Chapter 1

Introducing the New Windows Operating System

I t's been a long time coming. Microsoft hasn't released a new consumer operating system since Windows XP came out in October, 2001. Now, nearly six years later, Windows has once again been polished, modernized, and buffed to a glossy sheen for a newer consumer era. Windows Vista is here.

Windows XP was a big deal for the Windows family. Although Microsoft continued to release consumer operating systems built upon the Windows 95 kernel (including Windows 98, Windows 98 Second Edition, and Windows Me), it targeted only businesses and power users with its NT kernel offerings such as Windows NT and Windows 2000.

There was a difference. For backward compatibility to the days of MS-DOS and Windows 3.1 computing, Microsoft stuck with the 9x kernel for consumers. That kernel was an intricate meshwork of 16-bit (DOS) and 32-bit (NT) code that never truly abandoned the DOS conventions and never fully took advantage of the pure 32-bit power. The NT kernel, however, was built to be a 32-bit monster from the start, without the ambition to run 16-bit Windows 3.1 software or the thousands of games released for DOS.

In 2001, Windows XP brought the parallel lines of Windows business and consumer operating systems together at last. With its Compatibility Modes, it was able to run some DOS and Windows 3.1 software, but because the computing world had started its move to 32-bit in 1995, there wasn't as much demand for backward compatibility. Windows XP proved to be far more stable than any of the 9x flavors (especially the justifiably hated Windows Me), and it was multimedia-friendly and an excellent platform for gaming.

And aren't multimedia and gaming what computers are all about?

IN THIS CHAPTER

Exploring the Windows Vista interface

Exploring safety and security improvements

Looking at Windows Vista's multimedia and gaming enhancements

Introducing Windows Ultimate Extras

Although Microsoft has made a point of including strong game and multimedia support with all of its post-Windows 3.1 operating systems through the ever-evolving DirectX multimedia libraries, the company didn't fully and completely embrace the idea of full home multimedia until it released the Windows XP–based Windows Media Center Edition in 2003. And now, with Windows Vista, Microsoft is going after virtually every possible computer user in the world, from people in emerging markets (for example, third-world nations) to spoiled consumers, from timid technophobes to business power users. And, most important, Microsoft has now turned its all-seeing eye to dedicated gamers and multimedia enthusiasts.

The company released a number of different Windows Vista editions, each aimed at a different market segment. Windows Vista Starter, which is only available in emerging markets, is a bare-bones operating system for the simplest computers. Vista Home Basic is a notch above Starter, intended for homes with a single computer and users who don't need a bevy of fancy features—the kind of people who just want to check their e-mail and do some Web surfing and leave well enough alone. Home Premium is a more full-bodied consumer edition, with a stronger focus on multimedia and usability. It's one of several editions to feature the new desktop interface, Aero. A pair of Vista products aimed at various-sized companies includes the Business and Enterprise editions, with features that cater to networked businesspeople.

Then there's Ultimate. Windows Vista Ultimate is the edition for the true enthusiast, the person who spends hundreds of dollars on single upgrades just to run the latest games. Ultimate edition caters to people who can't imagine viewing home video without editing it through a PC first. This edition is the one for people who consider the PC not an appliance or a convenience or a luxury, but an essential cornerstone of existence, right up there with food, clothing, and shelter.

So, what's new in Windows Vista? A better question might be, "What's *not* new in this startling new operating system?" From the first glance, you can see that Windows Vista is obviously quite different from Windows XP. The interface is similar, but prettier. Windows Explorer is familiar, but so much more functional. Things are in different places. The browser is brand new. Everything is better organized. What's up with the icons giving you a glimpse into the files they represent? Even the old, standard games that haven't changed a bit since Windows 3.1 look improved. (Is that really Minesweeper?)

There's more. Behind the scenes, Windows Vista is a vastly improved operating system. It's more secure. It's less prone to critical failures and file corruption. It does things better, faster, more efficiently. Sometimes, it's as if your computer can read your mind.

As you progress through this book, you get to tear into all the aforementioned topics and more in exquisite detail. This chapter introduces you to Windows Vista and some of its startling new features.

