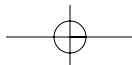
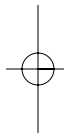
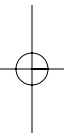
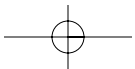
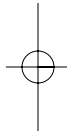
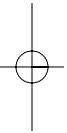
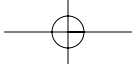


Expert Guide to Windows 98





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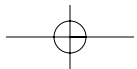
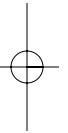
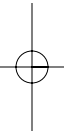
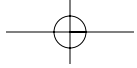
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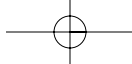
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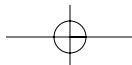
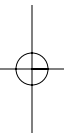
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This book is dedicated to my wife, Darcee. Usually authors dedicate books to their wives "for all the patience she's shown while I wrote this," but I'm dedicating this to her because I'm crazy about her.



ACKNOWLEDGMENTS

Books seem like such simple things, don't they? A hundred thousand words or so, a few pictures, off to the printer, and from there the 18-wheelers truck the cartons out to your local Barnes & Noble, B. Dalton, Borders, Waldenbooks, Crown, or whatever. Simple, right?

In the same way, watch a basketball pro sink a basket from halfway across the court. That looks simple, too. Or watch a fourth-degree black belt sidekick a half-dozen pine boards into toothpicks. That looks positively easy—heck, after some long days in the office, it looks *fun*!

The reality is, of course, that none of these things are easy. It's just that in every category, there are a few of the best, and it's in the nature of the "best" that they make *everything* look easy. Putting books together is hard work; putting the best books together requires, again, the "best" folks around.

And I'm, uh, not talking about *me*.

The crime of the book business is that most of the folks who enjoy books never hear of the folks who do most of the heavy lifting. So before flipping ahead to find out how to make the Application Defragger triple the speed with which your applications load, stay with me a few paragraphs and meet the cast.

Most of the writing in this book was done by my co-authors, Eric Christiansen and Kristina Shapar. They did the research and the writing, I just kibitzed. Errors are, of course, my responsibility.

The Windows Scripting Host can be a very powerful tool, but it doesn't have a lot to work with yet. Evangelos Petroustos stepped in and wrote four chapters on it that extracted the maximum from this minimum.

Elizabeth "Maeve" Creegan has worked with me on several earlier books. She came back to write the chapters on printing and legacy applications. Thanks, Maeve!

Sybex's Master of the Written Word, the one and only Gary Masters, was the man who commissioned this book, and without his leadership this and many other useful tomes might never have seen the light of day. (Gary, by the time this

is published, the Masters Memorial Wing of the beach house should be finished.) Rodney Zaks, Sybex's Master and Overlord, is a constant source of support and I'm forever thankful for that support.

Nancy Conner, our editor, painstakingly went through the whole text, including galleys, and has left her mark throughout these pages; nary a dangling participle can be found here. (Or perhaps I should say "here you will find no participles dangling.") Peter Kuhns, our Acquisitions & Developmental Editor, brought keen insights to the process, and clarity to the most confusing topics, and for that I give my thanks. Small business, writing—I worked with Peter years ago on a book for another publisher. He was a smart guy to work with then and he's still a real talent in the editing business. Don Hergert ably tech edited our text, and Project Editor Kim Wimpsett ensured that all the pieces fell into place (which is why Chapter 5 can be found before Chapter 6; trust me, it's not as easy as it sounds).

And, finally, Sybex's production team of Electronic Publishing Specialist Robin Kibby and Production Coordinators Duncan Watson and Eryn Osterhaus worked long hours to turn those hundred thousand or so words and those pictures into the design you hold before you now.

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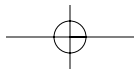
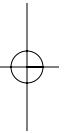
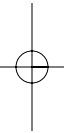
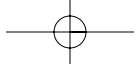
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INTRODUCTION

Welcome to the *Expert Guide to Windows 98*! Before we start discussing the Active Desktop, VxDs, Plug and Play, the Registry, and whether to use the Microsoft NetWare Client or the Novell NetWare Client, let me take a couple of pages and explain how this book is different from other Windows 98 books, and what's in it.

The technical book publishing business isn't what it used to be. Once, it was quite unusual to find a book available about a product on the day the product came out. Part of that was because we writers were generally clueless about *when* those products would come out (or, in the case of products like Novell DOS, *whether* they'd come out). But nowadays, it's *holy pull-down menus, Batman!* There are enough Windows 98 books around to fill the Panama Canal! A peek around the bookshelf will no doubt reveal the existence of at least a few Windows 98 "bibles" that are actually *larger* than the Bible (or the Talmud, or the Book of Mormon, or the Koran, or the Upanishads...), and that's sort of disturbing, when you think of it.

