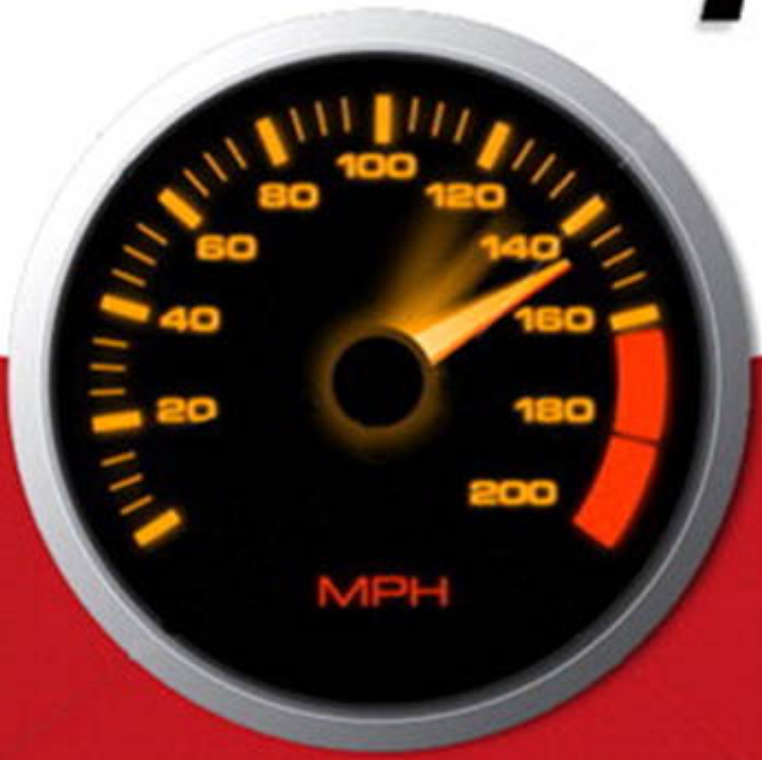
Speed It Up!



A NON-TECHNICAL GUIDE *for* SPEEDING UP SLOW COMPUTERS

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MICHAEL MILLER

Speed It Up! A Non-Technical Guide for Speeding Up Slow Computers

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Introduction

"Can you help me out? My computer is running really slow."

I can't tell you how many times I've heard this complaint over the past several months. First it was my stepdaughter with a slow PC, then a friend, then another friend, then my wife, and it kept on coming. It seems that just about everyone I know is coming to the conclusion that their computers are running too slow. It's an epidemic!

Of course, it's possible that not all these PCs are actually running slow; it's likely that some of this slowness is perceived rather than real. But even perceived sluggishness is still annoying when you're trying to get something done and are forced to wait… and wait… and wait for your PC to respond.

The point is, we all get frustrated when our computers take too long to do what we want them to do. Whether that slowness is caused by insufficient memory or power, whether it's caused by viruses or spyware, whether it's caused by a sluggish Internet or network connection, or whether it's simply a matter of trying to make an old computer do new things it's not capable of doing, you want to give that pokey PC a kick in the electronic pants so that it runs just a *little* faster, if it can.

IN THIS INTRODUCTION

The bad news is, even a fast PC can slow down over time, for a number of different reasons. The good news is, there are things you can do to speed up even the slowest of computers. These are the things I talk about in this book.

Speed It Up! A Non-Technical Guide for Speeding Up Slow Computers is, as the title implies, a guide that anyone can use to make their computers a little less sluggish. You don't have to be a tech geek to speed up a slow computer; anyone can make these simple changes to put a little more "oomph" behind their day-to-day computing.

Want to speed up your computer's startup process? I show you how to do it. Need to clean up unnecessary programs or remove a virus or spyware program? I show you how to do it. Want to power up your computer when you're editing digital photos or videos? I show you how to do it. Need more memory to run your favorite applications? I show you how to do it. Want to upgrade your computer so that you can run the latest PC games? I show you how to do it. Want to turn a listless Internet connection into a lively one? I show you how to do that, too. Heck, I even show you what type of new PC to buy if your old computer can't be speeded up enough. (That is sometimes the best solution, unfortunately.)

That said, this book isn't a highly technical guide for tweakers and speed freaks; if you want to turn your PC into a customized high-tech hot rod, you'll have to turn elsewhere. This book is more like a guide to tuning up your family sedan, or the computer equivalent of it. The instructions are easy to follow and don't require you to get your hands too dirty.

So if you think your computer is running a little slow, you've turned to the right place for some quick and easy solutions. Spend a few hours reading this book and I guarantee you'll learn more than a few ways to de-pokify even the most sluggish of machines.

What's in This Book

As promised, this book shows you how to speed up your Windows-based computer. The book presents software-based speedups, hardware-based speedups, and Internet- and network-related speedups—a little something for everyone.

This book contains 18 chapters, divided into 6 major parts. Each part walks you through a different aspect of the speedup process, from initial diagnosis to various types of solutions:

- **Part I: Quick Diagnosis for Sluggish PCs** is the place to start if you think your computer is slower than it used to be (or than you want it to be). You'll learn how to troubleshoot what might be slowing down your computer, as well as how to back up your data before you start implementing potential solutions.
- **Part II: Simple Speedups Anyone Can Do** walks you through some of the easiest-to-achieve performance improvements for your PC. You'll learn how to identify and remove harmful computer viruses and spyware, clean out unnecessary programs from your computer's memory and hard disk, optimize your PC's hard disk, and make Windows start up and run faster.
- **Part III: Power Speedups for Power Users** is for the more adventurous user. These speedups require a bit more effort than the previous solutions but can result in significant performance improvements. This is where you learn how to clean up and tweak the Windows Registry, as well as perform a "clean install" of Windows—which lets you reinstall Windows from scratch and create a like-new machine.
- **Part IV: Upgrading Your PC for Speed** presents hardware-based solutions for sluggish systems. You'll learn how to prepare for a computer upgrade and then how to add more memory and hard disk space, install a faster video card, and even upgrade your PC's CPU (central processing unit).
- **Part V: Internet and Network Speedups** recognizes that it's not always your computer that's slow; sometimes it's your Internet or network connection. You'll learn how to make your web browser go faster, how to reconfigure a sluggish Internet connection, and how to wring the most speed out of your home network.
- **Part VI: The Ultimate Speedup: Buying a New PC** is for those users who just can't get their old PCs to go fast enough, no matter what they try. (It happens.) You'll learn when to throw in the towel, what types of applications require newer and faster PCs, and how to tell what type of new PC you need.