The Vista Interface

The Windows Vista user interface represents a sweeping change from anything you may have ever seen before. This change is the most significant one in the Windows user experience since Microsoft went from Windows 3.x to Windows 95. The graphic user interface (GUI) is built upon the principles of the Windows GUI from Windows 95 to XP, but it's significantly different: The Start Menu has been overhauled; windows have nifty, transparent borders; and everything looks

fresh and new. The look falls under Windows Aero, the new desktop interface, but the enhancements don't stop with visuals — the shell and search features are massively enhanced, and the new Sidebar is a handy addition.

Windows Aero

Windows Aero is the new Windows Vista user interface, and it's brilliant (Figure 1.1). Via the power of your computer's 3D graphics card, onscreen windows feature transparencies so you can see through their borders. Windows are animated in a more lively manner than in previous versions (Rather than pop or fade into view, they warp and expand, almost as if they're made of rubber.) The new screen font, Segue UI, is smoother and easier on the eyes.
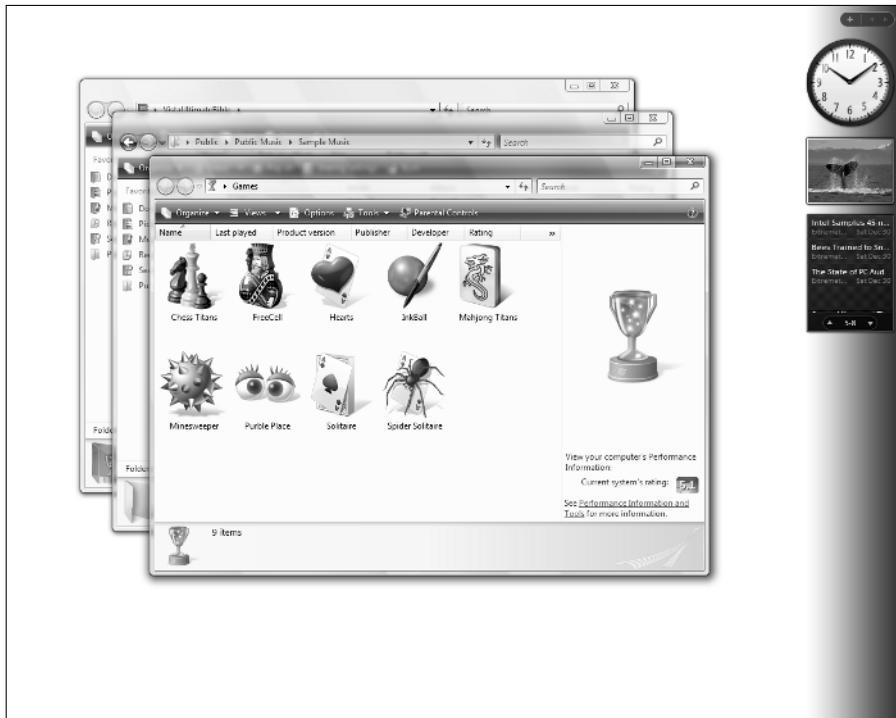
CROSS-REF   For more information on navigating the new Areo interface, see Chapter 3. For information about how to customize the interface, see Chapter 5.

NOTE   You do have other options for your Windows Vista user interface. The theme is customizable, and you can also select a classic, Windows 9x-style interface from the Themes settings in the Control Panel. (Choose Start ➪ Control Panel and then click the Themes tab.)

