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The Road to Windows Vista

After several years of chatter, rumors, leaked information, and random hearsay, Windows Vista is finally here! This highly anticipated unveiling is the first major release for home users since Windows XP in 2001. It also promises to feature more of what users want and more of what they need, including enhanced security, which has never been one of Microsoft's perceived strong points.

In this chapter, we go back to school for just a bit and review our history: How did we get to Windows Vista and where is Microsoft going with it? More importantly, we help you decide for yourself whether or not now is the time for you to make the move to this long overdue operating system!

A brief history of Windows Vista

Several years ago, word of the next Windows operating system tentatively entitled "Longhorn" made its way across the Internet. Amateur Web sites and bloggers all loved sharing their thoughts about how the new Windows OS would work. Fast forward to July 22, 2005, and Microsoft reveals that they are preparing a new operating system that is called Windows Vista (named, curiously, for a pub in British Columbia, Canada).

However, Windows Vista was never supposed to be the topic of IT water cooler conversations or even a major release like Windows 95 or Windows XP. In fact, it was

originally meant to be an intermediary release between Windows XP and Windows "Vienna" (or Blackcomb). As deadlines were missed, as often happens in the software field, Windows Vista started to implement features of Windows Vienna, and it grew into something it was never meant to be, which is a full-fledged major operating system release and not just an upgrade.

Windows Vista was officially named the next release by Microsoft, while Microsoft Vienna has been relegated to a release date not worth publishing. As time went on, Vista continued to implement features intended for Vienna. However, as Microsoft tried to include as many features as possible for this release, there was some concern that reliability, simplicity, and scalability would all be sacrificed for new features. As a result, Microsoft scaled down some of their new features for the Vista release. One of the biggest casualties was the new WinFS feature. WinFS, or Windows Future Storage, is a data storage and management system that runs on a relational database (which is a database that uses a relational model and runs on RDBMS software). For more information on WinFS, check out `http://msdn.microsoft.com/data/winfs/`.

Development of Microsoft Vista using the Windows Server 2003 code base was soon underway. After months and months of work, Vista Beta 1 (Build 5112) was released to a select group of testers including MSDN and TechNet members.

Microsoft then started the CTP program (Community Technical Preview) that allows Beta testers and MSDN members to download and install builds. The CTP program is a monthly program that offers a "snapshot" of Windows Vista's current status. In February 2006, Microsoft released the February CTP, which was the first feature-complete version of Windows Vista. Microsoft soon after released an intermediary build that took into consideration initial feedback from the February CTP.

In March 2006, Microsoft announced that it would be delaying the Microsoft Windows Vista release. As you can imagine, there was a lot of speculation about the reason for the delay and rumors were rife that the product was not up to quality standards. Of course, anyone who was a Windows Vista tester knew this to be unlikely as the Beta builds were relatively stable and feature-complete. Microsoft's decision was more likely based on a combination of marketing and quality concerns. In fact, Microsoft decided to implement a two-tier rollout plan: Those with volume licensing agreements would be able to upgrade first, and the general public would then receive Windows Vista.

As a result of this delay, the next CTP would now be released at the end of May 2006 instead of April 2006. This is the first CTP that is considered a Beta 2 equivalent. This version is available through the Customer Preview Program, which allowed the general public to freely download the operating system and give it a try. This was a win-win situation; users who were curious to try out the software could do so without having to pay for it, and Microsoft could use their customer base to test their product for them.

Microsoft continued to issue monthly CTP releases until the final release date. Post Beta 2, Microsoft released a July CTP to a select audience, and then released a Pre-RC1 (Release Candidate) at the end of August. This Pre-RC1 version was greeted very warmly by the tech community, especially from a number of industry notables who were very critical of the post Beta 2 builds. Just several days after the Pre-RC1 release, Microsoft released the RC1 build (5600), which is the version we used when writing this book.

Windows Vista will be made available in November 2006, according to the current schedule, to volume licensed businesses before being released to the general public in January 2007.

Throughout this period, quality control and stability of the Beta-level builds was a major concern of analysts and testers alike. Many professionals felt that the Beta-level CTPs simply were not stable enough to proceed to a final build candidate. As a result, there were a number of professionals (who really were pro-Vista) who advocated for delaying Windows Vista yet again in order to iron out all the bugs before releasing it to the public. The fact that CTP builds had varying quality (some releases were stable, while others were buggy) and consistency made gauging the true status of Vista hard to determine. Fortunately, things seemed to take a turn for the better performance-wise with the Pre-RC1 edition.

Microsoft as a company also took a number of public relation hits during the summer of 2006. Ongoing litigation with the European Union saw Brussels levy a massive fine against Microsoft, which didn't help already slipping stock prices. In July, Bill Gates announced that in 2008 he would stop his day-to-day activities at Microsoft and hand over the reins to Steve Ballmer and Ray Ozzie. Microsoft also incurred delays with the long anticipated Microsoft Office 2007 release. Finally, a top executive who was fairly visible in the public eye was released or quit under mysterious circumstances. All of these reasons, combined with the specter of yet

another Vista delay, pointed to a general feeling of concern and negativity surrounding Microsoft and their upcoming releases.

What's new in Windows Vista?

As you can imagine, Microsoft pulled out all the stops when putting together their wish list for Windows Vista. From features to security, there's something for everyone in the first incarnation of Windows Vista. For example, the first time we installed Windows Vista on our machines, we immediately thought of Linux and Mac OS X and how these users would appreciate the look and feel of their respective operating system. FireFox users will undoubtedly notice how Microsoft "borrowed" from the FireFox user interface in Internet Explorer 7.

Users will be pleased with Microsoft's latest offering — some new features are overhauled existing features and others are completely new! This section doesn't mention every new feature in Windows Vista, but it gives you a good idea of what awaits you! Each feature we describe in the following paragraphs is discussed in greater detail in various parts of the book.

Working with the Vista interface

Are you a home user? If so, some of the new features may impress you, while others will confuse you. For example, one of the first things you notice is that the ubiquitous Start button is now relegated to history's trash bin. Once the lynchpin of the entire Windows user interface, it is now replaced by a Windows "orb," for lack of a better expression. Despite the change in physical representation, this is still referred to as the Start menu. Users may also be surprised to find out what is hiding from them behind the Windows orb, as the appearance of the Start menu changes drastically in Windows Vista. These changes are covered in far greater detail in Chapter 4. Personally, our first reaction to seeing Windows Vista was "the menus are dark!" Also new is the navigation style of the Start menu; the days of this menu expanding to fill your entire screen are gone.

The new Welcome Center window appears at startup (yes, you can disable it). You can find extensive system information (see Figure 1.1). The bottom portion of the Welcome Center contains extra information such

> **Watch Out!**
>
> Not every feature is available in every edition of Windows Vista. Rather than start every paragraph with edition information, we provide a table at the end of this chapter that features new Windows Vista features and in what editions you can find them.

as Internet shortcuts, information on Vista, setting up various Vista features, and so on. It also features some self-promotion, whereby you can access or download a number of new Windows Live services.

The notification bar at the bottom-right side of the screen also appears differently than in XP. Although it has many familiar icons, it does include some new icons, including how your Internet connection appears. The dialog boxes in Vista now appear with a metallic, yet transparent, look about them. In fact, it reminds us quite a lot of Mac OS X dialog boxes and windows. It also reminds us a lot of Linux; two of Microsoft's biggest detractors now find themselves with a competitor that really is not so different from them in a number of ways.