I'm guessing that you probably won't read all of this book or perform all the speedups suggested—because you probably won't need to. I've presented the easiest and most effective speedups first, both in the book and in each individual chapter. So work your way through the various suggestions and feel free to stop when you've achieved the performance you're looking for.

Who Can Use This Book

You don't have to be a technical expert to use this book; many of the solutions offered require nothing more than a few clicks of the mouse. It helps if you know your way around the Windows desktop, of course, and there are a few more advanced solutions that require some simple hardware upgrades. But in general, just about anybody can perform most of the solutions presented here.

One thing, though: The solutions in this book are for computers running the Microsoft Windows operating system, either the newer Windows Vista or the older Windows XP. If you have an Apple Mac, that's a whole other world of problems and solutions that I'm not equipped to address, sorry.

How to Use This Book

I hope that this book is easy enough to read that you don't need instructions. That said, a few elements bear explaining.

First, this book contains several special elements, presented in what we in the publishing business call "margin notes." There are different types of margin notes for different types of information, as you see here.

Note

This is a note that presents information of interest, even if it isn't wholly relevant to the discussion in the main text.

Tip

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

Caution

This is a caution that something you accidentally do might have undesirable results.

Because many of the solutions presented in this book involve third-party software utilities or new hardware devices, lots of web page addresses in the text accompany the mentions of these products. 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. For that matter, some of the products and prices presented here are likely to change by the time you read this text. I apologize in advance, but that's the way the world works.

There's More Online…

When you need a break from reading, feel free to go online and check out my personal website, located at www.molehillgroup.com. Here you'll find more information about this book and other books I've written. And if you have any questions or comments, feel free to email me directly at speed@molehillgroup.com. I can't guarantee to respond to every email, but I do guarantee I'll read them all.

Speed It Up!

With all these preliminaries out of the way, it's now time to get started. Put on your reading glasses, fire up your mouse, and get ready to *Speed It Up!*

CHAPTER

6

Making Windows Go Faster

Sometimes slow system performance is due to an outside factor, such as a virus or spyware infection. Sometimes it's due to the programs you install and run on your system, or even to a fragmented hard disk. But sometimes sluggish operation is due to the operating system itself—Microsoft Windows.

It doesn't matter whether you're running the older Windows XP or the newer Windows Vista, Windows is a big piece of software that can put huge strains on your system hardware, making even fast PCs run a little slow. Fortunately, you can do some things to speed up how Windows runs on your PC—which we examine in this chapter.

IN THIS CHAPTER

Speeding Up Windows (XP and Vista)

Obviously, a lot of the advice presented elsewhere in the book also affects Windows' overall performance. For example, removing all but the most essential startup programs (as discussed in Chapter 4, "Cleaning Out Unnecessary Programs"), will help Windows not only load faster but run smoother. Defragmenting your hard disk (which we addressed in Chapter 5, "Optimizing Your Hard Disk") also improves Windows' performance.

That said, you can do some specific things to make Windows run faster. We'll start by examining speedups that work for both Windows XP and Windows Vista, and then move on to XP- and Vista-specific speedups in the following sections.

Note

Many of these speedups start from the Windows Control panel—which, by default, operates differently in Windows XP and Windows Vista. A better approach is to display the XP or Vista Control Panel in Classic view, which provides direct access to most operations. The following instructions assume the Control Panel's Classic view.

Install the Latest Drivers

Here's a universal speedup for all Windows-based computers. Some devices get speedier over time because their manufacturers come up with upgraded versions of their device drivers. If you want a quick system speedup, check the manufacturers' websites for the latest versions of their hardware drivers. Downloading an updated driver can make that device run significantly faster on your system!

Tip

You may think that you're safe by letting Windows Update, the auto update utility built into Windows, automatically download new drivers to your system—but you're not. Windows Update doesn't always identify the latest drivers, nor the most functional drivers available. It's a much better practice to download specific drivers from the device manufacturer's website, where you'll find the latest and greatest drivers available.

Delete Unused Fonts

Windows includes a lot of built-in fonts, and even more fonts get installed by many of the software programs you use. Know, however, that Windows loads every single one of these fonts into memory. The more fonts you have installed, the more memory they take, and the slower your system will run.

To speed up system performance, especially on PC's with small amounts of RAM, you should delete those fonts you don't use. This will free up memory for more important tasks.

To delete unused fonts from your system, follow these steps:

1. Click the Start menu and select Control Panel.
2. When the Control Panel opens, double-click Fonts.
3. When the Fonts window opens, as shown in Figure 6.1, select the fonts you want to remove, and then press the Del key on your keyboard.

