Part I

Surviving Setup

Selecting the Right Windows 7 Edition

Chapter

1

♦ ♦

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♦ ♦

If you haven't purchased Windows 7 yet—or you'd like to know whether or not it's worth upgrading from the version you do have to a more capable version—this chapter is for you. Here, we'll explain the differences between the many Windows 7 product editions and help you pick the version that makes the most sense for you.

The Way We Were: XP and Vista Product Editions

Back in 2001, life was easy: Microsoft released Windows XP in just two product editions, Windows XP Home Edition and Windows XP Professional Edition. The difference between the products was fairly obvious, and with its enhanced feature set, XP Pro was the more expensive and desirable version, as one might expect.

Over time, however, Microsoft muddied the waters with a wealth of new XP product editions. Three major product editions were added: Windows XP Media Center Edition (which received three major releases and one minor update between 2002 and 2005), Windows XP Tablet PC Edition (which received two major releases between 2002 and 2005), and Windows XP Professional x64 Edition, which took most of XP Pro's feature set and brought it to the x64 hardware platform. Other XP versions, such as XP Embedded and XP Starter Edition, can't really be considered mainstream products, because they targeted specific usage scenarios and were never made broadly available to consumers.

Secret

Most PCs sold during Windows XP's lifetime were 32-bit computers based on Intel's x86 platform. While the industry was widely expected to make the jump to 64-bit computing at some point, that leap came from an unexpected place: Intel's tiny competitor AMD developed the so-called x64 platform, which is essentially a 64-bit version of the aging x86 platform. The x64-based PCs are completely compatible with x86 software, and though all PCs sold today are, in fact, x64-compatible, most PC operating systems to date (including Windows Vista) were sold in 32-bit versions for compatibility reasons. (Even Intel is on board: though the x64 platform was created by AMD, all of Intel's PC-compatible chips are now x64 compatible as well.)

Though not as technically elegant as so-called "native" 64-bit platforms like the ill-fated Itanium, the x64 platform does provide all of the benefits of true 64-bit computing, including most importantly a flat 64-bit memory address space that obliterates the 4GB memory "ceiling" in the 32-bit world. For the purposes of this book, when we refer to 64-bit computing, we mean x64. And as we look ahead to the generation of PCs that will ship during Windows 7's lifetime, what we're going to see, predominantly, are x64 versions of the OS. That said, Windows 7 comes in both x86 and x64 variants, as we'll discuss later in this chapter.

You may occasionally hear Windows 7's product editions referred to as *SKUs*. This term stands for *stock keeping unit*. While we typically use the more common terms *product edition, version,* and *product versions* throughout this book instead, these terms are all pretty much interchangeable.

Following is a list of the major Windows XP versions that Microsoft shipped between 2001 and 2006. In a moment, we'll compare these products with their corresponding Vista versions:

Windows XP Starter Edition (underdeveloped countries only)

Windows XP Embedded (sold in embedded devices only)

Windows XP Home Edition

Windows XP Home Edition N (European Union only)

Windows XP Media Center Edition

Windows XP Tablet Edition

Windows XP Professional Edition

Windows XP Professional Edition N (European Union only)

Windows XP Professional Edition K (South Korea only)

Windows XP Professional x64 Edition

Windows XP for Itanium-based systems

All Windows XP product versions, except Windows XP Professional x64 Edition, and Windows XP for Itanium-based systems, were available only in 32-bit versions.

note The N and K versions of Windows exist because of antitrust-related actions against Microsoft around the world. These versions are each limited in some way and have proven unpopular with customers. Obviously, Microsoft wouldn't even make them unless they were so required.

For Windows Vista, Microsoft surveyed the market and came away with two observations. First, its experiment splitting the Windows XP (and Microsoft Office) product lines into multiple product editions had proven enormously successful for the company. Second, customers appeared willing to pay a bit more for premium product SKUs, such as XP Media Center Edition, that offered extra features. It doesn't take a rocket scientist to see that Microsoft's experiences over the past few years led directly to the situation we had with Windows Vista: the company created six core Vista product editions, two of which were considered premium versions. Or, if you include the so-called N and K editions (for the European Union and South Korea, respectively), there were actually nine product editions. Or, if you count the 32-bit and x64 (64-bit) versions separately, since they are in fact sold separately for the most part, there were 17 product editions. Add the (RED) version of

Windows Vista Ultimate—which was originally available only with select new PCs from Dell and, eventually, at retail—and you've got 18. Or something. Here's the list:

Windows Vista Starter

Windows Vista Home Basic

Windows Vista Home Basic (x64)

Windows Vista Home Premium

Windows Vista Home Premium N (European Union only)

Windows Vista Home Premium (x64)

Windows Vista Home Premium N (x64) (European Union only)

Windows Vista Business

Windows Vista Business K (South Korea only)

Windows Vista Business N (European Union only)

Windows Vista Business (x64)

Windows Vista Business K (x64) (South Korea only)

Windows Vista Business N (x64) (European Union only)

Windows Vista Enterprise

Windows Vista Enterprise (x64)

Windows Vista Ultimate

Windows Vista Ultimate (x64)

Windows Vista Ultimate Product (RED) Edition

Secret

Microsoft originally planned an Itanium version of Windows Vista, which would have run on high-end workstations, but the company cancelled this project during the beta process due to a lack of customer interest. Thus, the mainstream PC platform of the future is now secure: it will be 64-bit, and it will be x64, not Itanium.