Figure 1.1. The Microsoft Vista desktop.

If you are Aero-ready, you're going to be bowled over by how cool Windows Vista looks. It's well worth the extra hardware to check out this new desktop experience. From transparency, to interactive mouse point-ers, to much improved window toggling options, Aero is a massive improvement that finally brings Microsoft into the twenty-first century. For example, in the taskbar, you can get a glimpse of what is in the appli-cation, file, or folder by placing your mouse over the taskbar icon. A real-time representation of its contents appears as a thumbnail above the taskbar. All this and more, thanks to Aero. If you aren't Aero compatible, this feature will not work; the standard alt text appears instead.

Folders and directories also have a refreshed look in Microsoft Vista (see Figure 1.2). These elements are much more icon oriented than in past versions of Windows. Although this is generally an improvement over Windows XP, adjusting to folders and directories make take some time. Folders now include powerful search features, such as preloaded saved searches for easy, on-the-fly searches with amazingly fast results. An embedded Favorites menu enables you to switch to other folders quickly. A new toolbar and navigation bar allow you to navigate with ease. Windows' Documents, Pictures, and Music folders in Windows Explorer are also color-coded in Vista, so that you can set them apart from other folders. Strangely enough, the video folder keeps the standard yellow color.

The Control Panel is also revamped in this new release. If you switch to the Classic mode, you can see exactly what we mean. (We discuss sev-eral new options later in this chapter.) The Control Panel can admittedly look a bit overwhelming at first; you may feel lost among the new icons and themes. However, as you familiarize yourself with Windows Vista, you see that everything is in its logical place. The use of links to help you find specific tasks is particularly helpful; now that we've been using it for a while, we find it quite helpful.

Finally, Windows offers *gadgets*, which are customizable mini-applica-tions that facilitate certain user tasks. The Windows sidebar organizes your gadgets into an easy-to-use tool. Microsoft has created three differ-ent types of gadgets: desktop, Web, and device. For Windows Vista, you can use desktop gadgets. Web gadgets are for use with Web sites, such as start.com, while device gadgets run on external displays. Gadgets can be used on your desktop or on the Sidebar. You can also use them in con-junction with the start.com Web site. Currently an incubation experiment (meaning that it's not quite ready to go), this Web site lets you configure

> **Inside Scoop**
>
> Gadgets are designed to be used interchangeably among the environments. For example, you could use a Web gadget with the Windows Vista Sidebar.

an online version of the Sidebar using gadgets. Start.com, while a pretty neat idea, isn't the most visibly attractive site on the Internet. In fact, its rather bare-bones look might turn off a few users. Nevertheless, it's another option on the table if you want to use gadgets.

These gadgets, which we discuss in greater detail in Chapter 4, can be created either in DHTML (Dynamic Hypertext Markup Language) or a .NET language (for example, C# or VB.NET).
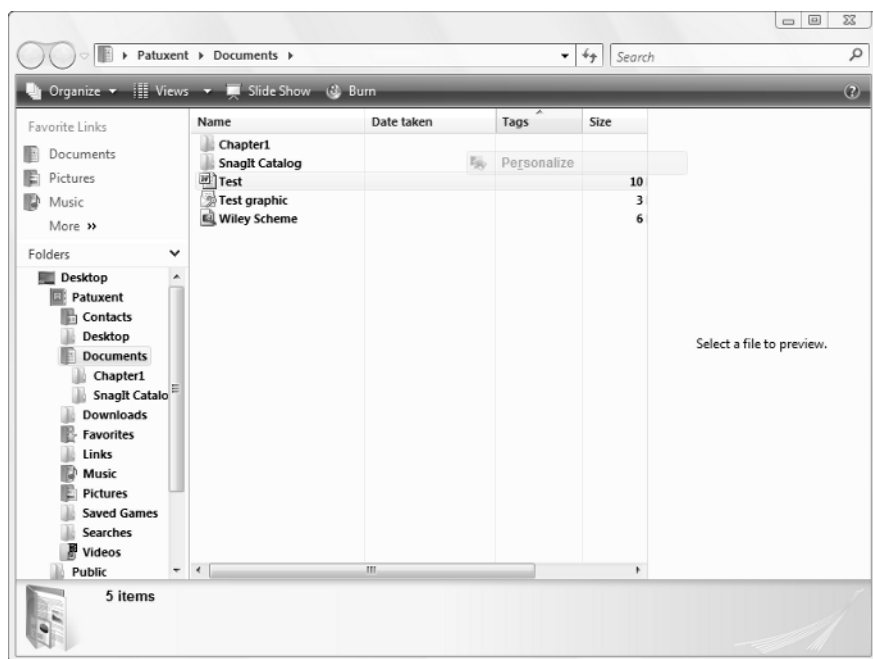

Figure 1.2. The Documents folder in Microsoft Vista.

Control Panel

As mentioned earlier in this chapter, the content and the look and feel of the Control Panel have changed extensively in Windows Vista (see Figure 1.3). The Vista Control Panel now integrates the Windows Explorer

framework. Although you can still choose either the new or the Classic Control Panel mode (à la XP), it has a new color scheme and number of new system icons. This makes configuring your computer even easier. If you open one of these menus/icons, you find a whole series of subject-related (category-based) settings that you can choose from. These settings are detailed in descriptive terminology that makes it easier for users to understand exactly what they're getting into. Additional options appear on the left side of these windows that allow you to select from other related settings and services.
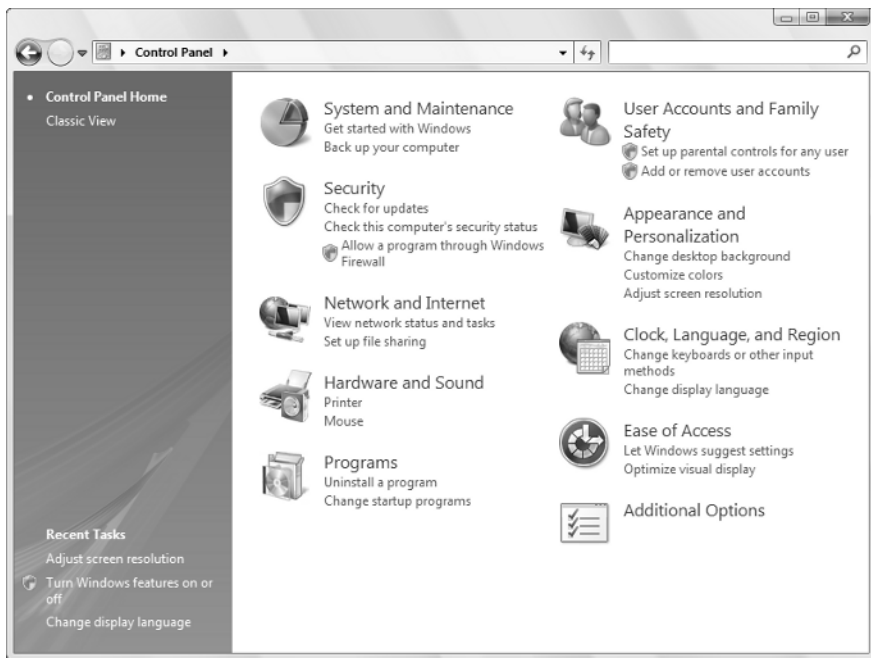

Figure 1.3. The Control Panel is bigger and better in Windows Vista.

