

Migrating from XP to Windows 7

One of the most looked-for features in Windows 7 is a software upgrade directly from Windows XP to Windows 7. The reasons are simple and straightforward: there are three times as many XP licenses out there as Vista licenses, and many large corporate customers have specifically asked for an XP upgrade capability. In this, we are disappointed, because although Microsoft will allow a license upgrade from Windows XP to Windows 7, no software upgrade exists—you must perform a clean installation of Windows 7 and migrate your data into the new OS installation.

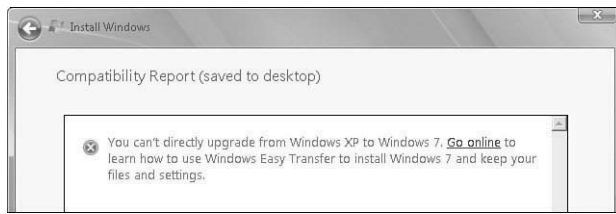
In fact, if you try to perform an in-place upgrade, you'll see the error message shown in Figure 3.1.

tip

That's the official Microsoft story. However, while we were writing this book we ran across a solution that allows you to do in-place upgrades from Windows XP systems to Windows 7. This is possible using the newest version of LapLink's PC Mover software. For more information on this, see Chapter 5, "Application and Data Migration".

When migrating a system from Windows XP to Windows 7, you should use the following sequence of activities:

1. Run the Windows 7 Upgrade Advisor and determine any potential hardware issues.

**FIGURE 3.1**

Attempting to upgrade from Windows XP to Windows 7 will result in a unwelcome error message.

tip

It is entirely possible that your computer running Windows XP lacks the minimum hardware requirements for running Windows 7. If that is the case, you're likely looking at purchasing a new PC with Windows 7 preloaded, building your own PC, and loading Windows 7 yourself or upgrading the hardware in your current XP computer and suffering through the arduous upgrade process described in this chapter.

2. Use a migration tool to snapshot your Windows XP system state, including all installed applications and data, and prepare for migration. We highly recommend Windows Easy Transfer.
3. Install Windows 7.
4. Resolve any driver issues within Windows 7.
5. Use your migration tool to install applications and data.

Before you attempt a Windows XP to Windows 7 migration, we strongly recommend that you read this entire chapter, as well as Chapter 8, "Windows 7 Security," make sure you have all the software and hardware tools you need at hand, and use the plan you created in Chapter 1, "Planning Your Migration," as a map to proceed. Over a number of years, we have found that well-planned migrations generally work out quite well, whereas ad-hoc migrations, where you jump right in, inevitably run into problems. Remember: Prior Planning Prevents Poor Performance.

Windows 7 Upgrade Advisor

Before upgrading a Windows XP system to Windows 7, you should first download the Microsoft Windows Upgrade Advisor from www.microsoft.com/windows/windows-7/upgrade-advisor.aspx.

Depending on how your browser is set up, you may directly run the installer or be prompted to save it. If you're dealing with only a single computer, it is a simple process. If, however, you're dealing with multiple

computers, you should probably save it because you will need to install and run the upgrade advisor on each of the computers.

After you've downloaded it, install the Upgrade Advisor on the system you want to upgrade. Then run the Upgrade Advisor (see Figure 3.2).

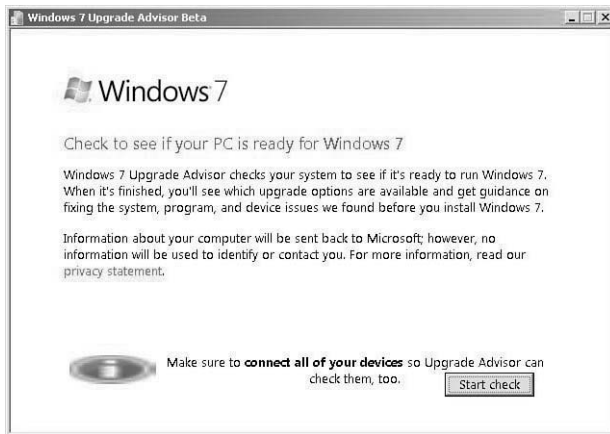


FIGURE 3.2

Windows 7 Upgrade Advisor Start screen.