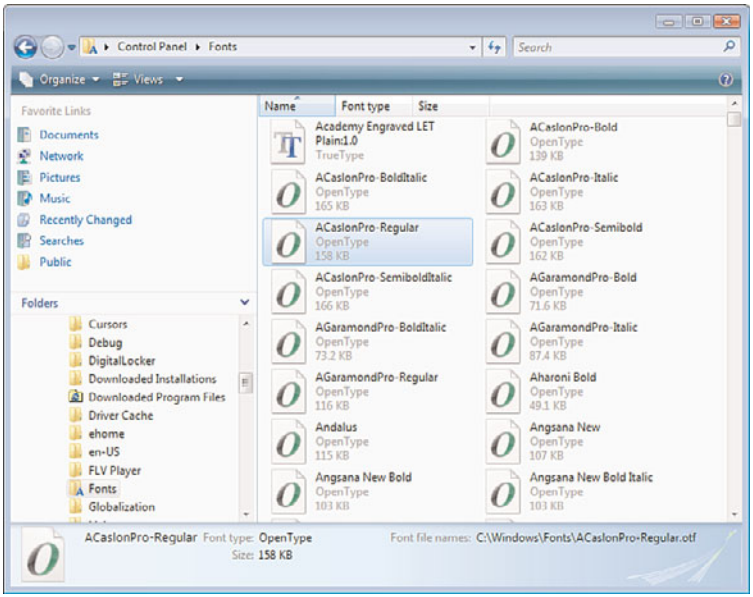

FIGURE 6.1
Deleting fonts in Windows Vista.

The more fonts you delete, the faster your system will run. Bye-bye fonts!

Caution

Don't go overboard when deleting fonts; many fonts are used by specific documents and templates in various programs. In addition, some fonts are system fonts, used by Windows and other programs to display menu bars, dialog boxes and the like. So make sure a font truly is unused before you delete it! (Alternately, copy any fonts you want to delete to another folder before you delete them, so that you can copy them back if you need them in the future.)

Turn Off System Sounds

Believe it or not, those obnoxious beeps and boops your computer makes for various system operations can actually affect your system's performance—especially during the startup and shutdown operations. You can attain a slight performance gain by turning off Windows' system sounds.

To do this, follow these steps:

1. Click the Start button and select Control Panel.
2. When the Control Panel opens, double-click Sound (in Windows Vista) or Sounds and Audio Devices (Windows XP).
3. When the Sound or Sounds and Audio Devices dialog box opens, select the Sounds tab, as shown in Figure 6.2.
4. Pull down the Sound Scheme list and select No Sounds.
5. Click OK.

That's it—no more sounds!

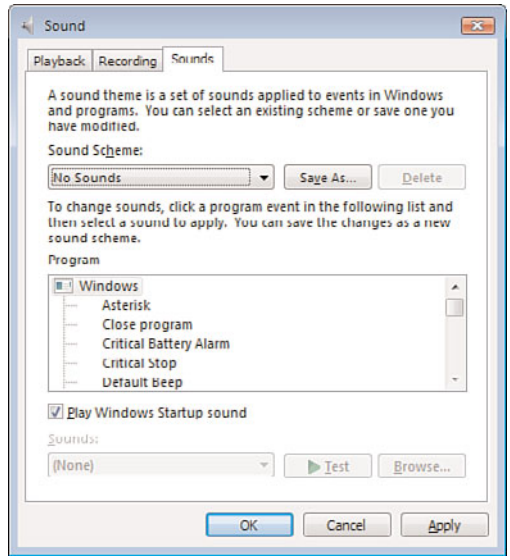

FIGURE 6.2
Turning off system sounds in Windows Vista.

Don't Look for Bootable Media on Startup

If you think your system takes too long to start up (and who doesn't?), here's a way to speed up that startup process. This tip is based on the fact that your computer looks for bootable media in any CD/DVD or floppy disk drives you have installed on your system. This is pretty much just a formality, as you almost always want to boot from your hard drive. If keep your system from looking in these extraneous drives, it will boot up slightly faster.

You make this change outside of Windows, during your computer's pre-Windows boot-up process. The change is actually made to your system's BIOS. Here's how to do it:

1. Reboot your system and wait for a blank screen with a little text on it; the text should tell you how to enter the BIOS or CMOS setup. (You may also need to consult your computer's instruction manual.)
2. Typically, you enter a particular key or key combination. Many computers require you to press the Del or F2 key, although this differs from machine to machine. Press the appropriate key on your computer keyboard.
3. Once you're in the BIOS setup, navigate to the Boot menu and select Boot Sequence.
4. You should now move your hard drive to the top position in this sequence or set it as the "first device."
5. Press the Esc key to record your settings and leave the BIOS setup routine.

Caution

After you make this change to your system's BIOS, you won't be able to boot from a CD/DVD or floppy disk, which you may need to do in an emergency. To boot from an external disk, you'll need to reverse this process by editing the BIOS and putting your CD/DVD or floppy drive as the "first device" in the boot order.

Optimize Windows' Display Settings

One of the quickest and easiest ways to make Windows run faster is to change several of its display settings. That's because it takes a bit of processing power to display all those fancy graphics onscreen. A plainer display uses fewer system resources, and makes your system run slightly faster.

What sort of resource-eating graphics effects are we talking about? How about effects such as animated windows, sliding menus, and the like—little things, visually, that take big power to create.

So if you want a quick visual speedup for your system, follow these steps:

1. Click the Start button and select Control Panel.
2. When the Control Panel opens, double-click System.
3. In Windows XP, this should open the System Properties dialog box, but not so in Windows Vista. In Vista, you need to click the Advanced System Settings link to proceed.
4. When the System Properties dialog box appears, click the Advanced tab, and then click the Settings button in the Performance section.
5. When the Performance Options dialog box appears, select the Visual Effect tab, shown in Figure 6.3.

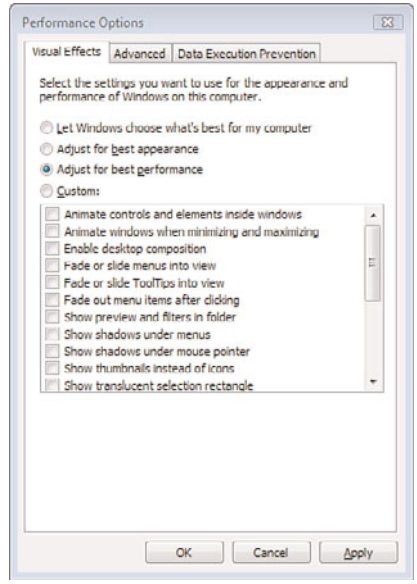

FIGURE 6.3
Disabling Windows' visual effects.