Searches

Windows Vista has added two new controls to its search feature: Instant Search and Enhanced Column Headers. The Instant Search feature is found in the Start menu (as detailed in the next paragraph), while the Enhanced Column Headers facilitates how data is displayed. These features are detailed in Chapter 4.

> **Inside Scoop**
>
> Using the Instant Search, not only can you find Start menu applications by typing the first letters, you can also find hidden files as well as system files. This is helpful, for example, when calling the Microsoft Management Console.

When you click the Windows orb, you can see the Instant Search box at the bottom of the menu. You can insert just about anything, including a part of a filename or a property, and click the Search icon. To make things easier, you can even add keywords to file properties for future recall. In many ways, the Instant Search box makes up for the now defunct Run features. We've also seen this feature referred to as the Live Search. You can also use this search in the Control Panel to quickly locate what you're looking for.

Windows Vista also features a new tool called Search Folders. The name is a little confusing because you don't use this feature to search file folders; you use it to save search criteria for later use. Using the Search Folders tool, you can go back and perform another search using previously defined criteria. Windows Vista features a number of preloaded "saved" searches. By clicking them, you receive virtually instantaneous results.

XPS support

Microsoft created its response to Adobe's PDF standard; XPS (XML Paper Specification) is a static document format that can be used in Windows Vista. In Vista and its applications, you can print to the Microsoft XPS Document Writer, which appears by default in Vista Print windows.

The need for XPS is debatable. Microsoft had planned on creating a PDF filter in Microsoft Office, which would have let users save Word documents as a PDF directly from the Save window. Unfortunately, due to legal reasons, this feature was removed and Microsoft XPS becomes Microsoft's de facto cross-platform document reader and writer.

Live Icons

Remember the bland, ugly icons of Windows past? Vista now offers Live Icons (provided you have the right graphics hardware). These icons still

represent files and their type; however, unlike the standard icon, these icons literally display a true view of the actual file. If you have a Word file icon, you can see text of the first available file. If it's a graphic, a thumbnail of the graphic appears in the folder icon (see Figure 1.4).
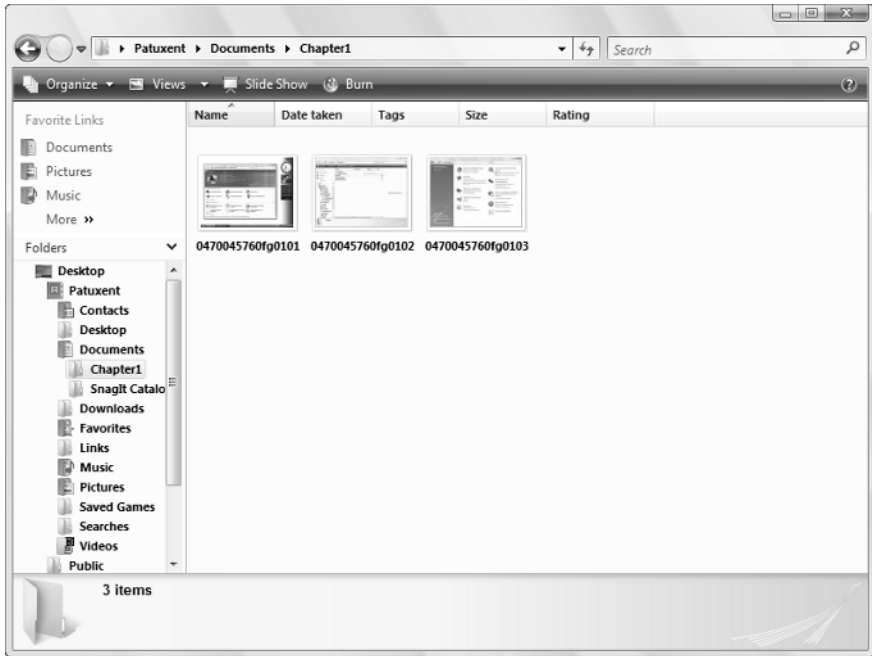

Figure 1.4. Live icons make folder browsing a little less boring.

Borders

In past versions, moving and resizing windows was difficult because of how svelte windows and dialog box borders are. Borders and headers of windows and dialog boxes in Aero are now wider so that you can move folders with ease. This feature change isn't as readily apparent in the Vista Basic environment.

Performance

The folks in Redmond clearly did their homework when it came to redefining performance. And this is why we applaud Microsoft for righting some past wrongs. On the other hand, it's clear that innovation suffered

at times due to focus on performance and security updates. So, what's new in terms of performance enhancements?

First and foremost, installation is considerably faster than previous versions of Windows. Startup time is also considerably faster. For example, we've noticed that it often takes two to three minutes for Windows XP to load everything and become functional. With Windows Vista, it took approximately 40 seconds from startup to being fully operational.

Another performance enhancement is the new Sleep feature. Sleep is a state somewhere in between Standby and Hibernate. Sleep can "wake up" as quickly as a computer set in Standby, but it also better protects data and consumes less battery power as if it were in Hibernate. How sleep works depends on your computer; if it is a desktop, the computer saves any open files or applications to both RAM and to the hard drive. On a laptop, it saves this information to RAM and then transfers it to the hard drive when battery power starts to wane.

The new SuperFetch feature tells Windows Vista to notice which applications you use the most and to store them into memory. As a result, recall is considerably faster. This is a marked improvement over previous behavior; for example, once you boot your computer, launching an often-used application could take a while or it might crash. The SuperFetch feature stores this application into memory so that it can launch the application at startup or post-crash quickly. In Windows XP, launching an application can be a tediously slow experience.

There are also EMD (external memory device) technology and hybrid hard drives to consider. When running Windows Vista, you can increase memory capacity by adding a USB flash drive as an EMD.

Hybrid hard drives are also new and compatible with Windows Vista. They contain an on-board flash memory buffer. Windows Vista uses this drive for major tasks, such as startup, hibernate, and faster reboots. These will eventually be a "strongly recommended" or even required piece of hardware of mobile users. We say eventually because hybrid

Watch Out!

If you add a USB flash drive as an EMD, keep in mind that the increased capabilities are only available so long as the USB drive is still plugged in. Once you remove it, the computer goes back to its original configuration.

drives are not intended to hit stores in the United States until June 2007 (date subject to change). As far as we know, these drives are only available for laptops.

Sidebar and gadgets

As discussed in the previous section and earlier in this chapter, the Windows Vista Sidebar and gadgets are a very important part of this release. The Windows Sidebar gives you direct access to your gadgets, thereby saving you time and finger energy and increasing productivity.

The Windows Sidebar sits on your desktop much like the Office Sidebar, where you can put often-used gadgets "in" it and easily call them back when necessary (see Figure 1.5). It works well with standard monitors and is ideal for widescreen monitors.

The gadgets, or mini-applications, are small, yet helpful applications that easily integrate into your Windows Vista experience. Though Windows ships with several gadgets on board; you can also download some over the Internet. They can be used with your desktop or used when using such Microsoft Web sites as Live.com.
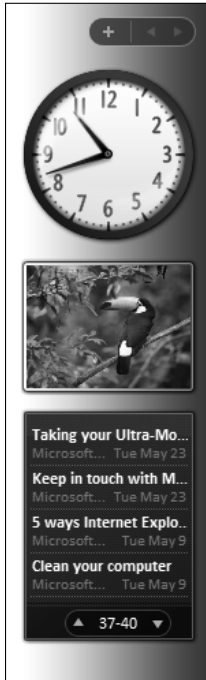

Figure 1.5. The Windows Sidebar.