FIGURE 1.1

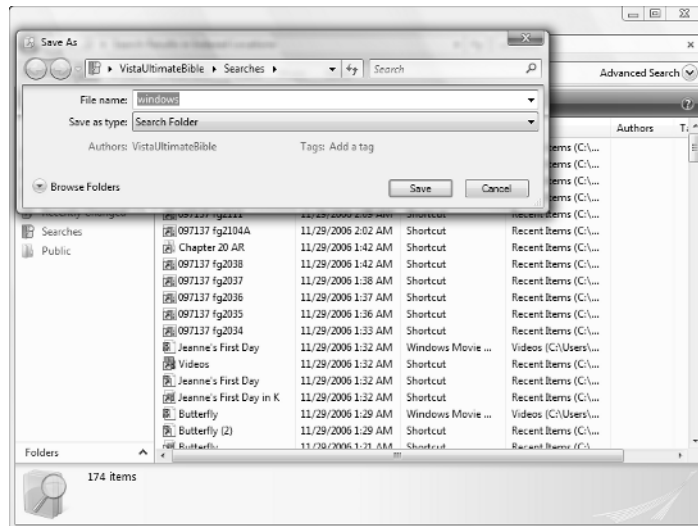The Windows Vista user interface, Aero, features a striking new look.

Aero's enhancements go beyond visuals, however. Microsoft drafted a new set of standards to complement its new look. Streamlined wizards help you accomplish your tasks. A tonal change in dialog boxes is supposed to make their message easier to understand and more friendly. Aero is fully enhanced by changes in the Windows shell.

The shell, which is the user interface beyond the visual appearance, is beefier and more user-friendly than in any operating system in history. It packs a number of changes from Windows XP:

- **Interactive paths:** When you navigate through the file system using the new Windows Explorer, the path in the navigation bar is interactive. You can click on any of the folders within the path to navigate directly to that folder. For example, if you navigate to C:\Users\<*your user name*>\Videos\, you can click the Users folder in the path to jump right into that folder.

- **Instant searches:** Each Windows Explorer window, by default, has a search text field in the upper-right corner. You can enter a search string there to search the current location, or you can search the entire computer by clicking Search in the Start Menu (which has its own Search text box). The Windows Search feature is heavily enhanced and searches the computer almost instantly.

- **Saved search folders:** After you perform a search, you can actually save it as its own virtual folder, as shown in Figure 1.2. By default, it saves the feature in C:\Users\<*your user name*>\Searches. From this location, you can "open" your Search folder at any time and it will update itself automatically.

FIGURE 1.2

Saving a search

- **Live icons:** When you navigate to a folder that has a number of items in it, some of the icons will actually transform into thumbnails. This feature is not new, but this part is: The thumbnails actually show what's in the file as a preview. Many file types that Windows recognizes, such as photos, videos, Word documents, and Adobe Portable Document Format (PDF) files generate such previews.

- **The Games folder:** Windows Vista takes great pains to cater to gamers, and the Games folder is the shell's way of welcoming gamers to the new operating system. Windows Vista-aware games will automatically install their shortcuts to the Games folder, and the folder provides a centralized location for organizing games, setting parental restrictions, enabling compatibility modes for legacy games, and more.
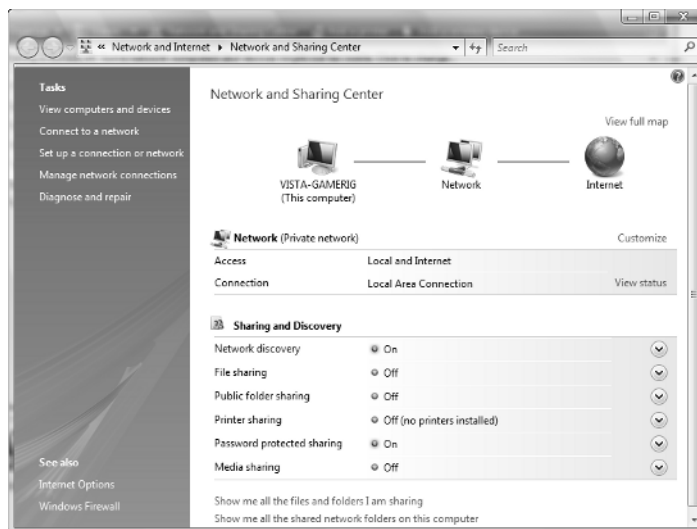
CROSS-REF For a discussion of the Games folder, see Chapter 21.

- **Network Center:** Networking is easier than ever, and the shell makes navigating networks far more straightforward than it ever was before. The Network Center, shown in Figure 1.3, shows all of your networks and allows you to navigate through them, change sharing settings, set Internet options, and more.