Click the Start Check button, and let the Upgrade Advisor examine your system. It will look at your hardware configuration and compare it to a comprehensive database of supported hardware and software.

Depending on your specific system configuration, your system may pass on first examination, such as the system shown in Figure 3.3

However, you might run into issues that need to be resolved before you can install Windows 7, as shown in Figure 3.4.

In the example in Figure 3.4, the reason the system check failed was because the hardware necessary to run Windows Aero wasn't available. You can still run Windows 7 without Aero; you just won't have access to Aero's features, meaning you'll be missing out on much of the visual appeal to Windows 7.

In a case like this, you need to figure out how you're going to resolve the problem before moving forward. How exactly you resolve the problem with a system will vary. You might, for example, be able to use updated drivers from the manufacturer. You might find a documented workaround online. Or you may well wind up having to upgrade select portions of your computer hardware to a new version that has Windows 7 drivers. In the example shown in Figure 3.4, you might need to buy a new video card that has a Windows 7 driver if you can't find a suitable driver online. In the most extreme cases, you might need to buy a new computer, but as

long as your system meets the specifications outlined in Chapter 1, that probably won't be necessary.

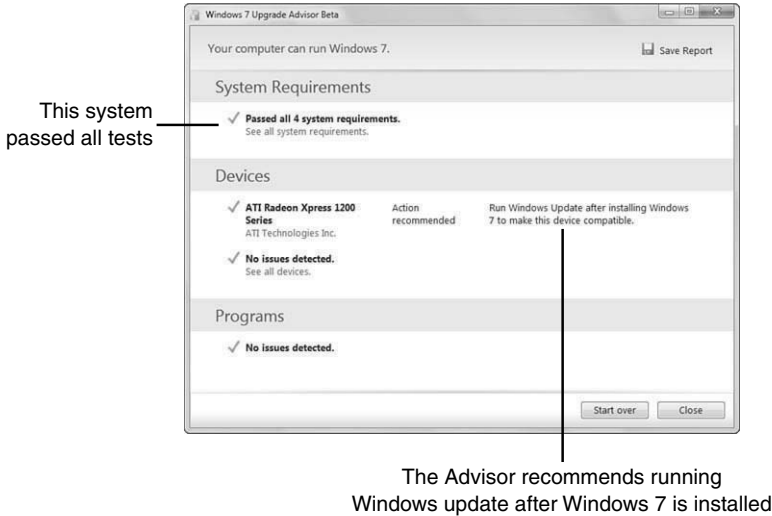


FIGURE 3.3

This system passed the Windows Update Advisor's tests (although it recommends running Windows Update after Windows 7 is installed to update the video driver).

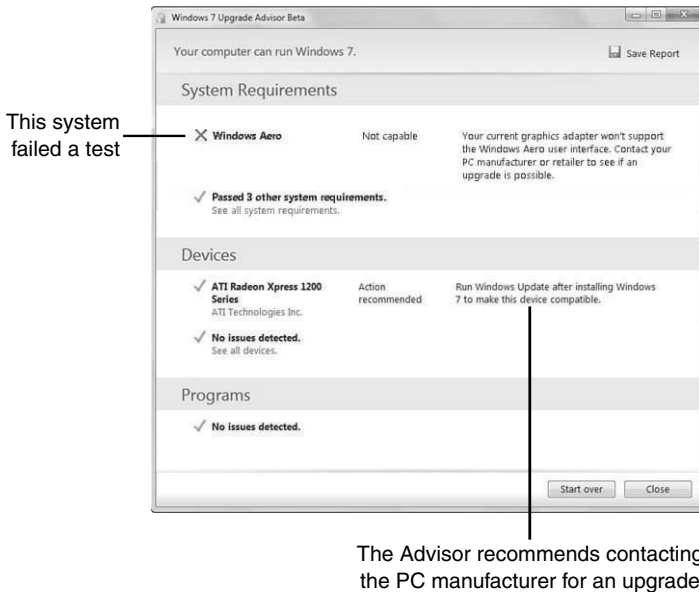


FIGURE 3.4

This system failed the Windows Update Advisor test.