In addition to spamming the market with an unbelievable number of product editions, Microsoft also increased the number of ways in which customers could acquire Windows Vista. As always, most individuals simply got Vista with a new PC, and some continued to purchase retail boxed copies of Windows Vista. Then there were the not-quite-retail versions of the software, called *OEM versions*, which were technically supposed to be sold only to PC makers, but were widely available online; and a new option called Windows Anytime Upgrade that enabled you to upgrade from one version of Vista to another. It was confusing. And it's still that confusing, because these purchase options are all available with Windows 7 as well. But then that's why you're reading this chapter, right?

Here's our advice: don't get bogged down in semantics or complicated counting exercises. With a little bit of knowledge about how these product editions break down and are sold, you can whittle the list down quite a bit very quickly and easily. Then, you can evaluate

which features are available in which editions and choose the one that's right for you based on your needs.

Windows 7 Product Editions: Only a Little Bit Simpler

As with Windows Vista, Windows 7 will ship in many different product editions. On the surface, this seems confusing—just as confusing, in fact, as the Vista product line. But this time, Microsoft made a few commonsense changes to the product lineup that should make things easier on most people. So assume the Lotus position, breathe deeply, and relax. It's not as bad as it sounds.

For starters, though there are, in fact, almost as many Windows 7 product editions as there were for Windows Vista, most individuals will only need to consider a handful of commonsense product editions. And with Windows 7, unlike with Vista, these product editions are all true supersets of each other, so there are no overlapping feature sets, as there were with some of the Vista product editions. That's good news, both for those migrating to Windows 7 and for those Windows 7 users who think they might want a more powerful product edition.

Consider a typical issue with the Windows Vista product editions. In that version of Windows, the Windows Vista Business edition didn't include Windows Media Center, a fun digital media application that was part of the Home Premium product. But business users enjoy digital media too, especially when traveling, and they told Microsoft that this division in the feature set didn't make sense.

Okay, here's what Microsoft is offering with Windows 7:

> Windows 7 Home Basic (developing markets only)
>
> Windows 7 Starter
>
> Windows 7 Starter x64
>
> Windows 7 Home Premium
>
> Windows 7 Home Premium (x64)
>
> Windows 7 Home Premium N (European Union only)
>
> Windows 7 Professional
>
> Windows 7 Professional (x64)
>
> Windows 7 Enterprise
>
> Windows 7 Enterprise (x64)
>
> Windows 7 Ultimate
>
> Windows 7 Ultimate (x64)

Secret

See the big change? That's right: the Starter and Home Basic versions have switched places this time around. In Windows Vista, Starter edition was aimed at developing markets only and wasn't available to mainstream Windows customers, while Home Basic was broadly available worldwide on budget PCs. In Windows 7, this is no longer the case. Now, Windows 7 Home Basic is made available only with new PC purchases in emerging markets, while Windows 7 Starter will be sold worldwide, primarily on netbooks and other very low end, budget PCs.

Why not just have one or two product editions, as we did back when Windows XP first shipped? Microsoft says that it has over one billion Windows users worldwide and that their needs are diverse and cannot all be met with a single product. So it has instead moved to a "Russian nesting doll" model, where as you increment up the list of Windows 7 product editions, features or capabilities are simply adopted from the previous editions. They are true supersets of each other, and additive, not arbitrarily different.

Secret

Because of antitrust regulations in the European Union (EU), Microsoft created special "E" versions of the various Windows 7 versions that do not include Internet Explorer. Unlike other versions of Windows 7, these Windows 7 versions don't allow you to add or remove Internet Explorer via the normal Control Panel-based mechanism. But Microsoft is making Internet Explorer available to users of these products separately, and of course, PC makers in the EU will always include a Web browser with their Windows 7 E-based machines. Aside from the absence of Internet Explorer, the Windows 7 E versions are functionally identical to their U.S.-based counterparts. Note, too, that the Windows 7 N Editions, also sold only in Europe, do not include IE 8 either.

Understanding the Differences and Choosing the Right Version

The first step is to understand the differences between each Windows 7 product edition. Then, you need to understand the various ways in which you can acquire Windows 7, either as a standalone product or as an upgrade to an existing version of Windows (including, confusingly, Windows 7 itself). After that, you can weigh the various trade-offs of each option—features, price, and so on—and act accordingly.

Let's do it.

Step 1: Whittling Down the Product Editions List

While the clinically sarcastic will dryly complain that there is precious real-world difference between Vista's 18 product editions and Windows 7's 12, that's just a smoke screen. In the real world, most people will have to choose only between two Windows 7 product editions. To get to this number, we need to temporarily forget about the differences between 32-bit and 64-bit versions (don't worry, we'll get to that) and just skip over the versions that really don't matter. Once we do this, the following list emerges:

Windows 7 Starter (32-bit or x64)

Windows 7 Home Premium (x64)

Windows 7 Professional (x64)

Windows 7 Ultimate (x64)

Okay, this is four options, not two, but it's still a much more manageable list than what we started with. Before we whittle this down to just two options, let's take a closer look at the four options now in front of us. After all, there were 12 product editions in the original list. How did we cut it down this far so quickly?

