

Windows 2000 OS Faults

OBJECTIVES

1. Delete *boot.ini*.
2. Make a shortcut point to an incorrect location.
3. View automatic restoration of Windows programs.
4. Change a file type association.
5. Edit Registry to run an invalid file at startup.
6. Assign bad drivers to network and video cards.

RESOURCES

1. Marcraft 8000 Trainer with Windows 2000 installed
2. Drivers for the Plug and Play network card
3. LAN connection

**Troubleshooting**

DISCUSSION

Windows 2000 is the most stable operating system yet. It is harder to "break" than previous Microsoft operating systems such as NT4 or Win98. One can delete *arcldr.exe*, *arcsetup.exe*, *autoexec.bat*, *boot.ini*, *config.sys*, *io.sys*, and *msdos.sys* and Windows will still start. If you create a shortcut to a file and then move the file, Windows will search for that file upon execution of the shortcut. If you rename a file, shortcuts pointing to it will be modified so that they still point to it. If you delete files that came with Windows (such as Net Meeting) they will be restored automatically. You cannot rename running Windows files such as Explorer or .dll files. This would cause a fault in Windows.

Some actions can be fatal however. If you delete significant amounts of information from the Registry you will need to re-install Windows. If you delete *ntldr* or *ntdetect* you will need to run an emergency repair. If you install the wrong drivers for an expansion card you will need to install the correct drivers.

PROCEDURE

1. *Boot.ini*
 - ___ a. Boot the computer to Windows 2000 and from the desktop double-click the My Computer icon.
 - ___ b. Double-click the C: Drive.
 - ___ c. Click on Tools/Folder Options.
 - ___ d. Click the View tab.

**Troubleshooting**

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- ___ e. You need to view all files, so click the radio button next to "Show hidden files and folders."
- ___ f. Uncheck "Hide file extensions for known file types" and uncheck "Hide protected operating system files (Recommended)"
- ___ g. You will get a warning similar to Figure 44-1. Read the warning and click Yes.

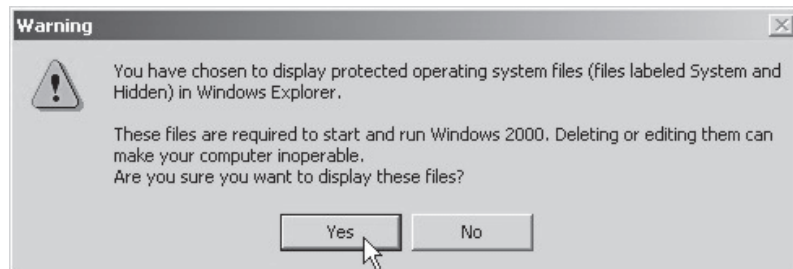


Figure 44-1: Display Protected Operating System Files

- ___ h. Click OK to close the *Folder Options* windows.
- ___ i. Record your observations about what you can now view in C: in Table 44-1.
- ___ j. Right-click on *boot.ini* and select Delete.
- ___ k. Confirm the File Delete by clicking Yes.
- ___ l. Close all windows and restart the computer.
- ___ m. When Windows is restarting record the message that appears at the beginning of startup in Table 44-2.
- ___ n. Once Windows has restarted double-click the Recycle Bin.
- ___ o. Right-click on *boot.ini* and click Restore.
- ___ p. Confirm moving the system file by clicking Yes.
- ___ q. Close the Recycle Bin.

2. Shortcut problems

- ___ a. Right-click the desktop and click New/Text Document.
- ___ b. Right-click the New Text Document and click Copy.
- ___ c. Right-click the desktop and click Paste Shortcut.
- ___ d. Double-click the shortcut and you will see *Notepad* viewing *New Text Document.txt*.
- ___ e. Close the window.
- ___ f. Right-click the New Text Document (not the shortcut) and click Cut.
- ___ g. Double-click the My Computer icon.
- ___ h. Double-click on C:.
- ___ i. Right-click in any blank space and click Paste.
- ___ j. Close the window.
- ___ k. Double-click the shortcut. Record what happens in Table 44-3.
- ___ l. Close all windows.
- ___ m. As before, go through My Computer, but this time delete *New Text Document.txt* from (C:).
- ___ n. Double-click the shortcut to *New Text Document.txt*. You will see a window similar to Figure 44-2. Click Yes to delete the shortcut.