What we suggest doing, however, is saving the Windows Update Advisor reports for each system on which you want to install Windows 7 so that you can refer to them as part of your update process, resolving any problems that are reported. Having done that, you should go through your system and determine what applications are installed, so you can make sure they're reinstalled after you get into Windows 7.

Migrating Applications from Windows XP to Windows 7

The next task is to use the Windows Easy Transfer Wizard to move your application and user data from the old Windows XP installation into the Windows 7 installation. In this section, we'll discuss how to move your application data out of Windows XP so that it will be available for installation into Windows 7.

First, download and install the Windows Easy Transfer Wizard. Point your browser to www.microsoft.com, hover your mouse over the Downloads and Trials button, and from the drop-down menu that appears select Download Center. Then, in the search box, type **Windows Easy Transfer Wizard** and press Enter.

We suggest that you download the installer to your system before running it, rather than running it directly from the download link. Why? Because you're going to need to install it again when you move your application profiles into the Windows 7 installation.

Although the Easy Transfer Wizard asks for a data transfer cable, you don't need one; in fact, many of the more efficient methods don't use the data transfer cable. We recommend the following:

- If you're moving your applications from Windows XP on one computer to Windows 7 on a new computer, you should use the network transfer mode.
- If you're moving your applications from Windows XP to Windows 7 on the same computer, you should use the CD/DVD/removable media option.

The only time we've found the data transfer cable to be superior is when you are migrating between two computers, without any networking capability. If networking is available, we'll use it, for the simple reason that transfers over Fast Ethernet are much faster than using the transfer cable.

One thing we've found very useful for same-system transfers like this is a suitably sized flash drive, or a USB external hard disk. The reason for using an external drive of this sort is that it allows you to wipe and rewrite the computer's internal hard disk—which is actually a very good idea under most circumstances. A decent USB external disk can be had online for under \$50, with enough room to move most system installations. This approach has three other benefits:

- You can easily archive the system state before reinstalling applications and the like by simply copying the archive files, to a file server, to DVDs, or to another storage drive.
- You can reuse the same external drive as you upgrade multiple computers—upgrade one, erase the data, move on to the next computer, and so on.
- After all your migrating is done, you can use the same external drive as a backup device.

note

From this point forward, our examples are based on the assumption that you are installing Windows 7 on the same computer on which you have Windows XP installed and that you have a suitable external drive.

About Partitions

Computer hard disks are defined both by their physical capabilities and by the logical breakdown of those capabilities. The logical breakdown is referred to as partitioning and involves creating logical “drives” that your computer recognizes as separate disk drives. The best analogy is to think of your house—the physical drive is the building, while each logical drive would be a separate room.

That being said, for almost all normal users, there is no real reason to create multiple partitions on your hard disk, other than those that your Windows 7 system installation requires (such as a separate recovery partition). The reason for this is that virtually anything that can be done with a partition, you can also do with folders, which are less of an issue to manage. Thus, using the default partitioning scheme that the Windows 7 installer creates is probably your best approach.

If, however, you know what you are doing with regard to disk partitioning, feel free to adjust the partition tables as appropriate to your system requirements. Some more advanced users do create separate partitions for their Windows operating system and data files (music, photos, documents, and so on). Doing so allows you to reinstall a good Windows installation gone bad without needing to back up and restore all of your data files.

For a short discussion of disk partitioning, and some of its benefits, see http://en.wikipedia.org/wiki/Disk_partitioning.

After you've installed Windows Easy Transfer Wizard, your next step is to start transferring files:

1. Close all the applications currently open on the computer, and start the Easy Transfer Wizard (see Figure 3.5).



FIGURE 3.5

Windows Easy Transfer Wizard.