At this point, the easy option is to check the Adjust for Best Performance option. Doing so disables many of the fancy visual effects and speeds up your system. You do, however, lose the cool effects, but that's the compromise you make for performance.

Alternatively, you can pick and choose which visual effects your system displays (and know that XP has slightly different effects than does Vista). Every

one of the effects uses up a certain amount of processing power. The more you leave enabled, the slower your system will run. So to speed up your system incrementally, check only those visual effects that you think are necessary to enhance your computing experience. The more effects you disable, the faster your computer will run.

Reconfigure Processor Priority

Windows' Performance Options dialog box has a second tab that enables even more fine-tuning of your system performance. The Advanced tab, shown in Figure 6.4, presents another option that can speed up your system.

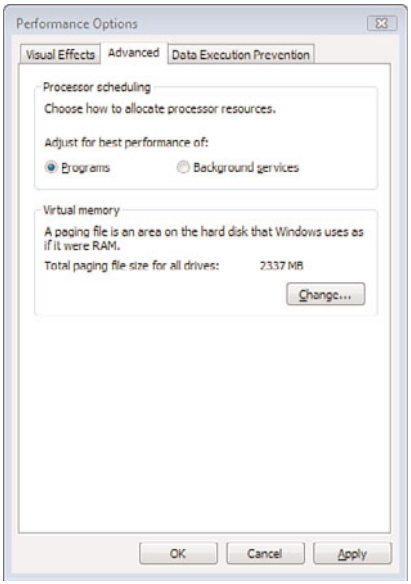

FIGURE 6.4
Editing Windows Vista's advanced performance settings.

The Processor Scheduling section of this tab lets you control how much processor time Windows devotes to an individual program or process. Because your computer's microprocessor has a finite amount of processing power to divide between all the applications and processes that are constantly running, how that power is divided affects what runs faster—your applications or Windows' background processes.

To give the bulk of the processing power to the program running in the foreground, making it run faster, check the Programs option. To split the processing power evenly between all running programs and processes, check the Background Services option—which may make your currently running program appear to run slightly slower.

Tip

In Windows XP, the Performance Options Advanced tab includes an additional Memory Usage section that determines how Windows XP uses system memory. To devote more memory to currently running applications, check the Programs option. On a system without a lot of RAM, this will make your programs run faster. If your system has plenty of memory, however, check the System Cache option, which can speed up your entire system.

Eliminate Background Services

Windows XP and Vista, like all operating systems, have a continuous stream of services running in the background. These are process necessary for the running of the operating system or selected applications. Most of these services launch automatically when you start Windows, but not all are required for your system to run properly. You can speed up your system's performance by disabling unnecessary background services.

While you can disable background services from the System Configuration utility, this option doesn't provide a lot of information about each process, which makes disabling them a bit of a hit or miss proposition. A better approach utilizes Windows' Services console, a "hidden" utility that includes descriptions of all running services. Here's how to do it:

1. Click the Start button and select Run.
2. When the Run dialog box appears, enter **services.msc** and click OK.
3. When the Services console appears, click the Extended tab, shown in Figure 6.5. Doing so displays a list of all services on your system, along with information about each service (in the Description column). The Status column tells you whether the service is currently running ("Started"), while the Startup Type column tells you whether the services starts automatically with Windows or manually.
4. Right-click the service you want to disable from loading on startup and select Properties from the pop-up menu.
5. When the Properties dialog box appears, select the General tab, as shown in Figure 6.6.

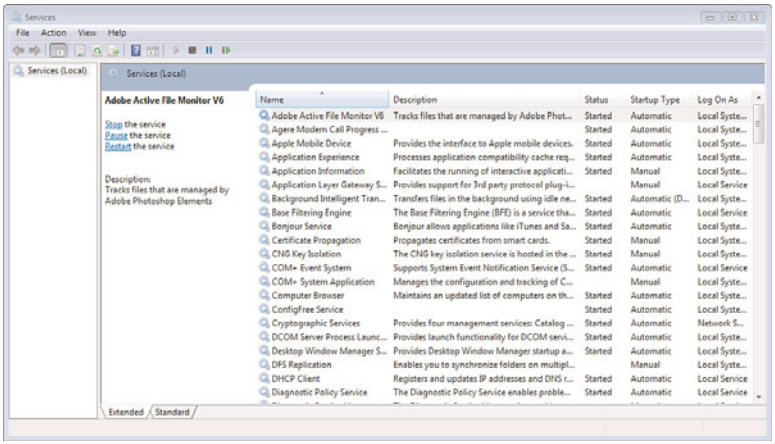

FIGURE 6.5

Viewing background services in Windows Vista.

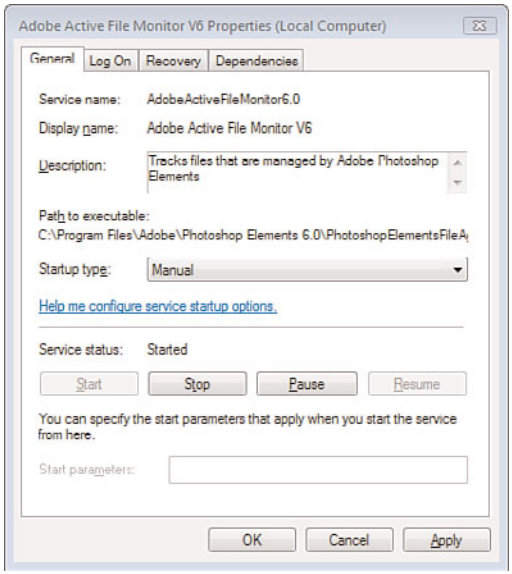

FIGURE 6.6

Disabling a service from loading automatically.

