is a broad survey of the Internet's fastest growing technology, with abundant references to the related tools that, although not based on the Web itself, nonetheless provide key Internet capabilities. I've emphasized not just the Web experience here, but also your ability to customize it through manipulating the browser itself as well as downloading plug-in and helper applications that extend the browser's range. Netscape is my tool of choice, although the same principles apply to Microsoft's Internet Explorer. Tweaking the software to reflect your own needs is not only enjoyable but necessary, for many Web sites today link to content that can only be viewed through third-party software. This book shows you where to get that software and how to install it.

Readers of my book *The New Internet Navigator* should understand that *The Web Navigator* is an entirely new book, written from the ground up to reflect the fact that the Net has changed dramatically in the past two years. The Web has become the standard medium for Internet publishing. Most new users first go on-line through a Web interface, using software supplied by their service provider. Whereas the issue used to be, how do I get on-line and which programs do I use, the issue today is, how can I customize my browser to do everything I need, and add to its capabilities? Thus *The Web Navigator* looks long and hard at how browsers work and suggests practical tips for using them more efficiently.

Because it covers everything from Internet definitions and access options to newer technologies like Java and ActiveX, this book is intended for a wide range of readers. While total novices can use it by working their way sequentially through its chapters, I've shaped it toward the more experienced user, who should find the methods suggested here for personalizing the browser helpful, while the material on plug-ins and developing technologies like Internet telephony, audio, and video will help those who haven't yet explored these options. We're all learning as we go in this facile medium, and it's my hope that this book will ground readers in the key issues of the Web today while offering a model for tracking its exciting new developments.

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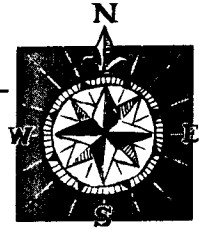
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# The World through the Web

No one can say how large the Internet has become. Unlike a city, this global network of linked computers doesn't respond to the niceties of demography, and if there were such a thing as an Internet census bureau, it would find its work almost impossibly complex. A network is a libertarian's dream. It connects to the broader Internet with nothing more than a few thousand dollars of hardware and a unique address so that computers around the world know how to reach it. Behind that address lie perhaps 10 people, perhaps 100, perhaps 5,000, depending on the organization behind the network and its own internal divisions. Not to mention the millions of individuals, people whose access to the Internet is through a service provider. They use modems to connect to a network that, in turn, connects to the Internet. Counting them means contacting all the service providers, large and small, and reaching a definitive figure which, in any case, is in a state of constant change as new customers sign on and established ones change services in the restless process known as "churn."

But think big. Does it matter whether the Internet's ranks have swollen to 40 and not 35 million? Perhaps 40 million is a reasonable estimate, and certainly we've pushed global networking into over 150 countries in one shape or another. But what counts just as much are rates of growth that make the Internet the fastest growing medium in history. No technology—not television, not radio, not fax—has grown so fast, and the remarkable thing about Internet penetration is that it continues its pace with seeming inexorability. Surely the Net will slow down one day, if for no other reason than the limits imposed by the numbers of people who own computers, or telephones, but for now, its robust dynamism is a cause for wonder. It's a community, this Internet, a place where you can talk to people without regard to distance, listen to digital radio archives, watch moving video, download programs, text files and

images, conduct research in large databases and, perhaps most significantly, search worldwide for information by means of ever more powerful software search engines.

Most of all, the Internet is a global phenomenon, which means that the computer around the corner from us with news about local school closings is as accessible as the one in France that helps us plan our trip to Giverny. Because we can access publicly available information with ease, the barriers of distance drop dramatically; we find ourselves going to the source for information about customs, cultures, cuisines. And because the Net can also be a personal place, we learn to join in discussion groups that talk about the things that interest us, from coin collecting to nuclear physics. A sense of community develops with odd resonances; it's a place where we make friends we never meet face to face, and forget about time and space because we're in the malleable world of cyberspace, which is a conflation and enlargement of both. Local news can quickly become world news, and a store that sells handcrafted walking sticks suddenly becomes an international presence through the use of a consumer-oriented World Wide Web page with accompanying catalog.

## **The Power of the Networked Machine**

Hollywood pundits told us it would happen, but never in the way it actually did. Computers in the movies of the 1950s and 1960s were always mechanical devices the size of railway cars; their huge panels were stuffed with flashing lights and reel-to-reel input devices that looked like tape recorders. When they spoke, which they often did, it was with a low, jerky, mechanical voice that mimicked what that era saw as the machine's great limitation—its inflexibility. Yet these were machines with sinister power. Used improperly, they brought merciless logic to bear upon the problems of existence and sometimes solved them by attacking the people who made them. When they talked to each other, it was to unite against humanity before being ultimately defeated.

But real computers do talk to each other, and not with sinister intent. What Hollywood never anticipated—what few but the most visionary could have anticipated—was the advent of the desktop computer and the fabulous expansion of processor power. The box on our desktop quickly became as powerful as the old mainframe style computers, and it didn't need a refrigerated room or a whole cadre of operators to make it work. And while its software seemed needlessly complex to people unused to operating computers, that very complexity was the result of the machine's ability to perform lightning-fast calculations and offer options we rarely knew we needed. Linking machines like this gave us the ability to communicate by moving information digitally, a fertile ground for innovation and ideas. The language of binary arithmetic pumped data through telephone wires and back out again; the desktop became a way station, a place where we tapped the worldwide muttering of thought.