CROSS-REF See Chapter 12 for information on networking.

FIGURE 1.3

The Network Center

■ **Contextual menu bars:** Each window contains a menu bar, but it doesn't look like the menu bars in Windows XP. Depending on the nature of the window, each menu bar presents different options. Each generally starts with Organize, then Views, but after that the options depend on what's in the folder. The Games window includes a Parental Controls option; many windows contain a Burn option so you can burn their contents to optical media. The Pictures window has a Slide Show option. Intelligent menu bars help you get the most out of your files instantly.

The Windows Sidebar

Off to the right on the Windows desktop sits the Sidebar (Figure 1.4). This convenience tool shows, by default, a small slideshow of stuff from the Pictures folder, an analog clock face with the current system time displayed, and an RSS feed organizer. Those little devices on the Sidebar are called gadgets, and you can customize them. You can add or remove a great deal of gadgets that come with Windows Vista, including a calculator, a currency converter, a notepad, puzzles, the Recycle Bin, a stick ticker, and more.

FIGURE 1.4

The Windows Sidebar is on the right. Also shown is the Sidebar customization window.

CROSS-REF See Chapter 8 for information about customizing the Windows Sidebar.

Furthermore, you can download dozens of Sidebar gadgets from the Internet. Microsoft provides a number of gadgets on its server for your convenience. At the time of this writing, you could choose from a number of games, a calendar, and a Seattle-area traffic meter!

Improved Safety and Security

Windows Vista takes security seriously. Redesigned from the ground up to prevent the myriad of exploits that have plagued earlier versions, Vista is easily Microsoft's most secure operating system. That's not to say no one will ever crack the security and threaten it, but it's far more prepared for the eventuality than earlier versions of Windows.

CROSS-REF For information about all of Vista's improved safety and security controls, see the chapters in Part III of this book.

User Account Control

For example, Vista comes with a *User Account Control* (UAC), which is a powerful feature that only lets programs make major changes in the operating system if a user with Administrative privileges allows it. All users, including administrators, run in a secure mode. When a process tries to do something that requires administrative privileges, requested or not, it prompts the user for authorization. This can theoretically prevent rogue programs, such as malicious stuff from the Internet, from compromising Windows Vista.

Windows Firewall and Windows Defender

Speaking of the Internet, Windows Firewall is more powerful than ever, and Windows Defender (Microsoft's antispyware program), an optional download for Windows XP, is included and turned on by default in Windows Vista.

Parental Controls

Parental Controls allow administrators to restrict other users' access to certain media. Using Parental Controls, administrators can block access to objectionable Web content; they can prevent games from being played based on Entertainment Software Rating Board (ESRB) ratings; they can enact time controls to define when certain accounts may be accessed; and much more.
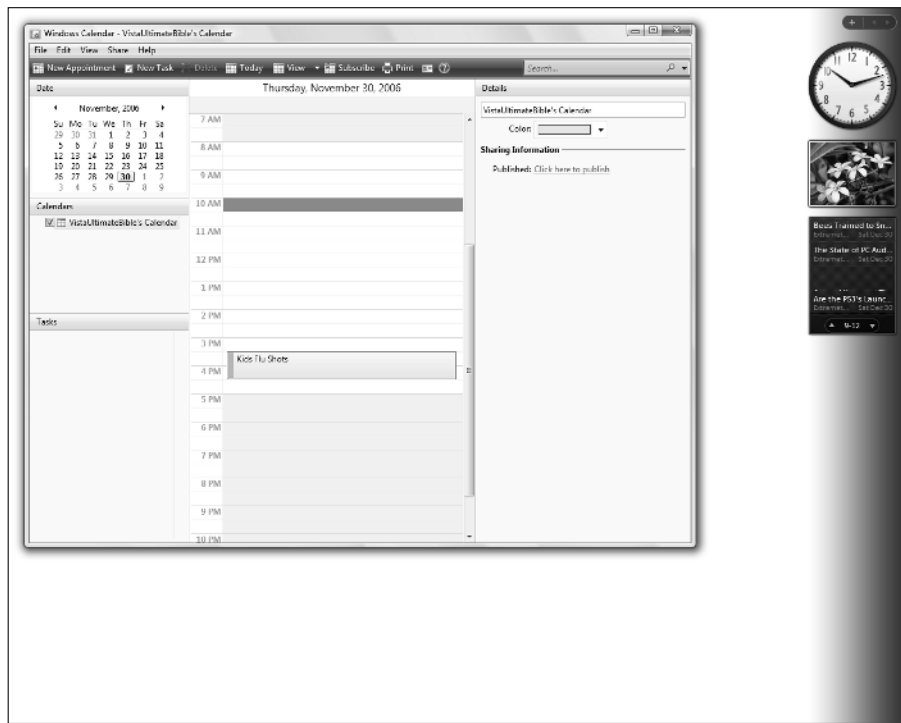
Better Applications