6. Pull down the Startup Type list and select Manual.
7. Click OK.

Note

When you set a service to Manual, it doesn't load on startup but still can be loaded if a particular operation or application requires it.

Obviously, you want to focus on the Automatic services; a Manual service does *not* load automatically on startup. Within the long list of Automatic services, however, how do you know which ones you need—and which you don't?

The simple answer is that you can disable any service that you don't use. For example, if you have a desktop PC (or a notebook that is not a tablet PC), you can for sure disable the Tablet PC Input service. That's an easy one, but you'll probably find more.

While each system is distinct, here's a short list of services that you probably don't need:

- Computer Browser
- DFS Replication
- Distributed Link Tracking Client
- IKE and AuthIP IP Keying Modules
- IP Helper
- IPsec Policy Agent
- KtmRm for Distributed Transaction Coordinator
- Offline Files
- Portable Media Serial Number
- Remote Registry
- Secondary Logon
- SSDP Discovery
- Tablet PC Input
- Terminal Services
- Windows Error Reporting

Caution

If you find that disabling a service causes something not to work on your system, return to the Services console and reenable it.

You may want to experiment with turning various services on and off. Note that not all of these services are available on all versions of the Windows operating system.

Disable File Indexing

Caution

If you disable file indexing, you won't be able to use Windows' built-in search feature to find files on your computer.

Both Windows XP and Windows Vista include a feature that lets you search files on your hard drive. This search feature works by indexing all the files on your hard drive. In other words, Windows extracts information from all the files on your hard disk and creates a searchable keyword index. It's this index that Windows searches when you conduct a query from the Start menu.

There are several problems with using Windows' search feature. First, it isn't that effective or efficient; it doesn't always find what you want, and takes a long time to do it. (Although, to be fair, Vista's search feature is much more effective than the crude one built in to Windows XP.) Second, your system performance really takes a hit while Windows is indexing your hard drive; it takes a lot of memory and processing power to scour all your files. And third, the index itself takes up valuable hard disk space.

Bottom line, using Windows' file indexing dramatically slows down your PC. You can gain a noticeable speed improvement by turning off this feature.

To turn off Windows' file indexing, follow these steps:

1. Click the Start button and select My Computer (Windows XP) or Computer (Windows Vista).
2. When My Computer or the Computer window opens, right-click the C: drive icon and select Properties.
3. When the Properties dialog box appears, select the General tab, shown in Figure 6.7.
4. In Windows XP, uncheck the Allow Indexing Service to Index This Disk for Fast File Searching option. In Windows Vista, uncheck the Index This Drive for Faster Searching option.
5. Click OK.
6. When the Confirm Attribute Changes dialog box appears, select the option to apply the changes to drive C: and all subfolders and files.

Caution

If Windows displays an Access Is Denied warning message, click the Ignore All button.

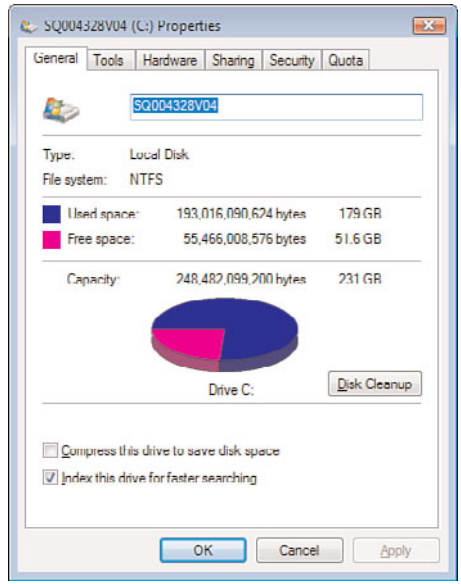

FIGURE 6.7
Turning off file indexing in Windows Vista.

Optimize Virtual Memory

As you recall, Windows uses your hard drive as virtual memory when regular memory fills up. This virtual memory space takes longer to access than does regular random access memory. With that in mind, there are ways you can tweak this virtual memory to improve system performance.

The first thing to do is assign a fixed size to the virtual memory pagefile. By default, Windows resizes the file as needed; unfortunately, this resizing takes time and resources. To create a fixed-size pagefile, follow these steps:

1. Click the Start button and select Control Panel.
2. When the Control Panel opens, double-click System.
3. In Windows XP, this should open the System Properties dialog box, but not so in Windows Vista. In Vista, you need to click the Advanced System Settings link to proceed.
4. From the System Properties dialog box, click the Advanced tab.

Note

Virtual memory space is sometimes called a *swap file*, *pagefile*, or *paging file*.

5. Click the Settings button in the Performance section.
6. When the Performance Options dialog box opens, select the Advanced tab.
7. Click the Change button in the Virtual Memory section.
8. When the Virtual Memory dialog box appears, as shown in Figure 6.8, uncheck the Automatically Manage Paging File Size for All Drive option.

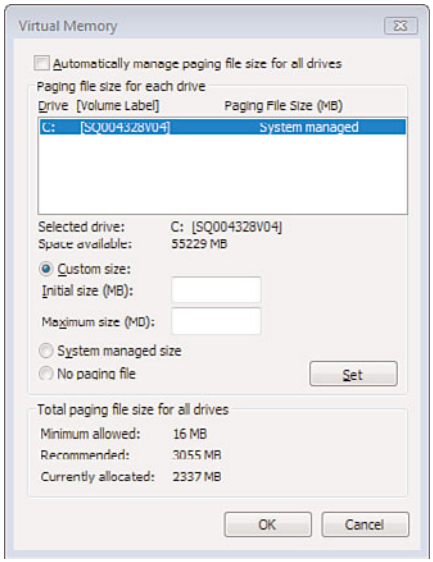

FIGURE 6.8
Managing the size of your system's virtual memory.