Ease of Access Center

Microsoft has improved its accessibility options through the creation of the Ease of Access Center. It allows you to set up accessibility tools from a single location, making Windows available for everyone. You can access it from the Control Panel or even enable accessibility features from the logon screen. One intriguing new feature is the speech recognition feature, which lets you teach your computer to recognize your voice so that you can control your computer vocally instead of using your mouse and keyboard.

Introducing Internet Explorer 7

Undoubtedly one of the most noticeable new features in Microsoft Windows Vista is the long-anticipated Internet Explorer 7. Even if you have not yet installed Windows Vista, you can get a taste of Microsoft's follow-up to IE 6 because it is also available for Windows XP. From the moment you launch the application, it's hard to miss several new features from the very minute you launch the browser.

For example, you can now search multiple search engines from the user interface (see Figure 1.6). In the options menu adjacent to the search box, you can easily select a new default search provider from a pretty extensive list. In fact, you can even take care of shopping from this menu by selecting one of many online boutiques. This list of search providers and boutiques includes such heavyweights as Yahoo!, AOL, Google, Amazon, MSN, Lycos, Target, and even the Weather Channel!

In what we interpret to be a nod to Firefox, Internet Explorer 7 also features tabs.

Instead of having to open up a new browser window, you can simply open up a new tab and work within the same window (see Figure 1.7). Unlike its competitor, you can also right-click the tab and perform basic tasks (close one or more tabs, refresh a tab, or create a new tab).

Internet Explorer 7 also makes cleaning up easier. A one-button cleanup feature clears passwords, temporary files, and caches. This new feature lets you clear pretty much anything quickly, which is a change from past versions.

You can also subscribe to RSS (Really Simple Syndication) feeds directly from Internet Explorer 7. This feature is useful for frequent blog readers who do not have enough time to read blog updates — RSS brings the updates to you.

Figure 1.6. The Internet Explorer 7 search provider list.

Figure 1.7. The Internet Explorer 7 interface with multiple tabs open.

Bright Idea

For more information on phishing, check out the Wikipedia entry at `http://en.wikipedia.org/wiki/Phishing` or visit the Anti-Phishing Working Group at `www.antiphishing.org/`.

Another great feature is the new anti-phishing feature that protects users from sites that might be phishing sites. Phishing is an attempt to commit fraud over e-mail. A user is asked to click on a link purporting to be a legitimate site, but really the site is bogus and is designed to solicit and store personal details that can then be used for nefarious reasons.

Improved security

Microsoft Windows Vista offers a number of new security features that are sure to please users. For example, Windows integrated their Windows AntiSpyware application — now called Microsoft Defender — into Windows Vista. Defender scans and protects your computer from dangerous spyware and other harmful applications that can infiltrate your computer.

The User Account Control is another improved feature in Windows Vista that is designed to protect you and your family while online by using the Parental Controls (see Figure 1.8). Parents can use this feature to prevent their children from accessing certain applications or accessing inappropriate Web sites. You can create limited accounts for children, for example, that prevent them from installing new software.

The improved firewall that ships with Windows Vista is now a bi-directional firewall. In other words, the firewall scans both incoming and outgoing data flow. This is an improvement over the Windows XP firewall, which only monitored incoming data. It also remedies a major concern with respect to Microsoft and safety. Currently, most firewalls available on the market offer bi-directional protection. Even Microsoft detractors will laud this major security improvement.

Windows BitLocker™ is another new Vista feature that helps you increase system security. When activated, it encrypts your entire hard drive. By using a special key that you generate (and save to an external media device, such as a flash drive), you can "unlock" your computer. This feature is particularly helpful if your computer is lost or stolen.
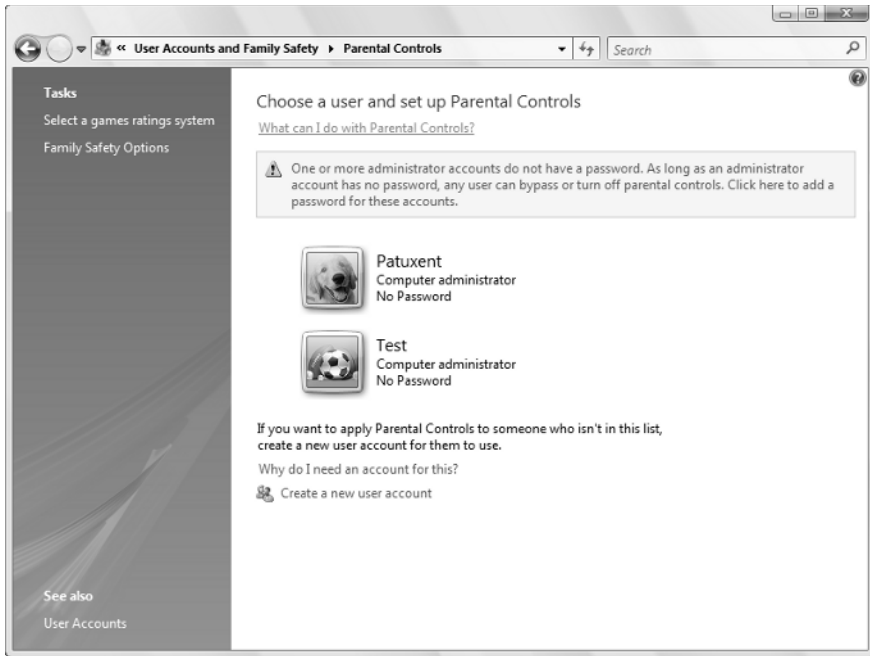
Figure 1.8. The User Account Parental Controls.

Creating backups

Windows Vista has improved backup capabilities that make backing up data safer and easier. There are now several levels of backup as well as protection from hardware failure.

Two new backup features include Windows Backup and the Volume Shadow Copy that up until now was only available in versions of Windows Server. The Windows Backup feature now features a new wizard that you can use to schedule backups. Because most of us tend to forget about backing up our machine due to life's daily activities and stresses, you can simply program when Windows should automatically back up your files. The Volume Shadow Copy, on the other hand, is a new backup feature that lets you save files at a specific point in time so that you can easily recall them in the event of file corruption or deleted file. Vista also suggests that you perform a backup the first time you launch Vista after installation; this is available from the notification area.

Windows Vista also features an improvement to the application called System Restore (see Figure 1.9). Unlike in Windows XP, you can now

create a Shadow Copy (see Figure 1.9), which is a backup copy of a file or folder taken like a snapshot at a particular point in time. This way, you can call back a restore point from a specific time.
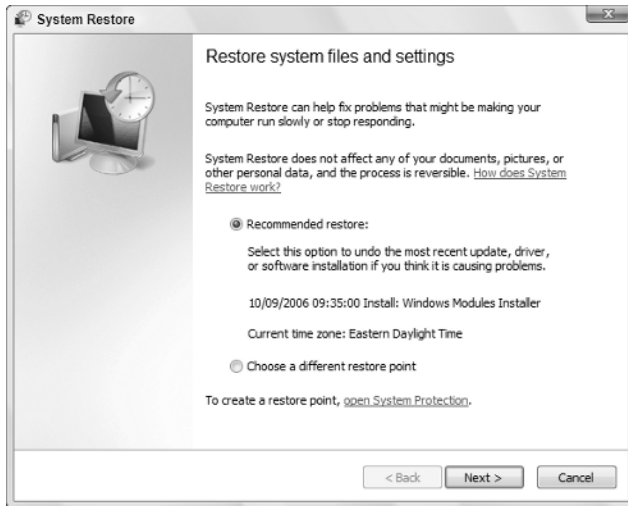

Figure 1.9. The Backup feature in Windows Vista.