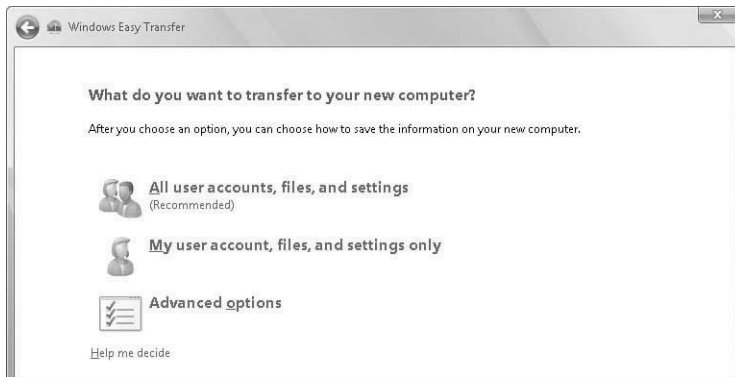
2. Click Next. The file transfer methods screen appears.
3. Select an external hard disk or flash drive.
4. Easy Transfer asks if this is your old or new computer. Select This Is My Old Computer (see Figure 3.6).



FIGURE 3.6

Selecting the computer from which you are transferring files.

5. Select what you want to transfer (see Figure 3.7).

**FIGURE 3.7**

Choose the files that you want to transfer from your XP installation to your Windows 7 installation.

tip

We've been using the Easy Transfer Wizard for quite a while, and we've found that it's much easier to migrate all user accounts, files, and settings and then clean up any potential issues after the migration. If, however, you want fine-grained control over your migration, you can use the My User Account, Files, and Settings Only option to migrate a single user account, or the Advanced Options option for custom migrations.

Think Carefully About the Files You Back Up

If you're like most of us, you've been using your computer for quite a while, accumulating pictures, documents, video, music, spreadsheet files, a greeting card database, and assorted other files. Those files are important to you, and easily overlooked in an upgrade when you're paying attention to things such as system files and application programs. Don't forget your documents, photos, music files, and the like!

For instance:

- Check the location of your Internet Explorer email files. When you installed IE, you were asked to specify where to store files that will show up within IE as being in your Inbox, Sent, Trash, and other folders. If you've set up a location other than the defaults, make sure these files are included in the transfer.
- You have probably generated a huge number of documents, spreadsheets, presentations, and other data files and they're not all stored under My Documents, although you may have some files stored there, too. Unless you want to risk losing these files, make sure they're included in the transfer.
- Is all of your stored music in the My Music folder, or have you stored some of your tunes elsewhere? If you have created playlists in your music player, look at your music player's documentation to see if those playlists can be transferred or exported so that you can back them up, too.

- The My Pictures folder might include a lot of your photos and other pictures, but you've probably stored some of your pictures in other folders, particularly if you've used more than one application program to process your pictures. Be sure to check all the non-default folders where those important pictures might be stored and include them in the transfer.
- If you've been using a previous version of Media Center, your picture, music, and video files may have been stored separately. Make sure they are transferred.
- If you have partitioned your hard disk into two or more virtual hard disks (such as Drive F: and Drive G:, for instance), it can be easy to forget to look at the folders on those disks when you're compiling the list of files to transfer. Be sure to include them.
- You don't have to include files on removable media, such as thumb drives. If they're not plugged into the computer when you go through the upgrade process, they should still be readable when the upgrade is finished.

6. When you're ready, click Next.

Before performing the transfer, the Easy Transfer Wizard gives you an opportunity to review what is being migrated (see Figure 3.8). Check through the list to make sure you haven't missed something important; then click Next to start the migration process.

In the example in Figure 3.8, the user has assembled all of the files he wants to save in the folder "Joel" to make the transfer easy. This screen may not look the same way if you've chosen multiple folders and files from different locations.