Windows Vista includes a number of new and beefed-up applications. Some are familiar: Windows Mail looks a lot like Outlook Express, only it's laced with new features. Others are brand new, like the built-in support for RSS Web feeds. Some of the applications included are as follows:

■ **Windows Calendar:** This new calendar application, shown in Figure 1.5, lets you schedule meetings and other events, and presents reminders when a scheduled event comes along.

FIGURE 1.5

Windows Calendar

■ **Media Player 11:** A new version of Windows Media Player, this application organizes your media files in a new and friendlier fashion. It also includes the MTV URGE music store.
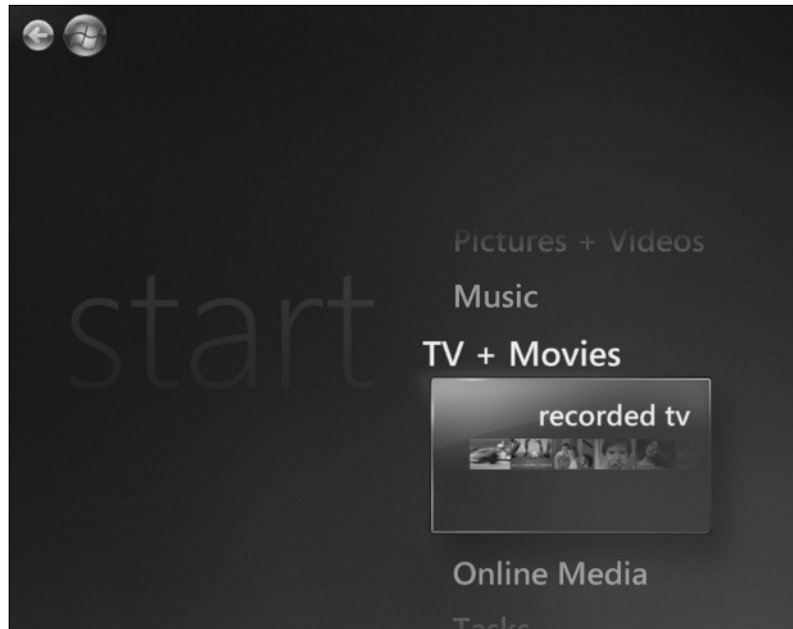
CROSS-REF Media Player 11 is covered in depth in Chapter 17.

■ **Media Center:** Alas, there will be no Windows Vista Media Center edition. Instead, Media Center is included with many of the Vista editions, including Ultimate. Media Center, shown in Figure 1.6, provides all the media-centric functionality of Windows Media Center and more.

FIGURE 1.6

Windows Media Center

CROSS-REF Detailed information about Windows Media Center can be found in Chapter 16.

■ I**nternet Explorer 7+:** A totally redesigned browser, IE7+ features tabbed browsing, a new Favorites Center, an integrated Search function, and a whole bunch of other new features.

■ **Movie Maker:** An updated version of the video editing application found in Windows XP, Windows Movie Maker now supports high-definition video and DVD output.