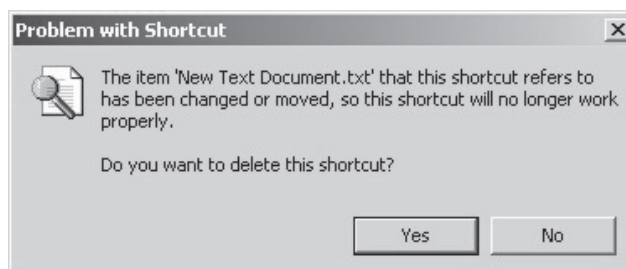


Figure 44-2: Delete an Invalid Shortcut

- ___ o. Right-click the Recycle Bin and click Empty Recycle Bin.
- ___ p. Confirm the file delete by clicking Yes.

3. Automatic restoration of Windows components

- ___ a. From the desktop double-click the My Computer icon.
- ___ b. Double-click on (C:).
- ___ c. Double-click the PROGRAM FILES folder.
- ___ d. If necessary click on Show Files to view the contents of the folder.
- ___ e. Double-click the NETMEETING folder.
- ___ f. Right-click on *conf.exe* (the execution file for Net Meeting) and click Rename.
- ___ g. Rename the program to **conf.exe** and press ENTER.
- ___ h. You will get a Rename warning similar to Figure 44-3. Click Yes.

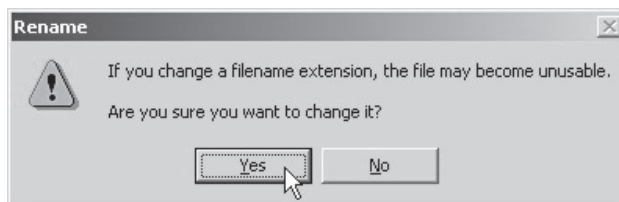


Figure 44-3:
Rename Warning

- ___ i. Wait approximately 10 seconds and record your observations about the folder's contents in Table 44-4.
- ___ j. Delete the file *conf.exe*.
- ___ k. Right-click on one of the .dll files in the folder and delete it. Use *nmchat.dll*, for example.
- ___ l. Wait 10 seconds and record your observations about the folder's contents in Table 44-5.
- ___ m. Close all windows.

4. File type association

- ___ a. From the Windows 2000 desktop double-click the My Documents icon.
- ___ b. Click File/New/Text Document.
- ___ c. Use the default New Text *Document.txt* filename and open the document by double-clicking the icon.
- ___ d. Type **This is a test** in the document.
- ___ e. Close the document and click Yes to save the changes.
- ___ f. From the *My Documents Folder* window click on Tools/Folder Options. This menu can be accessed from any folder in the Windows Explorer.
- ___ g. Click the File Types tab. You will see a window similar to Figure 44-4.
- ___ h. Look for the extension "TXT" by scrolling down in the Registered file types field.
- ___ i. Click the "TXT" extension and record its File Type in Table 44-6.
- ___ j. In the lower portion of the window is a short explanation of the extension. Record the name of the program that TXT "Opens with" in Table 44-7.
- ___ k. Click the Change button.