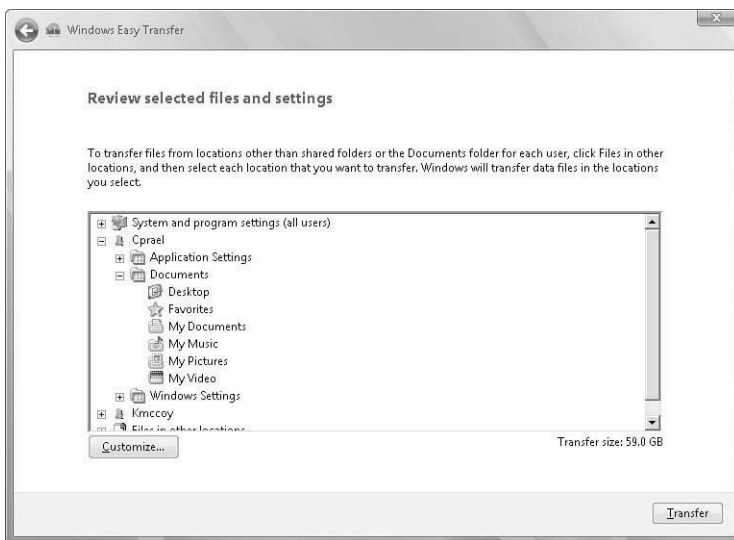


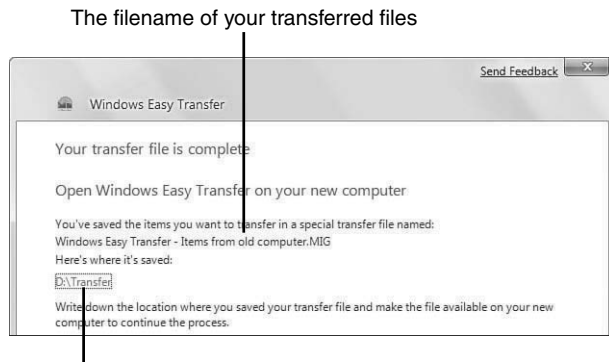
FIGURE 3.8

Review the files and settings you have elected to transfer and give your new overall transfer file a name.

7. When the Easy Transfer Wizard is finished, check your external drive to make sure that the settings files were stored properly. You should find a .MIG file with the name you gave it earlier (see Figure 3.9). Depending on what you have on your system, the migration file may easily be several hundred megabytes (or even gigabytes).

tip

One way to make your transfer a bit easier at this point is to copy the Windows Easy Transfer Wizard installer onto the external drive. That way, you can easily load it after you've installed Windows 7.

**FIGURE 3.9**

Here you can see the files that were transferred and the location in which they were saved.

caution

You need to be aware of one issue: Windows Easy Transfer doesn't move applications; it moves only their settings. This makes for a much smaller migration package, but it has its own issues. We'll discuss some of the pros and cons of this approach in Chapter 8, along with some methods of directly migrating applications.

Installing Windows 7

You are now ready to install Windows 7. Boot from your Windows 7 installation DVD, and perform a new installation.

How to Do a Custom (Clean) Installation

Follow these steps to perform a clean installation:

caution

A clean installation consists of removing all data from your hard disk by repartitioning and reformatting your hard disk and reinstalling the operating system and programs to an empty (clean) hard disk. This means that any programs or data you might have still stored on that hard disk will be removed and you won't have access to them any more, unless you've previously copied those programs and data to a separate place, such as another virtual or real hard disk, another place on your network, or to a temporary storage device such as a USB thumb drive or other removable material. A clean installation also offers you an opportunity to clean up space on your hard disk, storing the programs you decide to reinstall in a more efficient manner and perhaps compacting some of your data files. However, the most common mistake people make prior to a clean installation is not saving everything they want to keep. Be sure you select all the files you even *think* you may want to keep. You can delete the ones you truly don't need later.

1. Insert the Windows 7 installation disc into the computer's DVD drive, turn on your computer, and then do one of the following:
 - If you want to replace your computer's existing operating system with Windows 7, and you don't need to adjust your disk partitions, go to step 2.
 - Restart your computer with the installation disc inserted in your DVD drive. If you're asked to press a key to boot from the DVD, press the appropriate key. If the Install Windows window appears as shown in Figure 3.10, go to step 2.