9. Select the drive that contains the pagefile, and then check the Custom Size option.
10. Enter a value into the Initial Size box equal to the amount of RAM you have installed on your system. For example, if your system has 2GB (2000MB) of memory, enter 2000 into this box.
11. Enter the same value into the Maximum Size box.
12. Click OK.

Tip

If your system has less than 512MB memory, enter 1.5 times the amount of RAM into the Initial Size and Maximum Size boxes.

Another way to optimize the performance of your system's virtual memory is to keep the pagefile on your hard drive defragmented. While there's no way to do this from within Windows, you can use Microsoft's PageDefrag utility for this task. You can download PageDefrag (for free) at technet.microsoft.com/en-us/sysinternals/bb897426.aspx. Follow the instructions there to fully defragment your system's pagefile.

Tip

You can place your system's pagefile on any drive (or partition within a drive) on your system. A good strategy for speeding up pagefile performance is to move the pagefile off your main hard drive (the one that holds Windows) onto another dedicated (and fast) hard disk.

Turn Off System Restore

This next speedup is *not* one I particularly recommend, because Windows' System Restore feature has tremendous potential value if you have future system problems. Still, if you're willing to risk not being able to restore a recalcitrant system to its previous working condition, you can speed up your PC's performance by not having System Restore take up valuable background system resources.

Not only does System Restore take up a bit of system memory, it also uses up a lot of hard disk space storing all the restore points it creates—up to 15% of your total hard disk space. If hard disk space and memory are at a premium, you can regain some speed by turning off System Restore.

To disable System Restore in Windows XP, follow these steps:

1. Click the Start button and select All Programs, Accessories, System Tools, System Restore.
2. When the System Restore window opens, select the System Restore tab.
3. Select the Turn Off System Restore on All Drives option.
4. Click OK.

Disabling System Restore in Windows Vista is slightly different. Follow these steps:

1. Click the Start button and select All Programs, Accessories, System Tools, System Restore.
2. When the System Restore window opens, click the Open System Protection link.

3. When the System Properties dialog box appears, select the System Protection tab.
4. Uncheck each of the disks listed in the Automatic Restore Points list.
5. Click OK.

Caution

Disable System Restore at your own peril. If System Restore is not running, you won't be able to restore your computer in the event of a system failure.

Speeding Up Windows XP

Although Windows XP and Windows Vista have many similarities (and thus some similar speedups, as you've just learned), some major differences exist between the two operating systems. To that end, let's examine some speedups specific to the older Windows XP operating system.

Reboot Often

Here's something not so good about Windows XP. The longer it stays running without rebooting or shutting down, the less memory you have available. And we all know what insufficient memory does—it slows down your system.

You see, Windows XP is prone to "memory leaks." That is, little pieces of the programs you run stay loaded in system memory, even after those programs have been closed. It's sloppy programming on Microsoft's fault, what some would call a "bug" (although Microsoft doesn't call it that; it doesn't acknowledge the problem much at all), and one that affects anyone who keeps their computer running for days or weeks at a time without rebooting.

Here's the way it works. When you run a program, pieces of that program's code are loaded into your computer's random access memory. You would expect that when you close the program, all those program pieces would be removed from memory; that's the way things are supposed to work. In Windows XP, however, not all the program code gets purged from memory. A few bits and bytes here and there stay lodged in memory, even though they're totally unused.

Now, a few bits and bytes don't amount to much—until they start multiplying. That's because this memory lead problem doesn't affect just one program you run, but rather

Note

Windows Vista appears to have fixed the memory leakage problem that plagued Windows XP. So if you have a Vista PC, there's no need to reboot to free up system memory.

most programs you run. So after you open a close a half dozen or so applications, you end up with a significant chunk of memory that you can't use, because old program pieces are still there taking up space.

This problem becomes especially noticeable if you don't regularly shut down your computer at the end of each working day. If you're like most users, you leave your computer running for days, weeks, even months at a time without shutting it down or rebooting. And all the time your computer is running, more and more of your memory becomes lost to this memory leak problem.

In other words, the longer your computer stays up and running, the more bits of old programs end up lodged in memory—and the less memory you have available to run other programs. This is what slows down your system.

The solution is simple. Every time you close Windows, either by turning off or rebooting your system, the clogged up pieces of program are purged from memory, and you get a clean start on the restart. (Until, of course, you start opening and closing new programs again!)

So if you find your Windows XP computer slowing down day after day, do the simple thing and reboot it once every few days. (Click the Start button and select Turn Off Computer; when the Turn Off Computer dialog box appears, click Restart.) Doing so purges all occupied memory and get your computer running faster again—until you start loading more programs, unfortunately.

Don't Browse Network Folders

Some computer performance relates to an individual operation. That is, you can speed up the performance of some individual operations, regardless of the overall system performance.

One such operation that you can speed up is the opening of folders. In case you haven't noticed it, there's always a slightly delay when you double-click a folder to open it. That's because Windows XP automatically searches for network folders and printers every time you open the My Documents or Documents folders, and this takes time.

To speed up folder opening, you can turn off this network folder browsing. Follow these steps:

1. Click the Start button and select Control Panel.
2. When the Control Panel opens, double-click Folder Options.
3. When the Folder Options dialog box appears, select the View tab, shown in Figure 6.9.

4. Scroll down through the Advanced Settings list and uncheck the Automatically Search for Network Folders and Printers option.
5. Click OK.