Here's how.

Windows 7 Home Basic

You don't need or want Windows 7 Home Basic. But it's even simpler than that: you can't get it anyway. That's because Windows 7 Home Basic is available only with new PCs in emerging markets. You can't get it in the U.S., Europe, or any other developed area.

So unless you're buying a PC in one of the few countries in which you can acquire Windows 7 Home Basic, you probably won't hear much more about this product. And if you are buying such a PC, your computing needs are pretty basic, so it's unlikely that you're ready for this book just yet.

The K and N Editions Aren't for You, Either

Whatever Windows 7 versions are being offered in Korea (with a K moniker) or in Europe (with an N moniker), they're designed to satisfy the antitrust regulations and rulings in those locales, and you should also ignore them. Why? Because these versions are more limited than the non-K and non-N Windows 7 versions that are sold in South Korea and the EU, respectively. And they don't cost any less, so there's no reason to even consider them, even if you do live in these areas.

Consider the Windows 7 N edition, which is sold only in EU markets. This product came about because of a 2004 EU ruling that required Microsoft to offer versions of Windows without the Windows Media Player included. The requirement for a separate version of Windows was intended to enhance competition in the market for media players, such as the downloadable RealPlayer application.

But because Microsoft sells its N versions for the same price as its full-featured Windows versions, demand for the N versions never materialized. Until there's a big price difference, consumers will continue to interpret N to mean Not Interested. Ditto for the K versions, though we're having trouble coming up with a witty K-related word to help you remember why. All you need to remember is that you should forget these versions ever existed.

You're Not the Enterprise

Windows 7 Enterprise is a special version of Windows 7 that is aimed at Microsoft's largest corporate customers. It is functionally identical to Windows 7 Ultimate, but there is one difference between the two products: whereas Windows 7 Ultimate is available at retail (both with new PCs and as stand-alone software), Windows 7 Enterprise is available only through Microsoft's corporate volume licensing subscription programs. Because of the unique way in which you must acquire this version, chances are good you won't be hunting around for Windows 7 Enterprise. That said, if you do get a PC from work with Windows 7 Enterprise on it, you're using the functional equivalent of Windows 7 Ultimate.

32-bit Versions of Windows 7

The differences between 32-bit (x86) versions of Windows 7 and 64-bit (x64) versions are more complex, but here's the weird bit: though virtually every single PC sold over the past several years was x64 compatible, virtually every single copy of Windows that went out the door before Windows 7 was, in fact, a 32-bit version.

No more. With Windows 7, it's time to leave the 32-bit world behind for good, and the first step is to run a 64-bit version of Windows 7. These versions of Windows 7 are fully compatible with most of the 32-bit software that runs on 32-bit versions of the OS, and they are likewise just about as compatible with the wide number of hardware devices that are available on the market.

The biggest reason to go 64-bit is RAM: after all, 64-bit versions of Windows 7 can access far more RAM than 32-bit versions (up to 192GB, depending on which version of Windows 7 you're talking about, compared to less than 4GB of RAM in 32-bit versions).

Folks, with one minor exception, it's time to say good-bye to 32-bit versions of Windows. So with Windows 7, almost universally, we recommend that you seek out 64-bit (x64) versions instead.

What is the one exception? Many netbook computers come with a version of Intel's Atom microprocessor that is incompatible with the x64 instruction set, and thus with x64 versions of Windows 7. On such a PC, you will need to use a 32-bit version of Windows 7 instead. And that's just fine: given the limited usage scenarios for these computing lightweights, that's perfectly acceptable. It's also the exception to the rule.

Secret   Contrary to the conventional wisdom, 64-bit software isn't magically faster than 32-bit software. That said, 64-bit PCs running a 64-bit version of Windows 7 and native 64-bit software can often outperform 32-bit alternatives. But that's because you can stick far more RAM in the 64-bit machine: systems with massive amounts of memory just aren't as constrained and can operate to their full potential.

Step 2: Whittling a Little Further

Rationale aside, you may be looking back over the preceding list and thinking, well, hold on a second there: that's still four product editions. Is Microsoft really simplifying anything? Yes, because the vast majority of Windows 7 users will really have to consider only two of these product editions:

> Windows 7 Home Premium
>
> Windows 7 Professional

Microsoft and its partners will focus most of their efforts selling Windows 7 Home Premium and Professional to the retail and consumer markets (and Enterprise to volume licensing business customers). That means most consumers will simply have two options when it comes to Windows 7: Home Premium and Pro—just like with XP when that OS first shipped.

Meanwhile, Ultimate and Starter are, by definition, niche products that are available only to address low-volume but important markets. But what really makes this work is the previously mentioned "Russian stacking doll" structure whereby each version is a true superset of the one below it. This is a huge and important change.

Step 3: Understanding the Differences Between the Product Editions

Once you've whittled the list down to two or four contenders, it's time to evaluate them and understand which features are available in each product edition. There are various ways to present this kind of information, but we find that tables, logically divided by category, are easy on the eyes and mind. Tables 1-1 through 1-9 summarize how the product editions stack up.