FIGURE 3.10

If you see the Install Windows window, you can go on to the next step.

note

If the Install Windows page doesn't appear and you're not asked to press a key to start from DVD, you might have to specify that your computer use its DVD drive as the startup device. You'll need to restart your computer, enter the BIOS Setup, specify your DVD drive as the startup device, and then start Windows from the Windows 7 installation DVD as described previously. See your computer's documentation for entering the BIOS setup (this varies from computer to computer). Or, watch closely while your computer is booting. Before the Windows 7 splash screen appears, several lines of text appear quickly on your screen. In the text, you should see directions, such as Press F2 to Enter BIOS Setup. Press whatever key is specified. Once the BIOS Setup appears, you will need to scan around and look for boot drive options and set yours to look in your DVD drive first for a bootable DVD. Be careful with the BIOS settings and if you make changes that you are certain aren't correct, exit the BIOS without saving. If you are sure that you have changed the boot order correctly, be sure to choose the exit and save option. It's nearly impossible to give specific directions for this procedure because it varies from BIOS to BIOS. If you are uncertain what to do, we suggest contacting your computer's manufacturer.

2. When the Install Windows page appears, click Install Now.
3. When the Get Important Updates for Installation page appears, click Get the Latest Updates as shown in Figure 3.11. Among other things, the latest updates will help protect your computer from recently detected security problems.

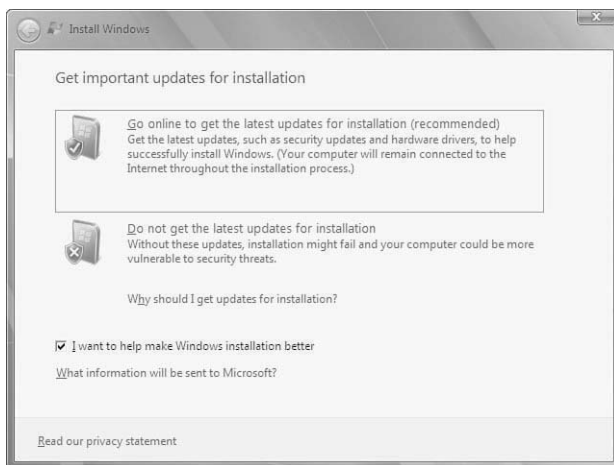


FIGURE 3.11

Be sure to download and install all important updates right away.

4. After the updates are complete, resume the Windows 7 installation by clicking the Continue button. Click I Accept the License Terms (you must accept to continue the installation) and click Next.
5. When the Which Type of Installation Do You Want? page appears, click Custom.
6. When the Where Do You Want to Install Windows? page appears, choose one of the following options:
 - If you don't want to specify a specific partition where you want to install Windows, or create partitions on your hard disk, click Next.
 - If you already have an existing partition where you want to install Windows 7 to create a multiple boot configuration, select that partition and click Next to begin the installation. (Be sure to install Windows 7 on a *different* partition from where your current version of Windows XP is installed.)
 - If you want to create, extend, delete, or format a partition, click Drive Options (Advanced), select the option you want, and follow the instructions. Click Next to begin the installation. (If the Drive Options (Advanced) option is disabled, you will have to start your computer using the installation disc.)
 - If you have only a single partition defined for the disk, you will need to delete it and then create a blank disk partition.

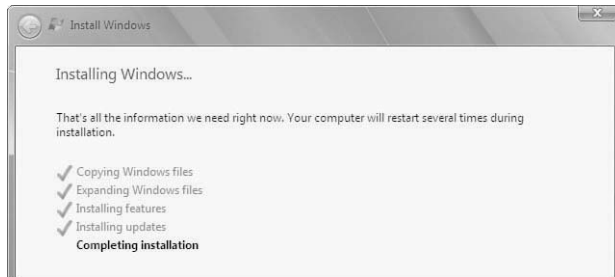
note

You might see a window that says the partition you selected contains files from a previous Windows installation. If you want to proceed, these files will be moved to a folder called `Windows.old` and will be accessible but not used to run Windows 7.