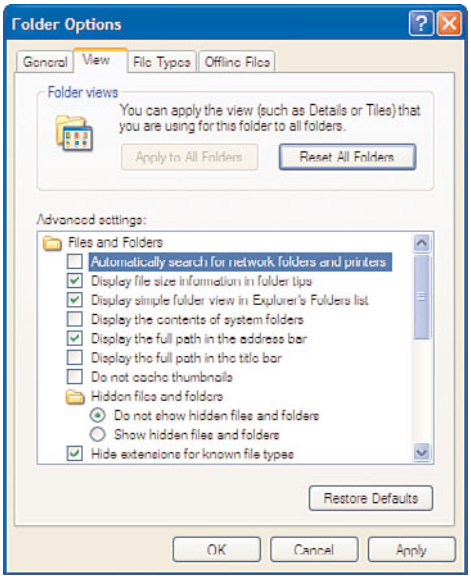

FIGURE 6.9
Turning off Windows XP's network folder browsing.

Note that you must reboot your computer for this change to take effect.

Improve Windows XP's Swap File Performance

Previously, we learned how to improve performance by tweaking the configuration of Windows' virtual memory. In Windows XP, an additional performance improvement can be had by making sure that all your RAM is used before the swap file is utilized—especially if you have more than 256MB of memory installed on your system. Follow these steps:

1. Click the Start button and select Run.
2. When the Run dialog box appears, enter **msconfig.exe** and click OK.
3. When the System Configuration utility appears, select the System.ini tab, as shown in Figure 6.10.
4. Click the plus sign next to the 386enh item to expand that listing.

5. Click New.
6. In the resulting box, enter **ConservativeSwapfileUsage=1**.
7. Click OK.

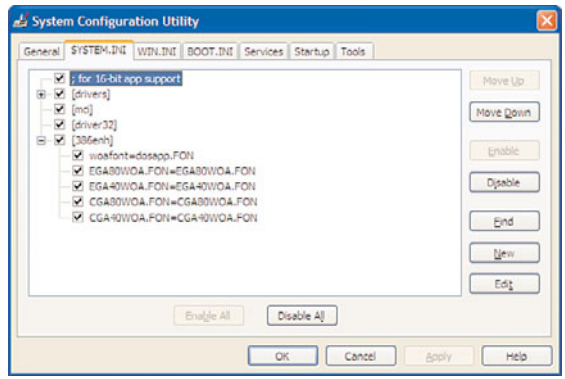

FIGURE 6.10
Speeding up Windows XP swap file use.

You must reboot your PC for this change to take effect.

Speeding Up Windows Vista

Unlike Windows XP and previous operating systems, Windows Vista is fairly streamlined in terms of performance. That means that there isn't a lot you can do to tweak it to make it faster—although some tweaks do exist, as you'll soon learn.

Disable Windows Vista's Aero Interface

Windows Vista is a more demanding operating system than Windows XP, especially when it comes to graphics display. This is due to Vista's new graphics engine, which is used to render the fancy-schmancy Aero interface.

If you're new to Vista, know that Aero is a glass-like 3D interface; the translucent windows give a sense of depth when individual windows are stacked on top of each other. Unfortunately, if you have an older or lesser-powered computer, it may not have the graphics horsepower necessary to run Aero efficiently.

If you think that the Aero interface is affecting system performance, you can turn it off and revert to the Windows Vista Basic interface. Of course, the Basic

interface doesn't look as pretty—but it will respond much faster in day-to-day operation, especially on low-end machines.

To disable the Aero interface, follow these steps:

1. Click the Start menu and select Control Panel.
2. When the Control Panel opens, double-click Personalization.
3. When the Personalize Appearance and Sounds window opens, click Windows Color and Appearance.
4. When the Windows Color and Appearance window opens, click the link Open Classic Appearance Properties for More Color Options.
5. When the Appearance Settings dialog box appears, as shown in Figure 6.11, select Windows Vista Basic from the Color Scheme list.
6. Click OK to apply the new theme.

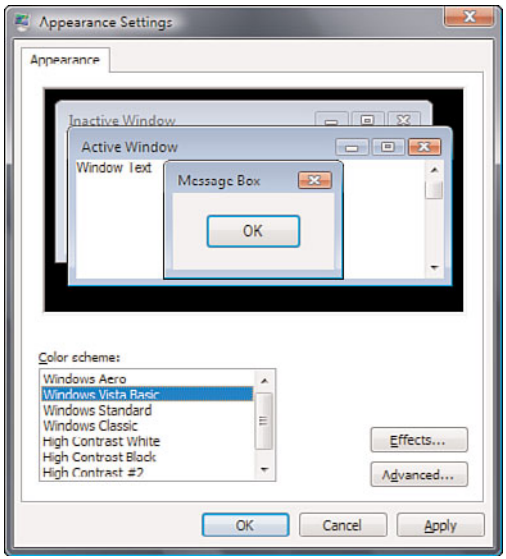

FIGURE 6.11
Changing from the Windows Vista Aero to the Windows Vista Basic interface.

Note

To display Vista's Aero interface, your PC's video card must support DirectX 9 with Pixel Shader 2, have a minimum of 64MB graphics memory and 1280 x 1024 resolution, and offer 32 bits per pixel, Windows Display Driver Model (WDDM) support. You must also be running Windows Vista Home Premium, Ultimate, Business, or Enterprise editions. You can't display the Aero interface if you're running Windows Vista Home Basic.

The Basic interface should feel a bit faster than the Aero interface, especially if you have a slower system to begin with.

Tip

For a less-radical change, uncheck the Enable Transparency option in the Windows Color and Appearance window. This turns off Aero's see-through feature while still retaining other key elements of the interface; it's the transparency effect that hogs the most memory.

Remove Windows Vista's Sidebar

Windows Vista adds a neat feature called the Sidebar, shown in Figure 6.12. The Sidebar is a pane on the side of the desktop that helps to organize mini-applications that Microsoft calls *gadgets*. Gadgets can deliver a variety of information and services, and can either be docked on the Sidebar or float above the desktop.