And the old machine, the centralized behemoth running its programs in majestic isolation before handing off the results to its programmers, faded before the power of the network. Link two computers together and you don't just double their power, you quadruple it; link three computers together and you boost functionality by the square of three. Office workers first saw these advantages take hold as business moved away from the centrist model of computing to embrace local area networks, but today it's the individual—the home user and the small businessperson—who is finding out how to access the unique resources available on-line. These people are entering the world of cyberspace by the millions. Who knows where the Internet they will encounter—consisting of computers talking not only to business, government, and research labs, but also to individual users riding in on ever-faster modem connections—can lead us?

## **The Browser as Revolution**

But if it took processor power and a revolution on the desktop to make the Internet of today possible, it was software that brought the point home to the consumer. Blasting digital data around the globe isn't something most people grew up thinking they would do, and even today, the intimidation factor associated with these technologies is high. But the Internet is rapidly being enmeshed in the phenomenon we've learned to call the World Wide Web, and it is the Web that has made all the difference. The Web links data in intuitively obvious ways; it sets up connections that tie computers together with a simplicity that even a classics buff like me, head filled with stories of ancient Athens and Rome, trained for everything but technology, can understand. Using the right software, we can simply point and click our way to download files, call up images, listen to sound, display video, and send electronic mail. With a Web browser on our computer, we're in touch with a graphical Internet that is linked through hypertext—we jump back and forth between documents and fuse the various forms of media.

They come in several varieties, these browsers, but they all harken back to the same model of moving data, and they all tend to work in pretty much the same way. The original browser was called Mosaic, and it was born out of research and experiment at a government-supported organization. But Mosaic would spawn many offspring, including the two in widest use today: Netscape Navigator and Microsoft Explorer. Both are descendants of the original model; Netscape, in fact, was built by many of the same people who conceived the idea for the original Mosaic. Today, they're locked in a fierce war for market dominance. New versions appear every few months, each laden with additional features, and either can be downloaded from the Net. But whichever browser you choose, the basics of Web navigation remain the same. And so does the goal—to customize your browser so that you can get the maximum benefit out of it, and hence maximize your presence on the Internet.

## A Sampling of Internet Sites

Without the Web, the Internet would have remained the domain of programmers, computer scientists, and researchers. With the Web, it has become home to anyone with an idea to publish, a product to sell, or a subject to research. For a look at how diverse its holdings have become, let's walk through some interesting sites, or Web pages, the places where you can find information. And bear in mind that the examples that follow were chosen from literally tens of millions of World Wide Web pages.

Before we set out, though, a note about what you'll see here. I believe in customizing everything. After all, the default settings in most software are established to provide you with someone else's idea of what you need. But programmers build in the necessary functions to enable you to change the way the program operates. The figures that follow show a Netscape display that has been customized to reflect my own needs; it's one with a larger content area so I can get as much text and graphics on the screen as possible. In Chapter 4, I'll show you how to duplicate this screen in your own browser; I'll also point out the changes this kind of display makes in the way you issue basic commands. You won't see a toolbar here, for example, but Netscape's designers have built in the ability to issue commands by pull-down menu, pop-up menu (via right mouse button click) and keyboard shortcuts. My method may or may not work for you, but I hope it suggests the power you have to alter the browser environment in search of your own best model.

### *The On-line Newspaper*

Newspapers weren't early adopters of the Internet's technology, but the publishing capabilities offered by the Web were so spectacular that more and more of them have begun to come on-line. What the Web provides for newspapers is what the Internet had previously lacked: formatting. In the formative days of the Net and lasting until the late 1980s, using networked computers meant working with straight text. It was possible to generate an image, but only if that image was sent as a coded text file, downloaded on your machine, and then decoded to make it work. And the text in question couldn't be manipulated by changing font and point size. It had to be monospaced ASCII text, meaning that about the only variation you could bring to it was the distinction between lowercase and capital letters.

But the Web made it possible to view information with the pleasing visual variations of the physical newspaper. Take a look at Figure 1.1, which shows you how this magic looks on your screen. We're examining *The Washington Post* in its on-line edition, complete with photographs, headlines, and capsule summaries of the news. The address is <http://www.washingtonpost.com/>.

But if you study the figure, you'll see that while this version of *The Washington Post* bears similarities to the printed paper, it also shows significant dif-





**Figure 1.1** The Washington Post on-line shows how newspapers can readily adapt to the multimedia format of the World Wide Web.

ferences. You can see that certain parts of the text are underlined, and if it were possible to show you this page in color, these parts would also appear in blue. The presence of the underlining and color highlight indicates a *hyperlink*; click on this item and you are taken to the underlying story. You'll find hyperlinks scattered throughout the on-line edition, which enables the newspaper to create a flexible and powerful on-line presence. You can't page through a digital newspaper in the same way you scan a physical one, with its sheets spread out on your breakfast table, but you can use hyperlinks to jump immediately to the story of your choice, avoiding all those pesky pointers to pages inside the print edition. And when you're through, you can quickly click on the Back command