So the logical question for you, the putative book-buyer, is: why buy *this* book?

Well, most Windows books fall into one of two categories. The first kind, of which this book is most certainly *not* an example, is the "click and drag" book. These books teach you how to use Windows 98; they introduce you to the GUI, discuss whether to use My Computer or Explorer, mention there's a thing called the Registry, and offer a Cook's tour of the Control Panel. The second kind is the "tips and tricks," "power user," or "secrets" kind of Windows 98 book. These books tell you that right-clicking the Inbox in 4/4 time while holding down the Alt key and whistling "The Bridge Over the River Kwai" will present a hidden 10-minute video tour of Bill Gates's house, conducted by none other than Master of the Universe, Gates himself. Well, sorry kids, but there are no videos here (except on the included CD); this isn't the second kind of book, either.

Secrets are terrific things; it's fun to know them (particularly when your friends and coworkers don't), but to me, a "secret" is just an example of incomplete documentation on Microsoft's part. I've spent 15 years as a PC support person and

technical teacher, and as far as I'm concerned, the greatest secrets are the answers to the questions, "How does Windows 98 *really* work?" and "How can I *keep* it working?"

That's what this book is all about. Over the past nine years, Sybex and other computer publishers have been kind enough to publish 13 of my books, books which are usually modifications of the course books that I use for my technical seminars. If you've ever picked up *The Complete PC Upgrade and Maintenance Guide*, *Mastering Windows NT Server*, or *Troubleshooting Windows*, for example, then you know what to expect: I'll explain how something works, and how sometimes it *doesn't*, and from there it's usually simple to see how to fix it. That's the basic approach of *this* book as well, but with a bonus: *examples*. Nothing frustrates me more than reading something technical that lacks examples. Sadly, that describes most of the technical Windows 98 literature, so I've tried to include as many examples as possible.

Basically two kinds of people will find this book useful: PC support people and power users. When I say "PC support people," I mean anyone who has to solve a Windows problem—like "My PCMCIA card isn't recognized," "The Network Neighborhood folder is empty," "My computer runs like molasses, how do I get this Active Desktop fungus off my system," or "I need to disable a system policy." It could be someone using Windows 98 at home to keep his checkbook, or it could be someone working on her company's Help Desk. As for power users—well, you know who you are.

Overview of the Contents

The book starts out with a technical overview of Windows 98. In Chapter 1 you'll learn a bit about how the GUI works, discover that Windows 98 is not all that terribly great a leap from Windows for Workgroups 3.11, and find out whether Windows 98 or Windows NT is the right 32-bit operating system platform for you.

Chapter 2 discusses the structure of Windows 98 with a look "under the hood" to find components with names like GDI, VMM32, and Configuration Manager. You'll need this understanding of the parts of Windows so you'll know where to go to fix problems. After all, if you didn't understand the parts of your car, you might pop the hood when trying to fix a flat tire.

One of the newest and most important concepts for PC support people is the Registry. Chapter 3 explains what the Windows 98 Registry is, how you'd work with it, what you can do with it, and when *not* to do anything with it.

Chapter 4 looks at setting up Windows 98. Sure, it's a simple matter to shove the CD into the drive and type **setup**, but this chapter looks beyond that and provides some help for those who must install and reinstall Windows 98 on a number of machines. The secret to simplifying Windows installations is to write a Windows "installation batch file," which you'll learn to do in this chapter.

Chapter 5 begins a string of chapters about networking with Windows 98. This large chapter is an introduction to networking under Windows 98. Here you'll learn about protocols, network binding interfaces, client software, browsers, and the like. It's the starting point for Chapters 6–8.

Chapter 6 is for the folks out there trying to make Microsoft's desktop operating system (Windows 98) work with Novell's network operating system (NetWare). You have a choice under Windows 98 about how to access a Novell server: you can either use programs written by Novell or some written by Microsoft. Making that choice isn't simple, and this chapter leads you through the pieces of NetWare connectivity.

Chapter 7 includes lots of information about Dial-Up Networking, the essential part of Windows 98 that makes remote networking possible. You'll use Dial-Up Networking in one of three ways: to dial into the Internet, to dial into your office network, or—coolest of the three alternatives—you can actually use the Internet to access your office! In Chapter 7, you'll learn some tricks Known To But A Few (well, all right, I almost called them "secrets") that will allow you to hook up to your company's network or to a friend's Windows 98 computer just as though you were right there—even if you're on the other side of the country!