This list is just a sampling of the applications included with Windows Vista. Others include Windows Contacts, Windows DVD Maker, Windows Backup, and more.

Multimedia and Gaming Enhancements

Windows Vista Ultimate is designed for multimedia and gaming, and it boasts a host of new features to make audio, video, and interactive experiences better than ever before. Besides the Games folder, mentioned earlier, it incorporates a bunch of other nifty upgrades.
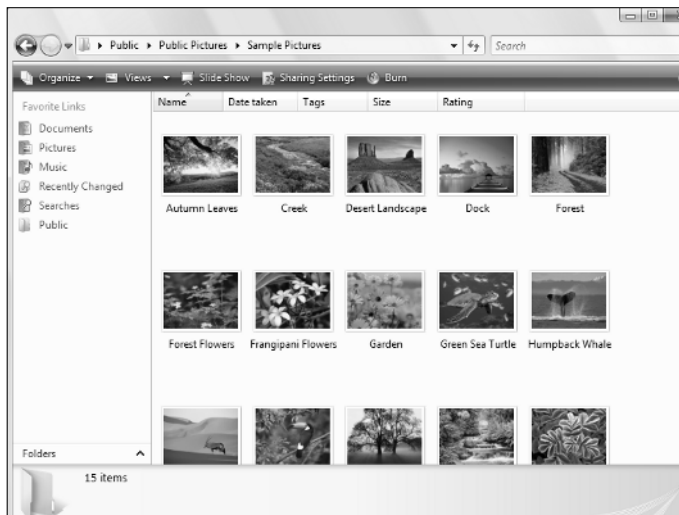
Windows audio stack

For example, the Windows audio stack has been completely rewritten to get the most out of even the best sound cards on the market, providing an aural experience superior to that in previous versions. With 32-bit floating point accuracy and ultra-low latency, sound is accurate and, at last, as good as the audio equipment attached to your PC. Those $500 surround multimedia speakers have never sounded better! Also, check out the new audio controls that allow you to assign audio levels to each application, rather than a simple, system-wide audio control.

Multimedia organization

Multimedia organization is outstanding. In addition to the Games folder, which allows you to launch games from one centralized location, the Windows Pictures folder, shown in Figure 1.7, allows you to activate slide shows with the click of a button, and the Music folder lets you play all the tunes in the current folder from the Menu Bar, or burn them to a CD or DVD.

FIGURE 1.7

The Windows Pictures folder

New games

Speaking of games, Vista Ultimate includes a number of new Windows games. Besides the old standards — Minesweeper, Solitaire, and Hearts (all of which have received a facelift) — you'll find Inkball, Majong Titans, and Chess Titans, which is shown in Figure 1.8, among others.

FIGURE 1.8

Chess Titans is one of the new games included with Vista Ultimate.

CROSS-REF To read more about the new games included with Vista Ultimate, see Chapter 6.

DirectX 10

Gaming is better than ever with DirectX 10 (the latest version of the gaming and multimedia capabilities in Windows). Featuring ultra-high-speed DLLs (dynamic link libraries) and a new graphics subsystem that, according to Microsoft, can display graphics eight times faster than DirectX 9.0c, DirectX 10 packs unified vertex and pixel shaders and more. Because DirectX 10 isn't backward compatible with older DirectX versions, Vista also includes DirectX 9L to run legacy games.
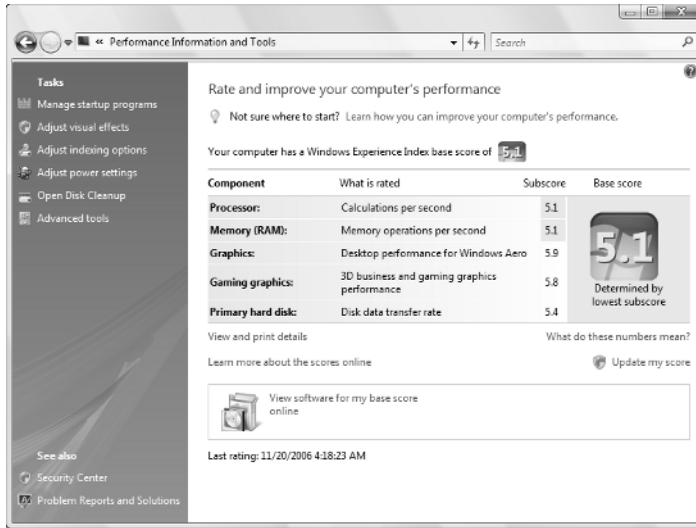
CROSS-REF For more in-depth information about the new DirectX 10, see Chapters 14 and 15.

