

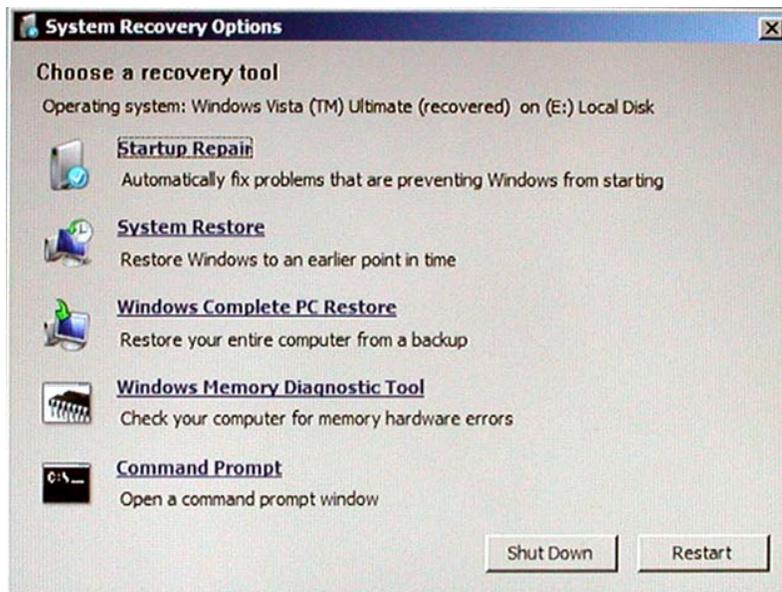
# The Windows Vista Recovery Environment

By Mark Edward Soper

## Introduction

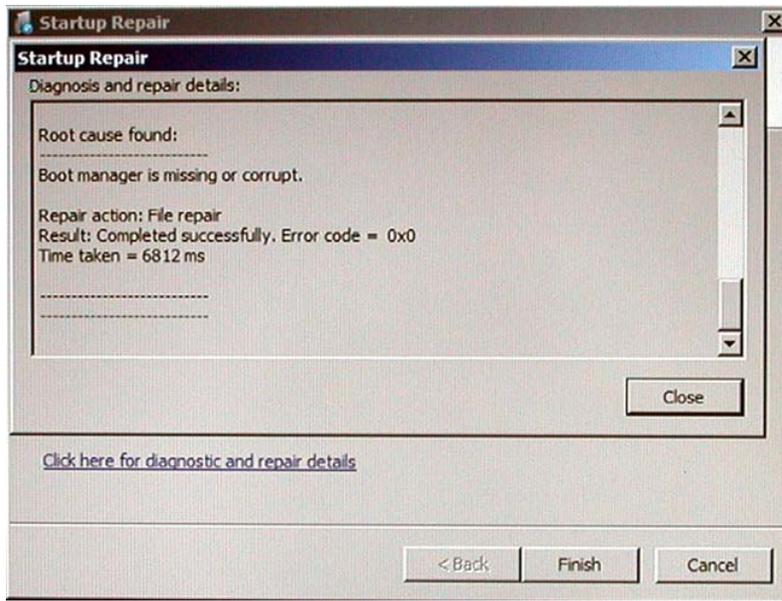
The Windows Vista Recovery Environment (Figure 1) provides five ways to recover from serious computer problems that may prevent you from starting your computer:

- Startup Repair
- System Restore
- Windows Complete PC Restore
- Windows Memory Diagnostics Tool
- Command Prompt



## Startup Repair

Use Startup Repair (Figure 2) to repair boot-level startup problems. Unlike Windows 2000 and XP, which used the completely manual and difficult to understand Recovery Console to perform repairs to the system's boot configuration, Startup Repair analyzes the problems with the system and automatically selects the correct repairs to perform. Startup Repair can perform up to five separate repair sessions on a problem system, fixing one or more problems during each session. After you perform the first repair, view the repairs performed, then try to restart your system. If you are unsuccessful, retry Startup Repair. Repeat the process as necessary. In many cases, Startup Repair will eventually get your system starting again. And, if not, you're not out of options to recover your data.



## System Restore

System Restore in Windows Vista, as in Windows XP, is used to revert the system to an earlier state without deleting data files. However, in Windows Vista, you can start System Restore from the Recovery Console, which means that even if your system has a problem so severe you can't start it normally, you can still return your system to an earlier configuration.