Table 1-1: User Interface Features

	Starter	Home Premium	Professional	Ultimate/ Enterprise
Windows Basic UI	Yes	Yes	Yes	Yes
Windows Aero UI	—	Yes	Yes	Yes
Windows Aero Glass effects	—	Yes	Yes	Yes
Aero Peek	—	Yes	Yes	Yes
Aero Snaps	Yes	Yes	Yes	Yes
Aero Shake	—	Yes	Yes	Yes
Aero Background	—	Yes	Yes	Yes
Windows Flip	Yes	Yes	Yes	Yes
Windows Flip 3D	—	Yes	Yes	Yes
Live Taskbar Previews	—	Yes	Yes	Yes
Live Preview (Explorer)	—	Yes	Yes	Yes
Jump Lists	Yes	Yes	Yes	Yes
Windows Search	Yes	Yes	Yes	Yes

Table 1-2: Security Features

	Starter	Home Premium	Professional	Ultimate/ Enterprise
More granular UAC	Yes	Yes	Yes	Yes
Action Center	Yes	Yes	Yes	Yes
Windows Defender	Yes	Yes	Yes	Yes
Windows Firewall	Yes	Yes	Yes	Yes
IE8 Protected Mode and DEP support	Yes	Yes	Yes	Yes
Windows Update (can access Microsoft Update)	Yes	Yes	Yes	Yes
Fast User Switching	Yes	Yes	Yes	Yes
Parental Controls	Yes	Yes	Yes	Yes

Table 1-3: Performance Features

	Starter	Home Premium	Professional	Ultimate/ Enterprise
Windows ReadyDrive	Yes	Yes	Yes	Yes
Windows ReadyBoost	Yes	Yes	Yes	Yes
SuperFetch	Yes	Yes	Yes	Yes
64-bit processor support	Yes	Yes	Yes	Yes
Physical processor support	1	2	2	2
Processor core support	Unlimited	Unlimited	Unlimited	Unlimited
Max RAM (32-bit)	4GB	4GB	4GB	4GB
Max RAM (64-bit)	8GB	16GB	192GB	192GB

Table 1-4: Reliability Features

	Starter	Home Premium	Professional	Ultimate/ Enterprise
Windows Backup	Yes	Yes	Yes	Yes
System image	Yes	Yes	Yes	Yes
Backup to network	—	—	Yes	Yes
Encrypting File System (EFS)	—	—	Yes	Yes
BitLocker	—	—	—	Yes
BitLocker To Go	—	—	—	Yes
Automatic hard disk defragmentation	Yes	Yes	Yes	Yes
Previous Versions	Yes	Yes	Yes	Yes
Create and attach (mount) VHD	Yes	Yes	Yes	Yes

Table 1-5: Bundled Applications

	Starter	Home Premium	Professional	Ultimate/ Enterprise
Internet Explorer 8	Yes	Yes	Yes	Yes
Windows Gadgets and Gallery	Yes	Yes	Yes	Yes
Games Explorer with basic games (FreeCell, Hearts, Minesweeper, Purble Place, Solitaire, Spider Solitaire)	Yes	Yes	Yes	Yes
Premium games (Internet Backgammon, Internet Checkers, Internet Spades, Mahjong Titans)	—	Yes	Yes	Yes
Calculator	Yes	Yes	Yes	Yes
Paint	Yes	Yes	Yes	Yes
Snipping Tool	—	Yes	Yes	Yes
Sticky Notes	—	Yes	Yes	Yes
Windows Journal	—	Yes	Yes	Yes
Windows Fax and Scan	Yes	Yes	Yes	Yes
Windows PowerShell and ISE	Yes	Yes	Yes	Yes
WordPad	Yes	Yes	Yes	Yes
XPS Viewer	Yes	Yes	Yes	Yes
Windows Anytime Upgrade	Yes	Yes	Yes	—

Table 1-6: Digital Media and Devices

	Starter	Home Premium	Professional	Ultimate/ Enterprise
Windows Photo Viewer	Yes	Yes	Yes	Yes
Basic photo slide shows	Yes	Yes	Yes	Yes
Windows Media Player 12 with Play To	Yes	Yes	Yes	Yes
Windows Media Player Remote Media Experience	—	Yes	Yes	Yes
MPEG-2 decoding	—	Yes	Yes	Yes

continues

Table 1-6: Digital Media and Devices *(continued)*

	Starter	Home Premium	Professional	Ultimate/ Enterprise
Dolby Digital compatibility	—	Yes	Yes	Yes
AAC and H.264 decoding	Yes	Yes	Yes	Yes
DVD playback	—	Yes	Yes	Yes
Can install MPEG-2 (DVD playback) add-in	Yes	n/a	n/a	n/a
Windows Media Center	—	Yes	Yes	Yes
Windows DVD Maker	—	Yes	Yes	Yes
Device Stage	Yes	Yes	Yes	Yes
Sync Center	Yes	Yes	Yes	Yes

