Hidden Tools in Windows 7

“Subtle gems make Windows 7 truly what Vista should have been.”

by Pete Choppin

Most of the big news about Windows 7 has been on interface changes, stability and how it is Microsoft's fix for its Vista embarrassment. But there are quite a few less obvious and publicized improvements, such as several new or enhanced tools included in the OS. Let's take a look at some of these, starting with the Action Center. (Control Panel/System and Security/Action Center).

Action Center

The new Action Center for Windows 7 is a central location of your OS where you can go to deal with security issues, troubleshooting and recovery. This eliminates the headache of searching all over the place for separate applets. It is all combined in an easy-to-use Control Panel applet, where you get maintenance and security messages and can view performance information, change user settings and more.

Figure 1. Action Center for Window 7.

Turning On or Off Notifications

Within the Action Center is a nice touch. Microsoft makes it easy for you to turn the various types of notifications on or off, as shown here. So if you have an antivirus program installed that Windows doesn't recognize, you don't have to deal with constant messages urging you to install one—just turn off virus-protection messages.

Figure 2. Change Action Center settings.

Problem Steps Recorder

One of the coolest new tools in Windows 7 is the Problem Steps Recorder (PSR)—especially for those of us who provide tech support to Windows users. No matter how hard they try, users often have problems accurately describing the problem they're experiencing or the steps they took before or after experiencing it. After all, if you know where you went wrong, it's more likely you'd figure it out yourself, right? Sure, Remote Assistance can be a godsend in those situations. But you can't always connect to the user's computer in real time. That's when the PSR comes in handy.

It's really a type of screen-capture software that records all actions—keystrokes, mouse clicks, etc.—and saves the sequence of events in an MHTML page that documents every step the user took, along with screenshots. You start the PSR by entering psr.exe in the Start menu Search box or at the command prompt.

You can view the recorded steps in IE by double-clicking the saved zipped MHTML file. The

interface is shown here.

Figure 3. Problem Steps Recorder (top). Problem Step Recorder playback (bottom).

ISO Image Burner

An ISO image is a type of archive file that is often used to distribute software. In Windows 7, Microsoft addressed something that's been on the wish list of many users for a long time. Now you don't have to download and install a third-party program to burn an ISO file to disc.

It's a simple process: After you download an .ISO to your hard drive, just double-click it and Windows 7 will open the Burn Disc Image dialog box, shown here. This also works for images with the .IMG file extension.

Figure 4. Burn Disc Image dialog box.

Biometric Scanning

In earlier versions of Windows, biometric authentication and management of biometric devices (fingerprint sensors) required third-party software that might or might not integrate well with the OS. Now it's built in.

Windows 7 includes the Windows Biometric Framework, which gives developers an API they can use to build biometrics into applications. Makers of fingerprint sensor hardware, such as UPEK and AuthenTec, work with Microsoft on the development of the Framework. Biometric devices are managed through a Control Panel applet.

Figure 5. Biometric Devices.

Credential Manager

The Credential Manager is another new feature in Windows 7. It is similar in some ways to the password-management feature in Vista's User Accounts applet, but is more sophisticated. You can manage Windows credentials for various computers that you sign onto, certificate-based credentials, and other generic credentials (for e-mail accounts, Web accounts, etc.). These are all stored, by default, in the Windows Vault.

Perhaps the best new feature in Credential Manager is the ability to back up and restore the Vault. Microsoft recommends that you back up your credentials to a removable drive, such as a flash drive, to make it easier to restore them if you have a hardware failure.

Figure 6. Credential Manager.

Display Projection

If you give lots of presentations, you'll welcome a new tool in Windows 7 that makes it easy for you to display your Windows 7 portable computer's desktop on a projector. Just press the Windows logo key + P, and you'll see the pop-up box shown here.

Figure 7. Display Projection.

The first setting is the default and displays on the computer screen only. The second setting clones the display on the computer screen to the projector. The third setting extends the desktop across both the computer screen and the projector, and the fourth setting displays via the projector only and turns off the computer screen.

Mobility Center

The Mobility Center provides several settings that make mobile computing more efficient. Pressing the Windows logo key + X opens up the Windows Mobility Center. Through this interface, you can turn on Presentation Mode. This disables your screensaver, sets your wallpaper to a neutral one, and even puts your IM client on "do not disturb" status. *[By default Windows Mobility Center is enabled only on laptops.]*

Figure 8. Windows Mobility Center.

Repair Disk

The Vista Service Pack 1 betas included a new feature that let you easily create a system-repair disc with a friendly graphical interface, but it was removed in the final release of SP1. Windows 7 restores this functionality. Just click Start and type System Repair in the Search box. Click on Create A System Repair Disc to open the dialog box shown here.

Figure 9. System Repair Disk.

To use the disc, put it in your drive and reboot the computer from the disc. (You may have to set the CD/DVD drive as the primary boot device in your BIOS.) Then, you'll get a list of system-recovery options.

Windows Backup

Of course, previous versions of Windows included a backup utility, but this tool has been

significantly improved in Windows 7. Vista's backup program was user friendly, but not very flexible. Windows 7 gives you more granular control over what you want to back up.

You can invoke the Backup And Restore applet from Control Panel or by typing Backup in the Search box on the Start menu. You can back up your files to a local hard disk, a removable disk, a DVD, or another computer on the network. (You may need to provide credentials to access a network location.) Then, you can choose to back up libraries or individual folders. You can also exclude specified folders from the backup.

Figure 10. Backup And Restore.

PowerShell

Windows PowerShell is a command-line shell interface and scripting tool that makes it easier for Windows administrators to automate tasks using cmdlets, which are commands that perform single tasks, and scripts, which are made up of multiple cmdlets to perform more complex, multistep tasks.

Previous versions of Windows include a command-line interpreter (command.com or cmd.exe), but PowerShell is much more powerful, providing a Unix-like command environment that can automate almost every GUI functionality.

PowerShell can be downloaded to run on Windows XP or Vista, but Windows 7 is the first client operating system that comes with it built in. (It is also installed by default in Windows Server 2008 R2.) PowerShell v2 adds about 240 new cmdlets, as well as new APIs and features, such as the ability to invoke PowerShell scripts and cmdlets on a remote computer.

Windows 7 is truly what Vista should have been. In addition to the improved interface and much more efficient utilization of system resources, Windows 7 has many built-in utilities and enhancements that make this operating system clearly the future of computing for Windows users. It is worth a closer look at some of the lesser-known tools built into the OS.