Performance Rating and Tools

The Performance Rating and Tools control panel, shown in Figure 1.9, allows you to assess the system's performance and get a rating of each of the major subsystems, which are combined for an overall system rating.

FIGURE 1.9

The Windows Performance and Rating Tools control panel enables you to assess your system's performance.
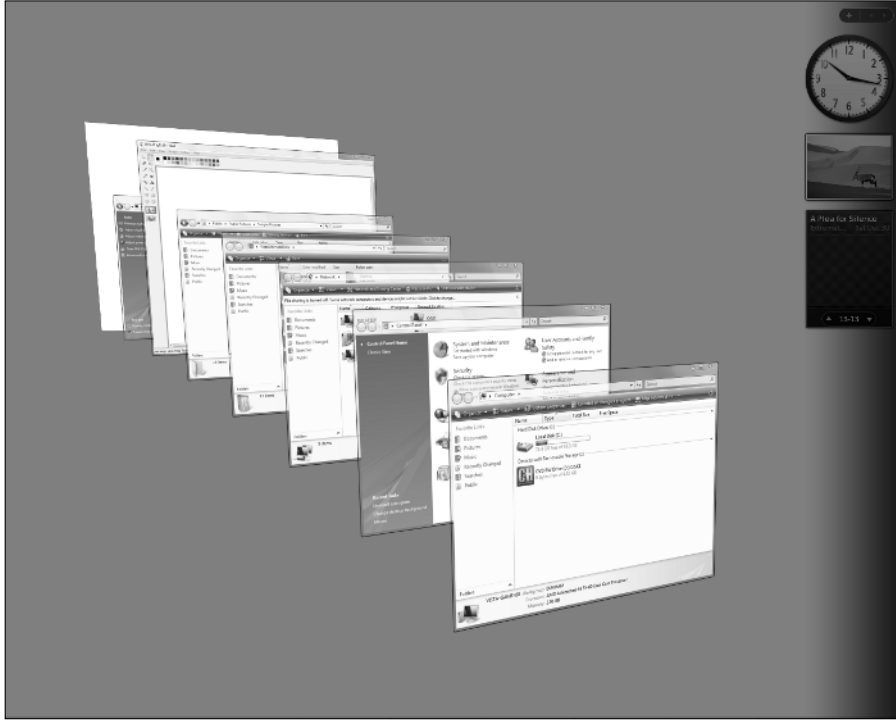

Windows Ultimate Extras

Windows Ultimate is unique in that it not only features *all* the features of the other Windows editions, but also includes downloadable Windows Ultimate Extras. Available through Windows Update, they are slated to include some pretty incredible software. Microsoft bills them as cutting-edge utilities and applications.

Flip 3D

Flip 3D is a cool way to breeze through the open applications on the Windows desktop. Plain-old Flip is the new name for the Alt+Tab combination that shows your open applications and lets you choose from among them. Now, however, you can also use the Windows key with Tab to present a 3D view of your open applications, as shown in Figure 1.10. The applications also show what's going on inside them. This Aero feature is both nifty and handy.

FIGURE 1.10

Flip 3D arranges your open applications in 3D.

Summary

Windows Vista Ultimate is the first operating system to live up to its name. It truly is the ultimate in desktop operating systems. This book guides you through the new features with a strong focus on multimedia and gaming, as well as shows you how to install Windows Vista fresh or upgrade your legacy Windows installation; how to network multiple computers in a home environment; how to get the most out of your movies, photographs and music; and how to leverage the new gaming features to your advantage; and that's just the beginning.