Chapter 8 shows you how to leverage your network in order to use it as a PC support tool. You'll learn how to simplify Windows 98 installations by using your network, for starters. Then you'll see how to use User Profiles to allow your favorite Desktop settings to follow you around the network. Profiles are even useful if you *don't* have a network, as they make it possible for you to share a computer with other users while keeping your Desktop settings separate from theirs.

Many of the so-called "new features" in Windows 98 are already available in the latest version of Windows 95, what's called in the business the "OEM Service Release 2," or "OSR2," version of Windows 95. One thing that *is* new is the

Windows Scripting Host, a powerful new tool that allows you to build batch files to control Windows using VBScript and JavaScript. I knew the book needed good coverage of this new support tool, and that's why we've got *four* chapters on the Windows Scripting Host and how to program it. Furthermore, we needed the best explanations and discussion that we could find on the topic, so we turned to Evangelos Petroustos to write Chapters 9–12. Chapter 9 introduces you to HTML and VBScript, and Chapter 10 discusses VBScript and Dynamic HTML (DHTML). In Chapter 11, you'll learn about VBScript and Windows 98 in general, and in Chapter 12, you can read about the Windows Scripting Host.

In Chapter 13, you'll see how to handle Windows 98 crashes. As Windows 98 is almost an "all-in-one" operating system, some kinds of failures are simple PC boot failures. The causes of boot failures are the same no matter what operating system you're running, so I've taken a discussion of disk failure recovery from one of my previous books and expanded it to include specifics of Windows 98, then added new sections on the Windows debugging switches and `BOOTLOG.TXT`, an invaluable diagnostic tool. And if you're a Windows 95 expert and are wondering why it's so hard to get the F4, F5, and F8 keys to work at boot time, you'll find out here.

Now that DOS is dead, you'll have to install all of your new hardware under Windows 98. Even though Windows 98 is meant to relieve you of ever having to deal with the arcane details, it can't do this for every piece of hardware out there, so chances are that someone you work for is going to ask you for the details, anyway. It can get a little tricky; not only must you know the Control Panel, you have to understand IRQs, DMAs, I/O addresses, and so on. Chapter 14 takes you through the process, including a discussion of Plug and Play, the centerpiece of Windows 98's hardware support. What's that you say? You don't have a Plug and Play computer? Well, if you have Windows 98, then think again—you *do* have a Plug and Play computer.

Chapters 15 and 16 look at those two most important peripherals, disks and printers. You'll learn how to install new ones, diagnose problems on existing ones, and how to rev up their performance a bit.

Finally, in Chapter 17, you'll see how to run existing DOS programs under Windows 98. Wondering what all those settings are in the property sheets for your DOS programs? You can find out here.

That's what you'll find in this book. If you found something that you liked, or something that you didn't like, or if you think that we should have covered something in more detail, then drop me a line. You can find me at mark@minasi.com. Thanks for reading, and I hope this book makes your life as a Windows "techie" easier!

Typesetting Conventions

When you're talking about a new operating system, with new ways of naming files and new ways of envisioning user input and command prompts, you have to keep clear when you're talking about the new way and not the old way. In this book my editors have tried to enforce some consistency on these things to help reduce the confusion inherent in the process.

Here are a few of the conventions used to differentiate between the types of elements you'll run into in this book:

- DOS-style file names (which follow an eight-dot-three convention) are usually shown in a special file name typeface, all uppercase.

Example: SYSTEM.DAT

- Long file names, now available with Windows 98 and any 32-bit application, are shown in the same special file name typeface, with upper/lowercase distinctions as maintained by the program or author.

Example: Steering Committee's version of 96 facilities
budget.DOC

- Directory and folder names are also shown in the file name typeface (and usually lowercase, simply to reduce the number of times it would be necessary to break the directory name at the end of a line).

Example: C:\windows\mmco\windows98 book\ch01

- Resources that you have *named* (for purposes of sharing them over a network or making them available to other users) are usually shown in regular text, though in certain situations they're styled as italic to avoid ambiguity.

Example: "Make your printer available over the network as *HP2 next to watercooler.*"

- Text or values you are expected to type into a dialog box or file are shown as boldface.

Examples: “Enter **2** for the number of copies”; “Change f:\123R3 to \\server\ted\123R3”

- Menu commands and options, and options in dialog boxes, are usually regular text, but have been styled as italic whenever it might not be clear that the words you’re seeing are part of the option, not part of my instruction to you.

Example: “Double-click the Print option on the File menu, or the Properties setting in the Display dialog box” shows option names that are perfectly clear, but “Click *Update user data while polling*,” makes it obvious that I’m not expecting you to wait until *you’re* polling to click on the option.