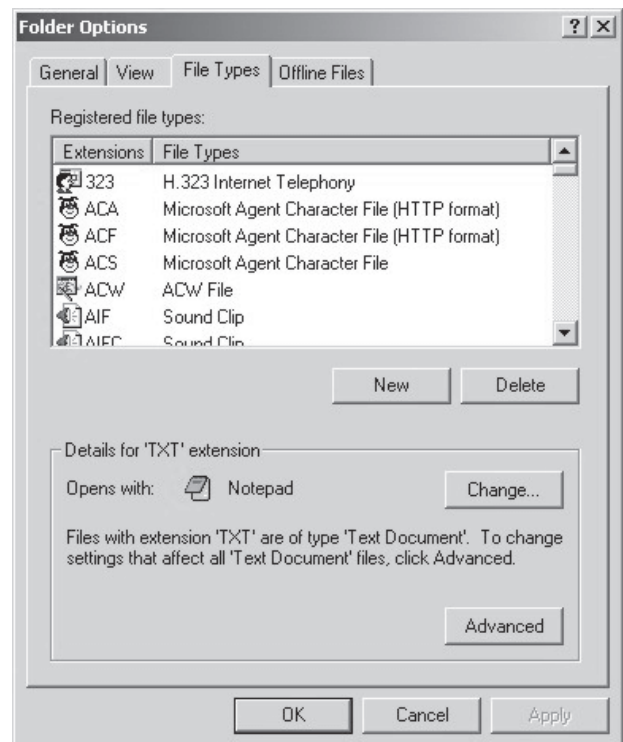


Figure 44-4: File Type Associations

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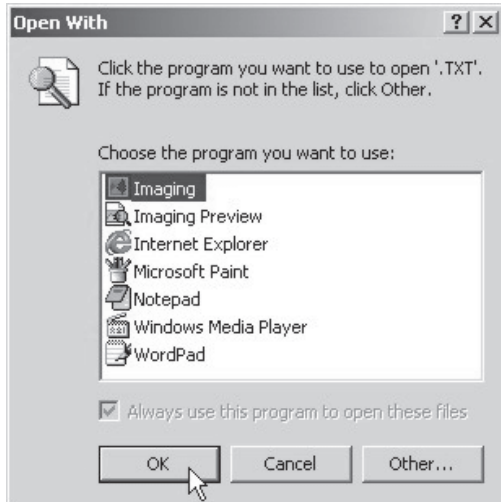


Figure 44-5: New File Type Association

- ___ l. You will see a window similar to Figure 44-5. Click on Imaging and click OK.
- ___ m. Close Folder Options by clicking the Close button.
- ___ n. In the MY DOCUMENTS folder that is still open double-click the new text document. Record your observations in Table 44-8.
- ___ o. Close all windows.
- ___ p. Open the MY DOCUMENTS folder once again and click on Tools/Folder Options.
- ___ q. Click the File Types tab. Look for the extension "TXT" by scrolling down in the Registered file types field.
- ___ r. Click the "TXT" extension and record the name of the program that TXT "Opens with" in Table 44-9.
- ___ s. Click the Restore button in the lower right portion of the window and record the name of the program that TXT "Opens with" in Table 44-9.
- ___ t. Close Folder Options.
- ___ u. Double-click the new text document and record your observations in Table 44-10.
- ___ v. Close the window that opened and delete *New Text Document.txt*.

5. Invalid shortcut at startup

- ___ a. Right-click the desktop and click New/Bitmap Image.
- ___ b. Right-drag the new bitmap image through Start/Programs/Startup and release the mouse button. Select Create Shortcut(s) Here from the window that opens. The screen should look similar to Figure 44-6.