Table 1-7: Networking Features

	Starter	Home Premium	Professional	Ultimate/ Enterprise
SMB connections	20	20	20	20
Network and Sharing Center	Yes	Yes	Yes	Yes
HomeGroup sharing	Join only	Yes	Yes	Yes
Improved power management	Yes	Yes	Yes	Yes
Connect to a Projector	Yes	Yes	Yes	Yes
Remote Desktop	Yes	Yes	Yes	Yes
Remote Desktop Host	—	—	Yes	Yes
IIS Web Server	—	Yes	Yes	Yes
RSS support	Yes	Yes	Yes	Yes
Internet Connection Sharing	—	Yes	Yes	Yes
Network Bridge	—	Yes	Yes	Yes
Offline files	—	—	Yes	Yes

Table 1-8: Mobility Features

	Starter	*Home Premium*	*Professional*	*Ultimate/ Enterprise*
Windows Mobility Center	—	Yes (No Presentation Mode)	Yes	Yes
Windows Sideshow (Auxiliary display)	—	Yes	Yes	Yes
Sync Center	Yes	Yes	Yes	Yes
Tablet PC functionality	—	Yes	Yes	Yes
Multi-Touch support	—	Yes	Yes	Yes

Table 1-9: Enterprise Features

	Starter	*Home Premium*	*Professional*	*Ultimate/ Enterprise*
Domain join (Windows Server)	—	—	Yes	Yes
XP Mode licensed	—	—	Yes	Yes
AppLocker	—	—	—	Yes
Boot from VHD	—	—	—	Yes
BranchCache	—	—	—	Yes
DirectAccess	—	—	—	Yes
Federated Search (Enterprise Search Scopes)	—	—	—	Yes
Multilingual User Interface (MUI) Language Packs	—	—	—	Yes
Location-aware printing	—	—	Yes	Yes
Subsystem for UNIX-based Applications	—	—	—	Yes

Secret

Though 32-bit versions of Windows 7 "support" 4GB of RAM, they can only access about 3.1GB of RAM, even when a full 4GB of RAM is installed in the PC. This is because of a limitation in the way that 32-bit versions of Windows handle memory access. If you were to install an x64 version of Windows 7 on the same system, you would have access to the entire 4GB of RAM. The 64-bit Windows 7 versions have dramatically improved memory capacity, as noted in the preceding tables.

Secret

The most amazing thing about that 192GB address space on Windows 7 Professional, Enterprise, and Ultimate is that it's a moving target and could, in fact, increase in the years ahead. In fact, it's increased since Windows Vista. On that system, the maximum amount of RAM was a relatively paltry 128GB. Ah, progress.

Step 4: Making the Right Product Edition Choice

Armed with the information in the preceding tables, we can think of Windows 7 as being divided into four basic product categories, each of which is neatly covered by a single product edition.

First up is Windows 7 Starter, which covers the bare-bones end of the market (netbooks and other very low-end PCs). Starter edition offers basic functionality, but has some serious limitations, not the least of which is that it can run only three applications at a time.

Then we have the two mainstream Windows 7 versions, Home Premium and Professional. Home Premium is a superset of Starter: it has no application limitations, comes with the snazzy Aero Glass effects, and includes numerous digital media features. Professional is a superset of Home Premium, adding network backup, EFS, offline file access, and other power user features.

At the top end of the market is Windows 7 Ultimate. This is the full meal deal, and it includes BitLocker, multi-language capabilities, and everything else Windows 7 has to offer.

Let's see how these options break down.

tip

Obviously, there is one other consideration to make here: price. For example, while Windows 7 Ultimate may seem like a best of both worlds type product, it also comes with premium pricing. We'll examine the various ways in which you can purchase Windows 7, and the cost of each option, later in this chapter.

Choosing Between Windows 7 Starter and Home Premium

Table 1-10 shows some of the features that differ between the Starter and Home Premium versions of Windows 7 for home users. If you've decided that a consumer-oriented version of Windows 7 is what you need, Table 1-10 will help you decide which of the two available versions will best suit you.

- ◆ **Choose Starter** if cost is the primary issue and you don't need fancy Aero Glass effects or features like Media Center, the ability to burn DVDs, or any of the other features that come with Home Premium.
- ◆ **Choose Home Premium** if you have a Tablet PC or if you want the more extensive multimedia features of the Home Premium version.

Table 1-10: Comparing Windows 7 Starter and Home Premium

	Starter	*Home Premium*
Aero Glass effects	—	Yes
Aero Peek	—	Yes
Aero Shake	—	Yes
Aero Background	—	Yes
Windows Flip 3D	—	Yes
Live Taskbar Previews	—	Yes
Live Preview (Explorer)	—	Yes
Physical processor support	1	2
Max RAM (64-bit)	8GB	16GB
Premium Games	—	Yes
Snipping Tool, Sticky Notes, Windows Journal	—	Yes
Windows Media Player Remote Media Experience	—	Yes
DVD playback	—	Yes
Windows Media Center	—	Yes
Windows DVD Maker	—	Yes
IIS Web Server	—	Yes
Tablet PC and Multi-Touch support	—	Yes

Choosing Between Windows 7 Home Premium and Professional

Table 1-11 compares the features that are present in the Home Premium and Professional versions of Windows 7.

◆ Windows 7 Professional, unlike Home Premium, supports domain networking. This enables users to log on to a network server using Microsoft's Active Directory (AD) technology and share centrally managed resources.