Synching data

The new Data Sync feature is designed to let users synchronize data between multiple computers, between a computer and a server, and between your computer and handheld devices. While this will facilitate your life by making sure your PDA and laptop have the same informa-tion, it is important to note that Windows Vista does not integrate any third-party sync tools. For example, if you wish to sync your Palm Pilot, you will need to make sure you have the proper software from the manu-facturer so that you can sync it with Windows Vista.

Speech recognition

As mentioned earlier in the Ease of Access section, Windows Vista now makes it possible to use speech recognition software to work with your computer using your voice. Using commonly used applications, you can dictate documents or e-mails or even fill out forms. Speech recognition is part of the Section 508 legislation in the United States that required

software to be readable (in other words, compatible with several reader standards) for speech recognition software.

Windows SideShow

Windows SideShow (see Figure 1.10), not to be confused with SlideShow, is a new technology designed for laptops that allows users to store important information, such as contacts or e-mails. You can even listen to your favorite tunes using the Windows Media Player through SideShow. This information can then be displayed using a secondary (built-in) display without having to power up your computer. This is a feature for mobile computers only; however, most laptops currently available in retail stores do not have this secondary display. This display is usually no more than several inches by several inches in size.
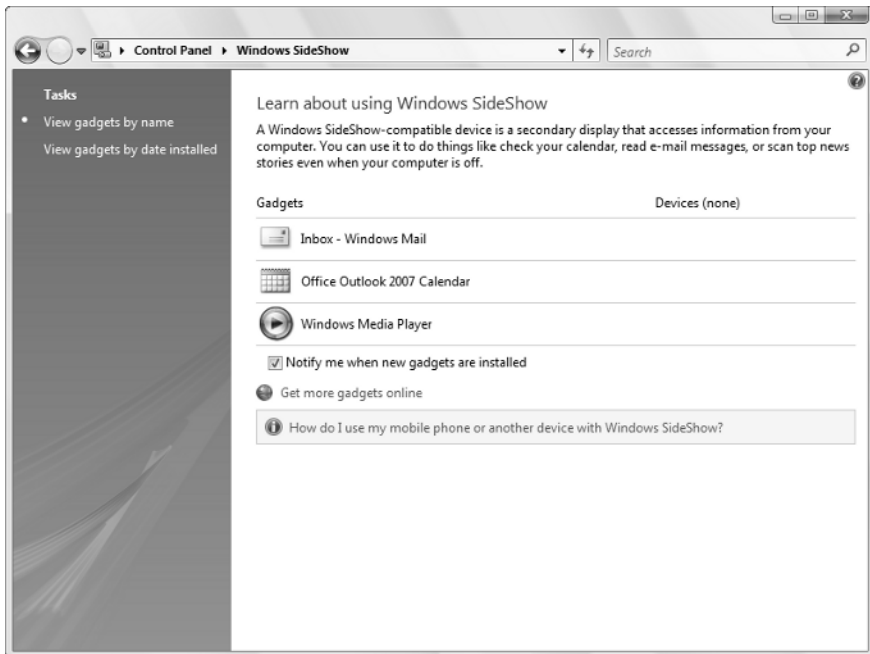

Figure 1.10. The Microsoft Windows SideShow is set through the Control Panel.

Windows multimedia

Windows Vista features new multimedia features and updates. What was formerly called Windows Movie Maker is now the Windows DVD Maker.

Depending on your edition of Vista, you can watch or record live television. Windows Media Player 11 also ships with Windows Vista releases (unless you reside within the European Union).

Windows Update

Okay, this feature is not new but rather an improvement over the version in Windows XP. The Windows Update feature now is certainly more low-key; for example, you can tell it to automatically update you computer without the intrusive dialog boxes that appear in Windows XP. You can perform Windows Update (see Figure 1.11) either running as a background application or as a primary application before installing your updates. Critics maintain that Windows uses an archaic Web-based updater; however, we dispute such a notion. Unlike Windows XP, which required Internet Explorer to download updates, Windows Vista lets you do everything from a window without having to use your browser.

This overview highlights some of the new features that await you in Microsoft Windows Vista. These features, as well as others, are detailed in their respective sections throughout this book.
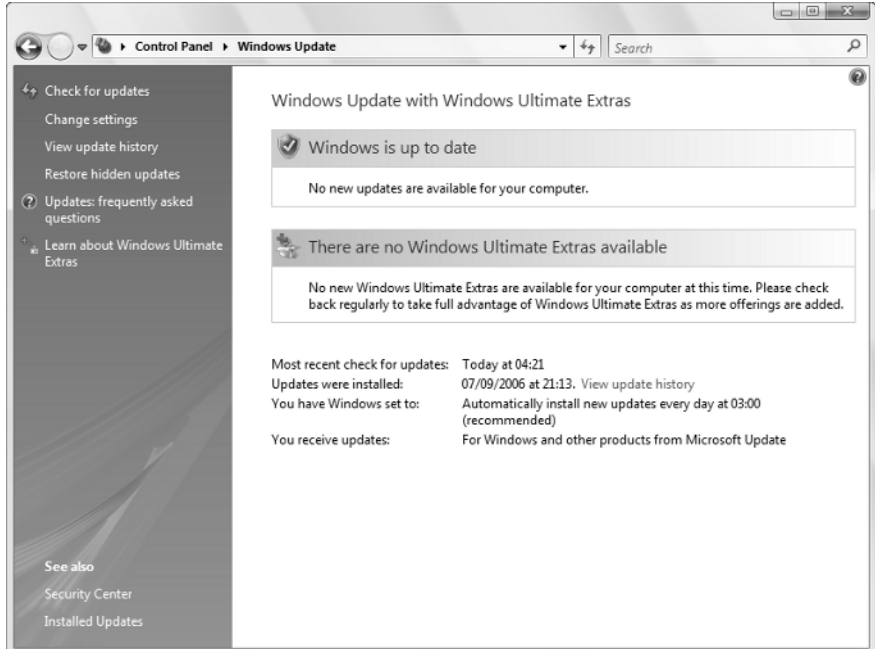

Figure 1.11. The Windows Update feature keeps your system up to speed.

Other applications

Windows Vista features some new goodies, most of which are detailed later in this book. For those who are tired of the same old toys, Vista has included some new games in its repertoire. The Outlook Express mail client is now replaced by Microsoft Mail, which is really the same product with a new name although it does feature some new, albeit very necessary, security tools. Windows Meeting Space is a new online collaboration tool that enables you to work remotely and share files with other users.

It also features several other low-level applications, like Calendar and Contacts, whose functions are fairly obvious. These are basically freebie apps that don't add much value to Vista since they are often replaced with more powerful applications, for example, Microsoft Office.