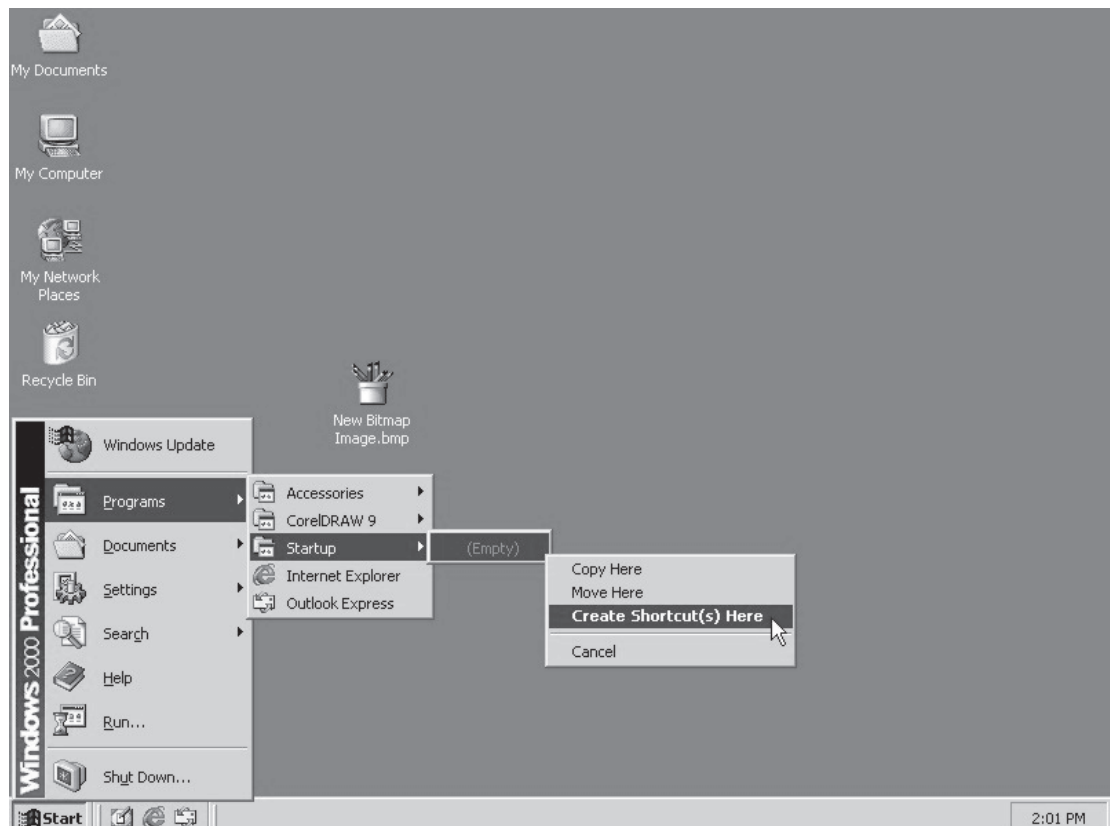


Figure 44-6: Create a Shortcut

- ___ c. You now have a shortcut to open the bitmap image at startup.
- ___ d. From the desktop delete the *New Bitmap Image.bmp*.
- ___ e. Close all windows and restart the computer.
- ___ f. Record your observations when Windows has restarted in Table 44-11.
- ___ g. Close any open windows.
- ___ h. Click Start/Programs/Startup. Right-click on Shortcut to *New Bitmap Image.bmp* and click Delete.
- ___ i. Click Yes to confirm the deletion.

6. Incorrect network adapter drivers

- ___ a. From the Windows 2000 desktop double-click the My Network Places icon.
- ___ b. Double-click on Computers Near Me.
- ___ c. Record your observations in Table 44-12.
- ___ d. Close all windows.
- ___ e. Go to Device Manager by clicking Start/Settings/Control Panel. Double-click the System icon.
- ___ f. Click the Hardware tab, and then click Device Manager.
- ___ g. Expand Network adapters. Record the name of your adapter in Table 44-13. Right-click on your adapter and click Properties.
- ___ h. Click the Driver tab.
- ___ i. Click on Update Driver.
- ___ j. Click Next.
- ___ k. Click on "Display a list of the known drivers for this device..." and click Next.
- ___ l. Click on "Show all hardware of this device class".
- ___ m. Choose a different Manufacturer from the Manufacturers list and choose any Network Adapter. The point is to choose an incorrect driver.
- ___ n. Click Next.
- ___ o. You will see a window similar to Figure 44-7. Click Yes.