◆ Windows 7 Professional, also unlike Home Premium, includes support for XP Mode and Windows Virtual PC, which enables you to run XP-compatible applications virtually under Windows 7. This means that Windows 7 Professional (and Enterprise and Ultimate) are much more compatible with legacy applications than is Windows 7 Home Premium.

Table 1-11: Comparing Windows 7 Home Premium and Professional

	Home Premium	*Professional*
Max RAM (64-bit)	16GB	192GB
Backup to network	—	Yes
Encrypting File System (EFS)	—	Yes
Remote Desktop Host	—	Yes
Offline Files	—	Yes
Windows Mobility Center	Yes (No Presentation Mode)	Yes
Domain joining (Windows Server)	—	Yes
Windows XP Mode/Windows Virtual PC	—	Yes
Location-aware printing	—	Yes

Secret

While Windows XP Mode and Windows Virtual PC are new to Windows 7, this isn't the first time Microsoft has attempted to include this technology in Windows. Back during the Windows Vista beta, Windows Vista Enterprise was originally going to include a feature called Virtual PC Express. However, before Windows Vista was finalized, Microsoft decided to make its entire Virtual PC product line—which enables you to run operating systems and applications in virtualized environments under a host OS—available for free. Windows Virtual PC is the new version of Virtual PC, and the big new feature this time around is that Windows 7 Professional, Enterprise, and Ultimate customers can get an entire virtualized Windows XP environment for free with the download. See www.microsoft .com/virtualpc for more information.

Choosing Windows 7 Ultimate

Windows 7 Ultimate combines all of the features that are available in all of the other Windows 7 versions, adds some unique features of its own, and comes with a premium price tag. In fact, Windows 7 Ultimate is so expensive compared to Windows 7 Home Premium and Professional that the only serious reason to get it is if you absolutely must have two drive encryption features, BitLocker and BitLocker To Go. Frankly, it's not worth it for most people.

Secret   The cheapest way to get Windows 7 Ultimate will be with a new PC, and when PC makers have occasional special offers that make it cheaper than usual. Keep your eyes open for such offers: if you can get Ultimate edition for little additional cost, it will absolutely be worth having, since it's the full meal deal.

Purchasing Windows 7

There are almost as many ways to purchase Windows 7 as there are Windows 7 product editions. This can make acquiring Windows 7 somewhat complex, especially if all you want to do is purchase a Setup disc and install the operating system on your own PC. Here are the ways in which you can acquire Microsoft's latest operating system.

With a New PC

The single best way to acquire Windows 7 is with a new PC from a major PC maker such as Dell, HP, or Lenovo. That's because Windows is cheaper when bundled with a new PC, and PC makers spend huge amounts of time testing every hardware device that they sell in order to ensure that customers have the best possible experience.

One thing that has sullied this market, of course, is *crapware*, a practice in the PC market where PC makers include useless or unwanted preinstalled applications on their preconfigured PCs. The good news is that this practice is slowly going away: Dell and other PC makers now offer new PCs without crapware, either for free or for a small fee.

The cost of Windows on a new PC varies from PC maker to PC maker and from machine to machine. Generally speaking, a copy of some version of Windows 7 will be included in the price of virtually every PC sold today, and the actual cost to you will range from roughly $30 to $80. The cost of upgrading to more expensive Windows 7 versions will vary as well. Based on some informal research (OK, we simply browsed the sites of PC makers online) it looks like you can typically move from Windows 7 Starter to Home Premium for less than $30, which is an excellent deal. The upgrade to Windows 7 Professional will typically set you back a bit more, say $35 to $80. And the upgrade to Windows 7 Ultimate is about $125 to $150. (These additional costs are all based on a core system running Windows 7 Starter, and can, of course, change over time.)

As an example, Figure 1-1 shows Dell's "configurator" for a typical home PC.
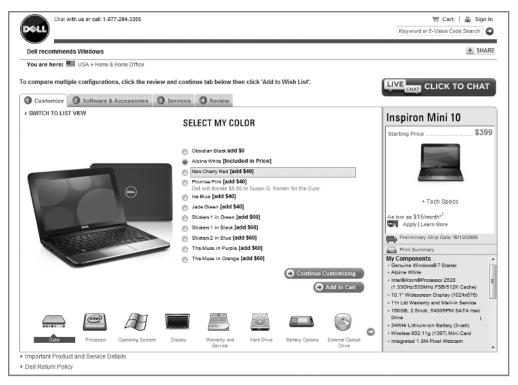
Figure 1-1: When you're buying a new PC, be sure to get the Windows 7 version you really want.

As you'll see in a moment, the cost of upgrading to a better or more expensive Windows 7 version is almost always lower if you do it at the time of the PC purchase. But regardless of the cost, it will always be easier to upgrade during the purchase process because the PC maker will install and configure the OS for you.

Retail Boxed Copies

If you were to walk into an electronics superstore like Best Buy, the versions of Windows 7 you would see are what's known as *retail boxed copies* of the software. You will see both *Full* and *Upgrade* versions of the software, and you should see a version of each for Windows 7 Starter, Home Premium, Home Premium x64, Professional, Professional x64, Ultimate, and Ultimate x64. Disregarding the obvious differences between 32-bit and x64/64-bit versions, here's the difference between each:

◆ **Full version.** A full version of Windows 7 can be used to perform a *clean install* of Windows 7 only. That is, it cannot be used to upgrade an existing version of Windows to Windows 7. Full versions of Windows 7 are more expensive than Upgrade versions.