Windows Vista also features a Media Center (Ultimate edition) that lets you access pretty much every source of existing multimedia, if you have the hardware to do it. In other media news, Vista now has a Microsoft venture called URGE (see Figure 1.12), which is akin to Apple's iTunes. Finally, Microsoft continues Marketplace, which is a Microsoft portal that allows you to buy Vista-ready equipment from third-party vendors.

Figure 1.12. URGE, Microsoft's foray into digital music sales.

The many editions of Windows Vista

Not surprisingly, Windows Vista is available in a number of different versions that are really focused on a specific type of user. In fact, six different

Watch Out!

Do not attempt to run 64-bit Windows on a 32-bit computer; it will not work. If you are not sure if your computer is 32-bit or 64-bit, it's a safe bet that you are running a 32-bit computer.

editions are available, all of which come in 32- and 64-bit formats (with the exception of the Windows Vista Starter, which we discuss later in the chapter).

The new editions are Windows Vista Starter, Windows Vista Home Basic, Windows Vista Home Premium, Windows Vista Business, Windows Vista Enterprise, and Windows Vista Ultimate.

What? Well, you certainly can't say that Microsoft didn't leave you any choice when it comes to picking your Vista (and if you think this list is impressive, wait until you see the list of Office 2007 editions!). But, which one is right for you?

Picking the right version will not be a difficult choice, simply because as a consumer you only really have three options: Home Basic, Home Premium, and Ultimate.

Deciding on which of the three to go for is easy; simply ask yourself a few questions, such as "Is multimedia important to me?", "Will I need to create a small office network at home?", "How old is my PC?", or "Do I really just need an OS to run my computer?"

Let's take a closer look at each version and find the right Vista for you.

Windows Vista Starter

The Starter edition is, if you are reading this book, an edition you will most likely never, ever see. In an effort to combat the spread of pirated and counterfeit software, Microsoft created the Starter edition that is only available in countries that have "emerging market" status.

The Starter edition is severely limited in terms of functionality; in fact, you can only open up to three windows at a time. This is also the only Windows Vista edition that does not have a 64-bit version; it can only be used in 32-bit. Quite frankly, this version is a bare-bones version of Windows Vista and would not do heavy-duty users much good.

One can surmise that the idea behind the Starter edition is to try and prevent software piracy. Unfortunately, software piracy will probably never go away; however, by releasing Starter editions, software companies might be taking a big step toward reducing piracy since this version is

slated to be considerably cheaper than other versions of Windows Vista. Of course, once software pirates see what the Starter edition is missing, they will most likely be back to old tricks with any of the following editions!

Windows Vista Home Basic

The Home Basic edition is the equivalent of the Windows XP Home edition. This edition is probably the best, or most practical, edition for your typical home user.

The Home Basic edition is a no-frills operating system that has a nice balance of features and security that are more than suitable for most home users. The Basic edition, like all Vista editions, includes most of the new features that are now available in Vista. However, there is one notable exception, the Aero Glass theme that you will read about in Chapter 4 is not available in Home Basic, but there is an Aero interface, albeit one that is not transparent.

Windows Vista Home Premium

If you have to think of an XP equivalent for Home Premium, I guess you could say that it's like a little bit of Home Basic and a whole lot of Windows XP Media Center Edition. Home Premium has all the features found in Basic, but it also features new multimedia features, such as HDTM support and DVD authoring. It also features the Aero Glass theme that Basic does not offer.

Home Premium also features all of the Media Center Edition features, in addition to the two listed above. If you are lucky enough to find someplace with an Xbox 360 in stock, you can also connect Home Premium to the console for use in multiple rooms.

Windows Vista Business

The first in the line of "big boys," Windows Vista Business is the modern-day equivalent of XP Professional. If you used Windows XP Professional, Windows Vista Business is the most similar edition.

Business edition prides itself on being ideal for all size deployments, but the justification for such a statement is not quite clear. It looks like Professional has been rebranded as Business in order to put more emphasis on how Windows can improve your business acumen (a debatable point) as well as offer more professional-level system tools — such as

spyware blockers, new backup technologies, and the new Small Business Resources. Curiously, the one missing feature here is still the elephant in the room — where is the on-board antivirus software?

This is the first Vista edition to offer Windows Server domain support and a new version of IIS (Internet Information Services), neither of which are available with the Home versions.

It also features improved organizational features so that you can better run your business.

Windows Vista Enterprise

The Vista Enterprise edition is the older cousin to the Business edition. As far as your average user is concerned, they will not ever have access to the Enterprise edition. In other words, if you buy your operating systems, you will not be using the Enterprise edition. The Enterprise edition is not available for retail purchase, nor is it available as an OEM (meaning that computers shipped with Microsoft Windows operating systems will not have this version).

However, if you work for a large company or one that uses a significant number of Windows licenses, it is possible that you may use this edition of Microsoft Vista. If this is you, then this is what you need to know about Vista Enterprise: It features a multilingual user interface and is bundled with Virtual PC as well as a new drive encryption feature.

If you work in a multilingual or international environment, you can use the Enterprise edition to change the language or dialog boxes and menus on the fly. Using the Virtual PC feature, you can emulate a "foreign" operating system in order to run applications. Finally, the Windows BitLocker™ Drive Encryption helps protect data in case your computer (especially laptops) is lost or stolen. Curiously, this new data protection feature is not available in Vista Business. If you want it, you'll need to pony up the dough and buy the Windows Vista Ultimate edition.

Windows Vista Ultimate

The Vista Ultimate edition is the total package for the home user that needs that extra bit of power. We preface this section by saying that if you do not have a powerful, souped-up PC, then this edition is not for you. A true multimedia powerhouse, this edition is really suited to gamers or PC home-theater fans.

Watch Out!
Microsoft Windows Vista is shipping on a DVD, as it is easier than CD-ROM due to data size limitations. While the media may look the same, you must have a DVD-ROM player on your computer in order to install Windows Vista. If you are using a simple CD-ROM drive, the CD cannot be read. If you have an older machine, please refer to your computer documentation to verify the capacity of your ROM drive.

Ultimate edition mixes the best of both Home Premium and Business features and adds a few more toys: a new DVD-ripping feature, a tool that tweaks game performance, and podcasting support. Microsoft does not use the term podcasting, however — it has been reborn as blogcasting.

How it will ship

Microsoft is shipping the three retail versions (Home Basic, Home Premium, and Ultimate) on a single DVD. If you do not have a DVD-ROM drive, we believe that Vista will also be made available on a multiple-CD set, though it is worth noting that every pre-sale source lists only DVD versions of Windows Vista. If you are planning on using Premium or Ultimate, you can enter an unlock code through the Control Panel.

Should I make the jump to Windows Vista?

This is basically a rhetorical question; here's another. Can you really afford not to make the jump? Bad questioning aside, both of these questions can be answered with a short answer: Yes.

All things considered, the learning curve for Windows XP users making the upgrade to Windows Vista is not significant if switching between equivalents. Windows XP Home users upgrading to Windows Vista Home Basic should not have much trouble getting used to the new features and layout. Former XP Home users looking to upgrade to Windows Vista Ultimate may have a steeper learning curve as there are more technologically "heavy" features in this edition of Vista. The primary changes for most users to adapt to are simply the change in the Start menus and how things are displayed.