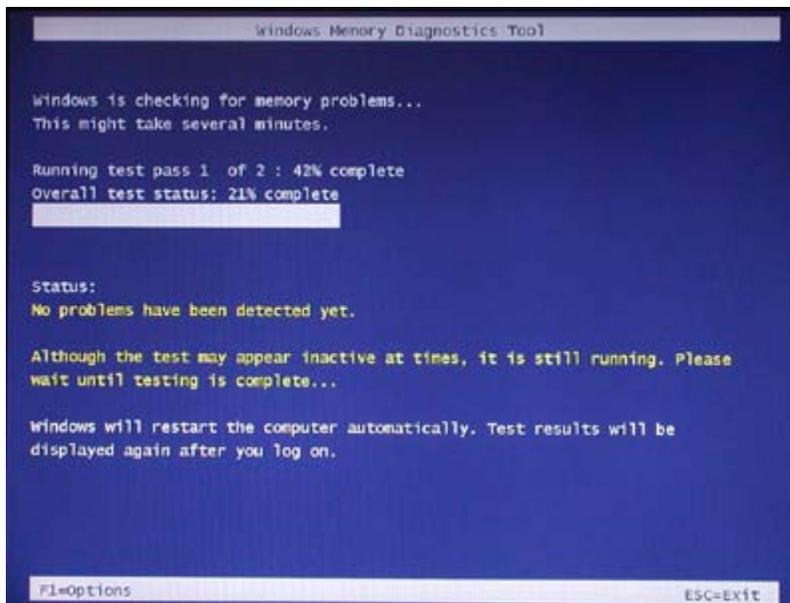
## Windows Complete PC Restore

Windows Vista Business, Enterprise, and Ultimate editions feature a disk-image backup known as Windows Complete PC Backup. A Windows Complete PC Backup image can be stored on an internal or external hard disk or on one or more DVDs. If the Windows installation is no longer present (such as in the case of a hard disk failure and replacement), you can start the image restoration process (Figure 3) from the Recovery Environment. There's no need to use a separate partitioning utility to prepare the hard disk to accept the backup image; Windows Complete PC Restore can partition and format the drive for you.



## Windows Memory Diagnostic Tool

Defective or incompatible memory modules can cause Windows Vista to fail. To find out if your system's memory is working properly, run the Windows Memory Diagnostic Tool. It offers three levels of testing, many different configuration options, and tests memory twice (Figure 4) before starting the system into the Windows Vista GUI.



## Command Prompt

The Command Prompt available in the Windows Vista Recovery Environment enables full access to all accessible drives connected to the computer at startup. Unlike the very limited Windows XP Recovery Console, which was primarily designed for restoring system files to a crashed system, the Windows Vista Command Prompt can use any command prompt program, including multiple file-copy programs such as xcopy and robocopy. Command Prompt enables you to copy data to or from a crashed system to another drive, including external USB drives. You can even format CD and DVD media from Command Prompt and copy files to (or from) the media.

## Launching the Recovery Environment

To start the Windows Vista Recovery Environment, insert the Windows Vista DVD into the system's DVD drive and restart the system. When you are prompted to press a key to boot from CD or DVD, press the spacebar or another key. When the Install Windows dialog (Figure 5) is displayed, select or confirm language, time and currency format, and keyboard or input method settings and click Next. When the Install Now dialog (Figure 6) appears, click Repair your computer. The Recovery Options dialog shown in Figure 1 is displayed.



## Choosing the Right Recovery Environment Tool

With five different Recovery Environment to choose from, it can sometimes be difficult to select the best repair tool to use for a particular problem. Use this checklist to help you select the right tool for the job.

*You cannot start your system.*

Use the Startup Repair tool to see if the problems can be repaired by this tool.

*You cannot start your system immediately after installing new hardware or software.*

Use the System Restore tool to return your system to its configuration before the installation. You will need to reinstall the hardware or software before you can use it.

*You have just upgraded your memory and you're having problems starting your system.*

Use the Memory Diagnostics tool to determine if your memory is working correctly. You should also double-check cables and other connections inside your system.

*You have replaced a failed hard disk with a new hard disk.*

If you previously made a Complete PC Backup image, use the Complete PC Restore option to restore the image to the new hard disk.

*You are unable to start your system and need to copy data to an external hard disk for use elsewhere.*

If you want to copy your data to an external USB or FireWire hard disk, connect it before restarting your computer. When you restart your computer, start Command Prompt and use commands such as copy, xcopy or robocopy to copy the files you want to an external drive. To get help on a particular command, type *command\_name* /? (replace *command\_name* with the actual command you want to use).

*Mark Edward Soper is a contributor to Special Edition Using Windows Vista, 0789734729, and is the author of the forthcoming book on Maximum PC Microsoft Windows Vista Exposed, 0789735865*