◆ **Upgrade version.** An upgrade version of Windows 7 can be used to perform a clean install of Windows 7 or upgrade an existing version of Windows to Windows 7. Upgrade versions of Windows 7 are less expensive than Full versions because you must be an existing Windows customer to qualify for Upgrade pricing.

And that's the rub. Understanding whether you qualify for an Upgrade version of Windows 7 can be somewhat confusing. And even then, it's not very clear when you can perform an in-place upgrade over an existing Windows version. Here are some guidelines.

Those Who Don't Qualify for an Upgrade Version of Windows 7

If you are currently running any MS-DOS-based version of Windows—including Windows 95, Windows 98, Windows 98 Second Edition, or Windows Millennium Edition (Me)—or any version of Windows NT (3.x and 4.0), including Windows 2000, you don't qualify for any Upgrade version of Windows 7. That means you will need to grab a more expensive Full version instead. Because the Full versions of Windows 7 cannot be used to perform an in-place upgrade to Windows 7, you'll need to back up all your documents and other data and your application settings, and find all your application install disks or executables so you can reinstall them after Windows 7 is up and running.

Those Who Do Qualify for an Upgrade Version of Windows 7

If you are running any mainstream desktop version of Windows XP—including Windows XP Home Edition, Professional Edition, Media Center Edition (any version), Tablet PC Edition (any version), or XP Professional x64 Edition—you qualify for an Upgrade version of Windows 7.

That said, there is one serious limitation when upgrading from XP: you will not be able to upgrade in-place but will need to perform a clean install instead and then migrate your settings and data over to the new Windows 7 install. (That is, you qualify for Upgrade pricing only.) We explain this process in Chapter 2.

Those Who Qualify for an Upgrade Version of Windows 7 and an In-Place Upgrade

If you're running any version of Windows Vista and you want to upgrade in-place to Windows 7, you can do so. The trick is understanding how different versions of Windows Vista map to different versions of Windows 7. For example, Microsoft will not let you upgrade from Windows Vista Home Premium to Windows 7 Professional. Likewise, you cannot upgrade from a 32-bit version of Vista to a 64-bit version of Windows 7, or vice versa. Table 1-12 clarifies the in-place upgrade story.

Table 1-12: Which Versions of Windows Vista Can Upgrade In-Place to Which Versions of Windows 7

Windows Version	Windows 7 Starter	Windows 7 Home Premium	Windows 7 Professional	Windows 7 Ultimate
Windows Vista Home Starter	No	No	No	No
Windows Vista Home Basic	No	No	No	No
Windows Vista Home Premium	No	Yes	No	No
Windows Vista Business	No	No	Yes	No
Windows Vista Ultimate	No	No	No	Yes

Your decision regarding which version to purchase will also be influenced by the cost difference of the more capable versions. Table 1-13 shows the current U.S. list prices for the different Windows 7 versions. These prices will almost certainly change over time.

Table 1-13: U.S. List Prices for Windows 7 Product Editions

Windows 7 Home Premium	
Windows 7 Home Premium Full	$199.99
Windows 7 Home Premium Upgrade	$119.99
Windows 7 Professional	
Windows 7 Professional Full	$299.99
Windows 7 Professional Upgrade	$199.99
Windows 7 Ultimate	
Windows 7 Ultimate Full	$319.99
Windows 7 Ultimate Upgrade	$219.99

Secret

Adding to the complexity here is that all retail versions of Windows 7, except for Windows 7 Starter, are available in both 32-bit and 64-bit (x64) versions. Windows 7 Starter will not be made available as a retail product but will instead be sold with new PCs only.

Pricing in countries other than the United States will vary, but should adhere to the relative positioning shown in Table 1-13.

Secret

If you're buying a retail copy of Windows 7 and you already own a qualifying previous version of Windows, such as XP, don't buy a full version of Windows 7. Instead, find out what Microsoft's current requirements are to qualify for an upgrade version, which is much cheaper. To successfully load an upgrade version, you usually must be installing onto a machine that has the old version installed, or you must have the old version on a CD (which you insert briefly during the installation of the new OS as proof). Microsoft can change these requirements at any time, so confirm this before whipping out your plastic.

tip Not sure what Windows XP or Vista product edition you have? In that OS, open the Start menu, right-click the My Computer (or, in Vista, Computer) icon, and choose Properties from the pop-up menu that appears. The window that appears will include your Windows product edition.

Secret Users with multiple PCs who are interested in Windows 7 Home Premium might also consider the specially priced Windows 7 Family Pack. Available for $149.99 in the United States --though prices could vary wildly at retail—the Family Pack provides three Windows 7 Home Premium product keys, allowing you to install the OS on, yup, you guessed it, three different PCs, and at bargain pricing.