FIGURE 6.12
The Sidebar in Windows Vista.

The only problem with the Sidebar is that it takes up valuable system resources. If you want to add a bit of speed back to your system, turn off the

Sidebar (and its corresponding gadgets). To do so, right-click anywhere on the Sidebar and select Close Sidebar from the pop-up menu. It's gone!

Tip

To redisplay the Sidebar, click the Start button and select All Programs, Accessories, Windows Sidebar.

Turn Off Windows Vista's User Account Control

In previous versions of Windows, it was too easy for any user to inadvertently install dangerous software. Windows Vista makes it harder to do anything wrong, by applying a new feature called *User Account Control* (UAC). Unfortunately, UAC works by displaying a series of "nag" dialog boxes that keep asking you if you *really* want to do whatever it was you wanted to do. To many users, UAC is less protection than it is a nuisance, making you take longer to do everyday operations.

The solution to the UAC problem is to turn it off. Here's how:

1. Click the Start menu and select Control Panel.
2. When the Control Panel opens, double-click User Accounts.
3. When the User Accounts window opens, click Turn User Account Control On or Off.
4. When the next window appears, as shown in Figure 6.13, uncheck the Use User Account Control option.
5. Click OK.

Caution

Disabling UAC makes your system less secure than when UAC is operating. Make sure you monitor which programs you download and install on your PC; you no longer have UAC there to protect you against obvious malware.

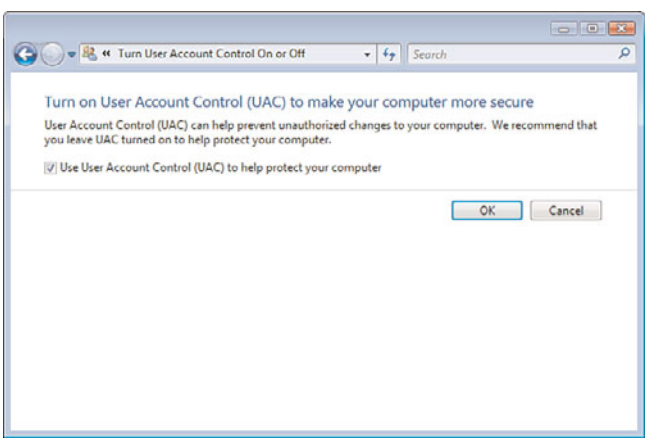

FIGURE 6.13

Disabling Windows Vista's User Account Control.

Turn Off Unnecessary Windows Vista Features

When Windows Vista is installed on a PC, it also installs a bunch of utilities that you may or may not ever use. Unfortunately, most of these features automatically load into system memory when Windows loads, which is a recipe for poor system performance.

Fortunately, Windows lets you disable unnecessary or unwanted utilities from the operating system. Doing so keeps the utilities from automatically loading—but doesn't delete them from your hard drive, so they're still there in case you ever need them.

To turn off these unwanted features, follow these steps:

1. Click the Start menu and select Control Panel.
2. When the Control Panel opens, double-click Programs and Features.
3. When the Programs and Features window appears, click Turn Windows Features On or Off (in the leftmost panel).
4. When the Windows Features dialog box appears, as shown in Figure 6.14, uncheck those you want to disable. (You may need to click the + sign beside some features to see all related subfeatures.)
5. Click OK to apply your changes.

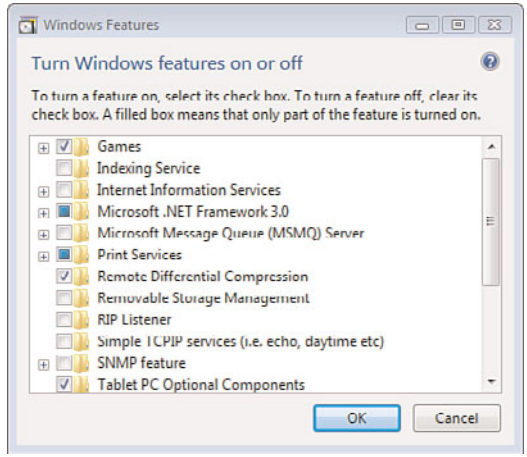

FIGURE 6.14
Disabling unwanted features in Windows Vista.

Which of these features do you need? It all depends. If you never play Windows built-in games, such as Solitaire and Chess Titans, you can uncheck the Games feature. If you don't have a tablet PC, you can uncheck the Tablet PC Optional Components feature. If you don't use Windows Meeting Space, you can uncheck that feature. And so on.

Tip

If you later do want to use one of these features, you can always reopen the Windows Feature dialog box and recheck that feature.

Just remember—every feature you uncheck will speed up your system performance just a tad. The more unnecessary features you disable, the faster your system will run.

Use ReadyBoost

Our last Windows Vista speedup deserves more space than we can devote in this chapter. That's because a very effective way to speed up Windows Vista is to provide it with more temporary memory, which you can do using a USB flash drive and Vista's new ReadyBoost feature. Turn to Chapter 10, "Adding More Memory," to learn more.

The Bottom Line

Windows XP and Windows Vista are both operating systems that use a lot of system resources. Fortunately, you can reduce this resource use—and speed up performance—by making a series of configuration tweaks. Here's the bottom line:

- Both Windows XP and Vista can be speeded up by turning off graphics elements that require excessive use of system resources.
- Both operating systems can also benefit by disabling unnecessary background services and features.
- The file indexing required by Windows' search feature is something else that slows down most systems. Turn off file indexing to speed up your PC.
- Windows XP has a memory leak issue that results in less usable memory being available over time. The quick solution is to reboot your XP machine every few days.
- Windows Vista's biggest resource hog is its Aero interface. Revert from Aero to the Windows Vista Basic interface to speed up your system.

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