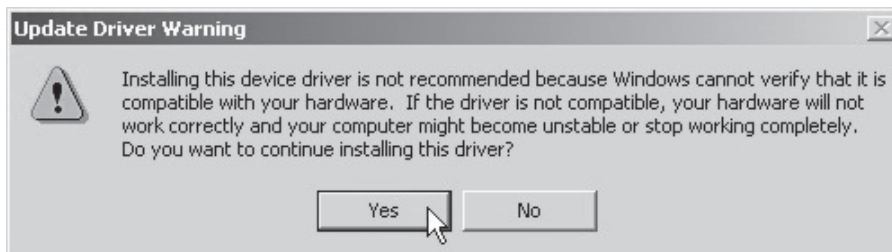


Figure 44-7:
Incorrect Driver Warning

- ___ p. Click Next and click Finish.
- ___ q. Close the properties of the adapter and restart as prompted.
- ___ r. When Windows has restarted double-click on My Network Places and double-click on Computers Near Me.
- ___ s. Record your observations in Table 44-14.
- ___ t. Close all windows. At this point you can install the correct drivers for the network card by using Plug and Play or the drivers provided by the manufacturer.
- ___ u. Repeat Steps e and f. Right-click on your adapter and click Uninstall.
- ___ v. Click OK to confirm the device removal. Right-click the computer name and select Scan for Hardware changes.
- ___ w. The following step will vary because Windows may not have the drivers built in. The new drivers will be installed automatically for the Plug and Play network adapter. You may need to follow the Wizard to install the drivers provided by the manufacturer. When the correct driver is installed you may close all windows.
- ___ x. Restart the computer and enter Computers Near Me as before.

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- ___y. Record your observations in Table 44-15.
- ___z. Close all windows.

7. Incorrect video adapter drivers

- ___a. Enter into Device Manager as in previous steps.
- ___b. Expand Display adapters.
- ___c. Record the Name of your adapter in Table 44-16.
- ___d. Right-click the adapter and click Properties.
- ___e. Click the Driver tab.
- ___f. Click on Update Driver.
- ___g. Click Next.
- ___h. Click on "Display a list of the known drivers for this device..." and click Next.
- ___i. Click Show all hardware of the device class.
- ___j. Choose a different Manufacturer from the Manufacturers list and choose any Network Adapter. Click Next.
- ___k. Click Yes to the incorrect driver warning window.
- ___l. Click Next and click Finish.
- ___m. Close the video adapter's properties and restart as prompted.
- ___n. When Windows has restarted record your observations about the desktop in Table 44-17.
- ___o. You can now reinstall the correct drivers for the video card. Enter Device Manager as before.
- ___p. Right-click the video adapter and click Properties.
- ___q. From the General tab record the Device status in Table 44-18.
- ___r. Close the video adapter's properties.
- ___s. Right-click the video adapter and click Uninstall.
- ___t. Click OK to confirm the device removal. Right-click the computer name and select Scan for Hardware changes.
- ___u. The new drivers will be installed for the Plug and Play video adapter.

NOTE: The following step will vary because Windows may not have the drivers built in. The new drivers will be installed automatically for the Plug and Play video adapter. You may need to follow the Wizard to install the drivers provided by the manufacturer. When the correct driver is installed you may close all windows and restart as prompted.

- ___v. When Windows has restarted record your observations about the desktop in Table 44-19.



TABLES

Table 44-1

Observations:	
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Table 44-2

New Message at Startup:	
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Table 44-3

Observations:	
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Table 44-4

Observations:	
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Table 44-5

Observations:	
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Table 44-6

TXT File Type:	
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Table 44-7

TXT File Opens with:	
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Table 44-8

Observations:	

Table 44-9

Before Restore TXT File Opens with:	
After Restore TXT File Opens with:	

Table 44-10

Observations:	
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Table 44-11

Observations at Startup:	

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Table 44-12

Network Observations:	
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Table 44-13

Network Adapter Name:	
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Table 44-14

Network Observations:	
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Table 44-15

Network Observations:	
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Table 44-16

Display Adapter Name:	
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Table 44-17

Desktop Observations:	
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Table 44-18

Video Adapter Device Status:	
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Table 44-19

Desktop Changes:	
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Feedback

LAB QUESTIONS

1. What happens to the icon in Device Manager when the incorrect drivers were installed for the network adapter?
2. What type of mode did Windows enter when you installed incorrect video drivers?
3. How many options were there in the Folder Options/View window?
4. How long did it take for Windows to automatically restore a file that you renamed?
5. What is a possible reason for receiving a Problem with Shortcut window?