7. Click OK.
8. Your computer will begin installing the Windows 7 files and may stop and start several times (see Figure 3.12). You can see that the system is busy when an ellipse (...) appears after the phrase describing its current action.

note

The installation can take a long time (25 minutes is not unreasonable for certain configurations); it depends on the speed of your CPU, the speed of your DVD reader, and several other factors.

**FIGURE 3.12**

The installation process might take a while, so get comfortable.

9. When installation has completed, you'll see the new Windows 7 desktop. The first thing you will note is that the desktop interface has changed quite a bit from Windows XP. It is, however, quite similar to that introduced in Windows Vista. To learn more about new features that are part of Windows 7, see Chapters 6 to 11.

Migrating Your Applications from XP to Windows 7

After you've installed Windows 7 on the computer, you are ready to start putting applications back on and configuring it for use. Broadly speaking, you'll do two things:

- Install applications from your checklist.
- Reload application and user profiles using Windows Easy Transfer.

Installing Applications

Earlier in this chapter, after you ran Windows Update Advisor, you might recall that we had you create a list of all the applications on the computer. This list also appeared in Chapter 1 when you were planning your migration. Now is the time to use that list. Use it as a checklist to make sure that you install all the applications you want on your computer. The good thing is that for every application that you are reinstalling, you do not need to worry about reconfiguration. Further, you don't have to worry about creating unique user profiles.

In each case, load the application, run it to resolve any registration issues, and keep going. Do not spend time customizing the application to deal with specific user preferences at this point. Your goal should be to have loaded, running, properly licensed software.

tip

If, however, you are installing upgraded versions of software, or cross-grading applications, you will need to resolve issues from those changes. See “Resolving Application Upgrades and Cross-Grades” later in this chapter.

Reloading Application and User Profiles

After you have loaded your applications, you need to reload the application and user profiles:

1. The first thing to do is hook up your external drive to the computer again. Make sure that it connects properly to Windows 7 and that its contents are visible to the computer.
2. Go onto the disk and install Windows Easy Transfer Wizard under Windows 7. You’ve already done this once, and this is why we had you save the downloaded installer and put it on that external drive.
3. As shown in Figure 3.13, start the Easy Transfer Wizard, the same as under Windows XP (described earlier in this chapter).



FIGURE 3.13

Starting Windows Easy Transfer Wizard for moving your files into Windows 7.

4. From the select computer window you saw in Figure 3.6, select This Is My New Computer.

5. Windows Easy Transfer will ask you if the files are already saved to an external drive. Select Yes and point Easy Transfer to where you have stored the migration (.MIG) file.

tip

Before it migrates the files, Windows Easy Transfer allows you to review the settings and files you want to migrate. If you are new to this, leave everything selected. If you feel you need finer-grain control, however, use the Advanced Options to selectively install the migrated settings onto the Windows 7 installation.

6. After your transfer is complete, Windows Easy Transfer displays a Transfer Completed window, allowing you to review what's been installed.
7. One very useful feature of this is that it also creates a transfer report showing all the applications for which settings were transferred. You can use this report to verify that the applications you installed covered all the bases as far as what was supposed to be installed.

Resolving Application Upgrades and Cross-Grades

As we noted in Chapter 1, a significant upgrade like this is a good time to also deal with application upgrades and cross-grades. As you may recall, we suggested you plan out your upgrades and cross-grades so you could be sure of what you were doing and what needed to be done at each step in the process.

You also need to pay attention to timing at this point. We suggest that you hold off resolving application upgrades and cross-grades until after you have migrated your application and user data from your Windows XP installation. The reason is that upgrades and cross-grades will frequently convert user parameters to be appropriate to the new version of the application software. If you install the upgrade or cross-grade first and then perform your migration, you may accidentally wind up with corrupted application settings.

If, on the other hand, you perform the migration first and then deal with the upgrade or cross-grade, you can be sure that upgrade tools correctly pick up and handle your application and user profile data, resulting in a clean installation.