You may have noticed that within the past year, more and more software applications required at least the use of Microsoft Windows XP SP2. As Windows Vista becomes more and more mainstream (read: as more and more people are comfortable with installing or upgrading to a new

Watch Out!

Some people, especially businesses that must upgrade a number of computers in order to run Microsoft Vista, are hesitant to install the first release of an operating system. Given the important role an OS plays in the operation of a computer, Microsoft surely recognizes this and would probably not release a product that is not ready to see the light of day. If you have doubts, you can always wait until a subsequent release, such as Service Pack 1, to make the jump.

operating system), more and more applications will be available that are built on Vista technology. For example, you could run Microsoft Office 2007 on Windows XP SP 2, but why? The software was designed to use Vista's display and search features. Most peripheral developers now have Vista-compatible drivers available for their products. Fortunately, Windows Vista does a pretty good job of installing those drivers during Vista installation.

Eventually, there will come a point in time where you will have to make the jump or switch to another operating system. Even the most loyal fans of Windows 3.11 and Windows 95 saw the writing on the wall and switched when it was time.

Ultimately, we feel that most users will be happy with Windows Vista and the new features and security that it provides. If you don't believe me, the next 600 or so pages are here to convince you.

What Microsoft did right

Microsoft definitely pulled out all the stops when it came to designing and releasing Windows Vista. From the beta, Microsoft did an overall good job in communicating with partners and releasing remarkably stable beta builds for review and testing. We also appreciate how Microsoft maintained transparency throughout the early stages of Microsoft Vista development.

One of the first things Microsoft did right is Internet Explorer 7. This new and very improved Web browser clearly intended to fix previous wrongs by putting more emphasis on security and personal protection. This includes the new anti-phishing tool that helps crack down on phishing sites. One of the biggest compliments that we can give Internet Explorer 7 is that it looks like its developers were greatly inspired by its free competitor, FireFox. Similar features include the use of tabs to a one-stop

cache/history clearing button, not to mention search engines available from the application interface. For a brief period of time, IE7 launched with two open tabs — your home page (`www.msn.com` by default) and the Windows Live Web site. Fortunately, this was quickly corrected so that only the home page appeared. Overall, you may personally prefer another browser; it's hard to argue that IE7 isn't an improvement over IE6.

Another reason to celebrate Microsoft Vista is the new anti-spyware application called Microsoft Defender. Finally catching up and responding to one of the biggest security threats to home users in recent years, Microsoft finally released an "in house" application that checks for and removes dangerous spyware from your machine. If you are unfamiliar with spyware and its risks, it is software that can display pop-ups (advertisements) or track user actions and collect personal data or modify personalized settings in Windows.

Defender is designed to sit in the background and monitor your computer in real-time; should Spyware or any other malicious software cause a security breach, Defender asks you to take action. You can also program Defender to scan your computer at your leisure. You can manually update the latest spyware definitions from the application interface or set the application to download updates as they become available.

Yes, Microsoft already has an existing anti-spyware application called Microsoft Windows AntiSpyware, but this application never left beta status and was never integrated with a Microsoft Windows release. Defender is the next version of Microsoft Windows AntiSpyware and is integrated with Microsoft Vista.

The improved firewall is another positive security enhancement as it offers bidirectional support — it monitors both inbound and outbound data. Surprisingly, it has taken Microsoft a longer time that I would have hoped to offer this rather basic firewall feature, but it's better late than never! The disk encryption feature (BitLocker™ Drive Encryption) is a nod to PGP, which has offered such protection for years, but it is also a welcome addition to the Windows Vista family, if you buy the right edition.

Microsoft has also improved its search functions by including a new desktop search feature. This new search function is lightning fast compared to the Windows XP search function. If you are connected to a Microsoft Vista network, you can also expand the search to include computers on the Vista network.

Aero is also a really cool feature or environment; however, it's value depends on how much you use your computer or are willing to spend on it. Its enhanced visualizations make the long hours we log on our computers worth the extra hardware.

Finally, Windows greatly improves the installation process. What used to take well over an hour depending on how powerful your computer is now takes approximately 35 minutes to install and minutes to set up once installed.

Microsoft spent a lot of time playing catch-up with the Windows Vista release. Where innovation may not be the number one priority in this release, it definitely corrects a fair amount of past wrongs, which shows that Microsoft has its head pointing in the right direction.

What Microsoft got wrong

Microsoft is not totally out of the dog house, despite the many stellar qualities of this Vista release. For example, despite the focused look on improved security, Microsoft has never put out one of the most glaringly missing tools: an antivirus software application. Although it may seem that the market may be fairly covered, this has not stopped Microsoft from putting out competitive software in the past. Although you can always sign up for Windows OneCare (a pay subscription service that offers antivirus protection, firewall, and so on), it would have been nice to see it in Microsoft Vista. This is especially true because Windows OneCare is currently only available for Windows XP, though there is currently a Beta version now available for Windows Vista.

While Microsoft is commended in the previous section for correcting previous wrongs or oversights, it is still a shame that there was not room left over for more innovative features. For example, one particularly exciting feature, the WinFS file server, which was originally slated to be part of Microsoft Vista, has been shelved for this release.

The biggest negative surrounding Windows Vista is without a doubt Microsoft's inability to manage PR and communications involving the operating system. Unfortunately, Microsoft always seemed to be reacting to a problem — be it personnel, development, or marketing — instead of getting in front of the problem. As a result, there was quite a bit of concern as to the health of the company on numerous occasions throughout 2005 and 2006. Microsoft's ongoing litigation in Europe and rumblings

in Asia didn't help the company's image as they worked to get Vista out the door. The head of Microsoft's operating systems group left just prior to the RC1 release; which didn't seem to affect dates, but neither did it add to perceived company stability.

Another concern is potential computer limitations. For example, one of the authors of this book is running 768MB of RAM with a Pentium 4 processor, and the memory seems barely sufficient. We would not recommend running Microsoft Vista without at least 1GB of RAM on board, despite Microsoft's insistence that 512MB is adequate. Most new computers are currently shipping with at least 512MB of RAM on board, but the minimum is rarely enough to get by let alone take full advantage of resources. If you are lacking in memory, you can go to a more Classic look under Vista to free up system resources, but you want nice and pretty like everyone else, and not to have to pay money for the same old looking Windows, right?

This is a legitimate problem because Windows Vista will make a significant number of computers obsolete. Why? Well, the memory might not be so much a problem as other pieces of hardware, such as video cards. For example, your computer needs to support the Windows Vista Display Driver Model if you want to enjoy the new Aero theme.

In terms of graphics, unless your graphics processor supports DirectX9-level shaders, you cannot take advantage of the 3D accelerated elements. Older graphics cards do not support this, nor do a lot of modern laptops. If you do decide to upgrade your graphics card, you need to re-look your entire computer. If you are using an older or low-end computer, you might not have an AGP or PCI-Express slot (the equivalent of a souped-up PCI slot on your motherboard that is designed for high-quality graphics cards). You may also need to buy a power supply to handle the video card requirements.

So, yeah, many new or recent computers will be able to run Windows Vista, but you do run a significant risk of feature loss. This is particularly a problem in countries outside the United States where hardware or new computers are considerably more expensive, especially due to high local taxes. Microsoft's proposed workaround to the above problems is to simply buy a new Windows Vista-ready computer to replace your old one. Are people ready to spend a lot of money on a new or revamped computer now, especially when Windows XP is a tried and true operating system

that has worked fine over the past few years? Are local economies conducive to consumers' spending on new computers and parts?