OEM Versions

One of the biggest secrets in the software world is that Microsoft's operating systems are available from online retailers in so-called OEM ("original equipment manufacturer") versions (which come in just the Full SKU) that are aimed at the PC builder market. These are the small "mom and pop"-type PC makers who build hand-crafted machines for local markets. OEM packaging is bare-bones and does not come with a retail box. Instead, you get the disc, a Product Key, and a slip of paper describing the product.

OEM versions of Windows 7 differ from retail versions in some important ways:

- ◆ **They are dramatically cheaper than retail versions.** As shown in Table 1-14, the OEM versions of Windows 7 are dramatically cheaper than comparable retail versions. Note, however, that OEM pricing fluctuates somewhat, so the prices you see online could be a bit different. Shop around for the best prices.
- ◆ **They do not come with any support from Microsoft.** Because PC makers support the products they sell directly, Microsoft doesn't offer any support for OEM versions of Windows 7. This explains the cost differential, by the way.
- ◆ **You are not really supposed to buy them unless you're building PCs that you will sell to others.** Technically speaking, OEM versions of Windows 7 are available only to those who intend to build PCs to sell to others. Furthermore, online retailers who sell OEM versions of Windows 7 are supposed to verify that you're a PC builder and/or sell the products with some kind of hardware. For this reason, you'll sometimes be asked to purchase a hardware tchotsky like a USB cable when you purchase OEM software.
- ◆ **There's no box.** This shouldn't matter too much, but you don't get the cool Windows 7 retail packaging when you buy OEM. Instead, you pretty much get an install disc shrink-wrapped to a piece of cardboard and a product key.

Table 1-14: U.S. List Prices for Windows 7 OEM Product Editions

Windows 7 Home Basic	
Windows 7 Starter OEM	$39.99
Windows 7 Home Premium	
Windows 7 Home Premium OEM	$73.99
Windows 7 Business	
Windows 7 Professional OEM	$139.99
Windows 7 Ultimate	
Windows 7 Ultimate OEM	$199.99

Depending on which version you're looking at, the savings are usually substantial. All of the OEM products (which are "Full" versions) are less expensive than the Upgrade retail versions of Windows 7. That said, OEM products cannot be used to upgrade an existing PC: they're for new installs only.

Secret
As with the retail versions, you also have to choose between both 32-bit and 64-bit OEM versions of Windows 7 online. However, you can't purchase Upgrade OEM software because OEM versions are only aimed at new PC installs.

Secret
OEM versions of Windows 7 are sometimes sold in multi-OS packs. So, for example, you can purchase a three-pack of Windows 7 Ultimate if you'd like. You know, because you're a PC maker.

Windows Anytime Upgrade

Windows 7 provides an integrated capability to upgrade from a less powerful product edition to a more capable version at any time. Once you've installed Windows 7, you simply run the Windows Anytime Upgrade applet, select a source to purchase an upgrade license

from, and your PC is quickly enhanced with the more powerful version you've selected. Because of the way in which the Windows 7 product line is designed, however, Windows Anytime Upgrade is available only in the following product editions:

- ◆ **Windows 7 Starter** can be upgraded to Windows 7 Home Premium, Professional, or Ultimate via Windows Anytime Upgrade.
- ◆ **Windows 7 Home Premium** can be upgraded to Windows 7 Professional or Ultimate via Windows Anytime Upgrade.
- ◆ **Windows 7 Professional** can be upgraded to Windows 7 Ultimate via Windows Anytime Upgrade.

Windows Anytime Upgrade is shown in Figure 1-2.

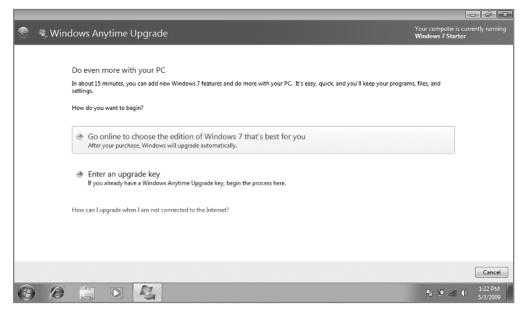We examine Windows Anytime Upgrade more closely in the next chapter.

Figure 1-2: Windows Anytime Upgrade lets you upgrade from certain Windows 7 versions to other, more powerful versions.

Secret

There are other ways to acquire Windows 7, actually. We mentioned previously that Microsoft sells subscription-based software through its volume licensing programs, for example, and those users will typically get Windows 7 Enterprise. However, in this book we're focusing on the ways in which individuals can acquire Windows 7. If you do get a copy of Windows 7 Enterprise with a work PC, remember that this version of Windows 7 is functionally identical to Windows 7 Ultimate.

Summary

Windows 7 certainly offers a lot of options when it comes to picking a product version, but with a little know-how, you will be able to make the right choice, one that matches both your needs and your budget. In this chapter, we've given you what you need to know to match a Windows 7 version to your needs. Now you just need to figure out how much the upgrade is going to cost. Remember that it's often much cheaper to acquire a new Windows version with a new PC, so if you're going to be buying a new PC, be sure to get the right Windows 7 version at that time. Or, if you're more technically proficient, you can save big bucks with an OEM version. We will look at clean installs, upgrade installs, along with other ways to install and upgrade to Windows 7, in the next chapter. No matter how you choose to acquire Windows 7, we've got you covered.