

Introduction

It's funny how things change.

Just a few short years ago, setting up a computer network was the province of specially trained, highly technical network administrators. You almost needed a degree in network administration to choose the proper equipment, run the appropriate wiring, and configure all the technical settings. It was not for the technically casual user, or for the faint of heart.

And that equipment? Back in the day, it was expensive—very expensive. Putting together a home or small business network might set you back a thousand bucks or so, all things considered. Costly, to say the least.

Physically setting up the network was also a chore. Everything was wired, so you had to run and connect what seemed like miles of Ethernet cable. Depending on where your computers were located, you might have to run that cable through walls and ceilings, through attics and basements, around corners and under carpets. It was a real pain in the posterior, on the best of days.

After you had everything purchased, positioned, and connected, you then had to deal with the technical configuration. If your computers were running Windows 95 or some similarly ancient operating system, this process was completely unintuitive. (Hence the need for formal network training.) You had to deal with all manner of indecipherable acronyms, addresses, and settings; nothing was logical, nothing was readily apparent, nothing was easy.

Fortunately for you, things are much different now. Networking equipment has come down in price, so that thousand-dollar network will only cost you a few hundred dollars today. The equipment is a lot easier to configure and use, and things are completely wireless—so there are no more messy cables to run. Even better, newer versions of Windows have internalized much of the network setup and configuration, so that setting up your computer for network use is as easy as clicking a few buttons.

If you're running Windows Vista on your network computers, things are even easier. Some of the best behind-the-scenes improvements in the new Vista operating system involve networking. With Vista, networking is both easier to set up (often automatically, with little or no interaction on your part) and more stable. With Vista, networking just works.

That doesn't mean, however, that you don't have questions or need any assistance. You still need to know what kind of network to create, what equipment you need to buy, how to connect all that equipment, and then how to configure everything to work the way you want it. And then, of course, there's the issue of what to do when things don't work like they're supposed to.

That's where this book comes in. *Wireless Networking with Windows Vista* is your complete guide to connecting Windows Vista PCs in a home or small business network. Whether you're creating a new network from scratch, upgrading your current network, connecting a new PC to an existing network, or connecting a notebook PC to a public wireless hot spot, this book will help you do what you need to do.

How This Book Is Organized

Wireless Networking with Windows Vista contains a lot of information about setting up and using wireless networks. To make finding the right information easier, this book is organized into five main parts, each focused on a particular aspect of the networking process:

- **Part I, “Planning Your Wireless Network,”** provides an introduction to wireless networking, describes the different types of Wi-Fi networks available, helps you design your new network, and provides advice for purchasing the appropriate networking equipment.
- **Part II, “Setting Up Your Wireless Network,”** is where you get your hands dirty, so to speak. Here you'll find step-by-step instructions for connecting all your network computers and equipment, configuring all the devices on your network, setting up and sharing a wireless Internet connection, and adding wireless security to your network.
- **Part III, “Using Your Wireless Network,”** shows you how to use your network for various day-to-day tasks. You'll learn how to set up your network for multiple users, share files and folders, share music and other media, share printers and other peripherals, and connect video game systems to your wireless network.
- **Part IV, “Using Other Networks,”** takes wireless networking outside the home. Read this section to learn how to connect your Windows Vista notebook to a Wi-Fi hot spot, or to a corporate network at work.
- **Part V, “Upgrading and Maintaining Your Wireless Network,”** is the section to read if you want to connect additional devices to your network, or if you're experiencing any sort of network-related problems. (The troubleshooting advice in the final chapter may be worth the entire price of the book!)

Finally, we end the book with a glossary of networking terms, which is useful if you don't know your 802.11g from your IP addresses. All those confusing terms are explained here.

Conventions Used in This Book

I hope that this book is easy enough to figure out on its own, without requiring its own instruction manual. As you read through the pages, however, it helps to know precisely how I've presented specific types of information.

Menu Commands

Windows Vista presents an intuitive point-and-click interface. To indicate navigation through Windows and various software programs, I use the following notation:

Main menu, Submenu, Submenu.

All you have to do is follow the instructions in order, using your mouse to click through the various menus and submenus. For example, if I tell you to open the Start menu and select All Programs, Accessories, System Tools, you know to click the Start button and select the various menus and submenus in order. It's pretty easy.

Web Pages and Manufacturer Information

Obviously, there are lots of web page addresses in the book, like this one: www.molehillgroup.com. When you see one of these addresses (also known as a *URL*), you can go to that web page by entering the URL into the address box in your web browser. I've made every effort to ensure the accuracy of the web addresses presented here, but given the ever-changing nature of the Web, don't be surprised if you run across an address or two that's changed. I apologize in advance.

Many of the web pages listed in this book are those of networking equipment manufacturers. In fact, you'll find a lot of network-related equipment discussed in this book. These listings are for your information only; just because I describe a particular item doesn't mean I personally endorse it. (In many instances, comparable equipment from different manufacturers is equally deserving.) Know that the prices mentioned in this book are current as of April 2007 and are retail prices suggested by the manufacturer; actual street prices might be and probably are lower, depending on where and when you shop.

Special Elements

As you read through this book you'll note several special elements, presented in what we in the publishing business call "margin notes." Different types of margin notes are used for different types of information, as you see here.



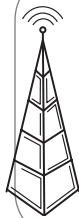
Network NOTE

This is a note that presents some interesting but not necessarily essential information about a topic discussed in the surrounding text.



Network TIP

This is a tip that might prove useful for whatever you're in the process of doing.



Network CAUTION

This is a caution that something you might accidentally do might have undesirable results—so take care!

There's More on the Web

Now that you know how to use this book, it's time to get to the heart of the matter. But when you're ready to take a break from setting up your new wireless network, you may also want to check out my personal website, located at www.molehill-group.com. Here you'll find more information about all the other books I've written and am in the process of writing. I'll also post any updates or corrections to this book, in the inevitable event that an error or two creeps into this text. (Hey, nobody's perfect!)

In addition, know that I love to hear from readers of my books. If you want to contact me, feel free to email me at networking@molehillgroup.com. I can't promise that I'll answer every message, but I do promise that I'll read each one!

But enough with the preliminaries. Turn the page and start networking!