Two other issues have caused alarm among users, but these are not universally shared concerns. The first is the price: There have been a number of rumblings online and at the water cooler about the pricing scheme. Speaking to the communication problems we mentioned earlier in this section, the Windows Vista pricing information "leaked" to Canadian press and then appeared on the Amazon.com Web site. This pricing information is given in the following section. Given the cost of buying some of the on-board features, such as PGP to replace the disk encryption or third-party DVD ripping software, prices seem to be relatively fair, though certainly not cheap. The second issue is the increased integration of DRM (Digital Rights Management), which involves the protection of audio and video copyrights. This issue is discussed in greater detail in the Windows Media section.

Other members of the Vista family

There is more to the Windows Vista family than meets the eye or is covered in this chapter. In fact, Vista rears its head in a number of different fashions. Not all versions are available for all users and not all versions will necessarily be available at the time of the general release currently planned for January 2007.

Microsoft Windows Vista 64-bit

With the exception of the Starter edition, Windows Vista is available in 64-bit for all other editions. Essentially a recompiled version of the standard 32-bit Vista, this edition provides increased performance and reliability while running natively with a 64-bit processor.

This version is probably not necessary for most home users, but rather developers and other information technology professionals. You can also expect that, for this reason, it will probably be considerably more expensive than the standard 32-bit versions.

Microsoft Windows Vista N

Microsoft also has several versions of Vista N, which is a marketing way of saying "for the European market." After a number of years of legal wrangling during the Windows XP days, Microsoft agreed to release a special

version of the Windows operating system in the European Union without the Windows Media Player. Of course, there is no price reduction for this Media Player–less Windows.

Please note that this version is not available outside of the European Union. At the time of writing, there were some renewed concerns in the EU about Microsoft's dominance and how the court's judgments' were being applied. At the moment, no other changes have been made to the N version.

Perhaps not ironically, no major retailers shipped units with Windows XP N on board and sales were dismal. Windows Vista N is likely to have the same result; it exists to satisfy a court requirement.

Windows Vista Tablet PC edition

Are Tablet PCs the Next Big Thing? Some people think so, and several vendors have developed specialized hardware that acts like an electronic version of a notebook. The Tablet PC edition of Windows Vista is still in the works from what we have understood, but Microsoft is remaining quiet about it. What we do know is that most Vista editions are compatible with Tablet PC.

Tablet PC features are currently available in every edition, except Start and Home Basic. We have read of successful installations and uses of the various CTP releases on Tablet PC. However, at this point in time, no release date has been made public for a Tablet PC–specific release. In the interim, use one of the Windows Vista editions supporting the use of Tablet PC.

Choosing the right edition

Table 1.1 contains a non-exhaustive list of various features in Windows Vista and in what edition(s) you can find them. Please note that we didn't include Windows Vista Home N and Windows Vista Business N in this table. These editions, available only in Europe, are the same as their standard counterparts, with the exception of the missing Windows Media Player 11 application. European users wishing to use this application will have to download it directly from the Microsoft Web site.

The Starter edition is also excluded from this list; most readers enjoying this book will not have access to it. For a complete list of features by edition, you should check out the Windows Vista Product Guide. This list is currently available for Beta 2 at `www.microsoft.com/downloads/details.aspx?FamilyID=bbc16ebf-4823-4a12-afe1-5b40b2ad3725&DisplayLang=en`.

Table 1.1. Features in editions

Feature	Home Basic	Home Premium	Business	Enterprise	Ultimate
User Account Control	*	*	*	*	*
Windows Security Center	*	*	*	*	*
Windows Defender	*	*	*	*	*
Windows Firewall	*	*	*	*	*
Parental Controls	*	*			*
Windows ReadyDrive	*	*	*	*	*
Service Hardening	*	*	*	*	*
Windows ShadowCopy			*	*	*
Encrypting File System			*	*	*
Virtual PC Express				*	*
Windows BitLocker				*	*
Windows Anytime Upgrade	*	*	*		
Aero interface		*	*	*	*
Instant Search	*	*	*	*	*
Windows SuperFetch	*	*	*	*	*
Windows ReadyBoost	*	*	*	*	*
Windows Media Player 11	*	*	*	*	*
Windows Movie Maker	*	*	*	*	*
Windows DVD Maker		*			*
Premium games		*	*	*	*
Windows Fax and Scan			*	*	*
Tablet PC		*	*	*	*
Windows SideShow		*	*	*	*
PC to PC Sync		*	*	*	*

Table 1.1. *continued*

Feature	Home Basic	Home Premium	Business	Enterprise	Ultimate
Remote Desktop	Client only	Client only	*	*	*
Offline files and folders			*	*	*
Roaming user profiles			*	*	*
Internet Information Server (IIS)			*	*	*
Windows Media Center		*			*
Speech Recognition	*	*	*	*	*
XPS Document support	*	*	*	*	*
Network diagnostics	*	*	*	*	*
Windows Mail	*	*	*	*	*
Windows Calendar	*	*	*	*	*
Themed slide shows		*			*
Internet Explorer 7	*	*	*	*	*
Accessibility settings	*	*	*	*	*
Dual processors	*	*	*	*	*
Xbox 360 support		*			*
Scheduled file backup		*	*	*	*
Windows Vista Basic interface	*	*	*	*	*

Pricing Windows Vista

The Windows Vista pricing scheme has the potential to be confusing. Although the prices are pretty straightforward, it is easy to see how users can be confused when buying supplemental licenses and have to pick the type of additional license. Each license grants the use for a single computer; you can also buy additional licenses for a slightly discounted price.

When we say slightly, we mean slightly! The additional license is approximately $20 to $40 less than an upgrade license. It is our understanding that one license is for a single computer and not up to three computers, which is often the case with software.

Table 1.2. lists the suggested retail prices; they are what you will most likely pay at major retail stores. Of course, if you are buying a new computer with Windows Vista installed, the price of the operating system is included in the cost of the computer. We suspect that most users will be able to take advantage of some sort of upgrade; we discuss upgrade compatibility in Chapter 2.

Table 1.2. Pricing editions

Edition	Full version	Upgrade price	Additional license	Additional upgrade license
Windows Vista Home Basic	$199.00	$99.95	$179.00	$89.95
Windows Vista Home Premium	$239.00	$159.00	$215.00	$143.00
Windows Vista Business	$299.00	$199.00	$269.00	$179.00
Windows Vista Ultimate	$399.00	$259.00	$359.00	$233.00

If you do buy Windows Vista from a retail outlet, be sure to verify that exactly what you are buying corresponds to your needs. We advise you to

- Determine what edition of Windows Vista you need.
- Verify upgrade compatibility and determine if you need a full release or an upgrade.
- If you need an additional license, verify, based on the previous step, if you need an additional full installation or upgrade license.

Just the facts

- Windows Vista is Microsoft's latest operating system, due in late 2006 or early 2007. It features five different editions.

- Windows Vista features a number of new features, including the Aero environment.

- The Start menu is dramatically different in Windows Vista.

- There are a number of different Windows Vista versions beyond the usual standard edition; these include Windows Vista N and 64-bit versions.

- Some features are only available in certain editions; consult the table in this chapter or the Microsoft Web site to make sure that you by the right edition if you need a particular feature.