Reinstalling Windows 95/98/ME/2000 Professional

Who needs this handout?
If you have been instructed to reinstall Windows on your computer as a result of a recommendation from a computer consulting professional, you will need this handout. If you would like information about Windows startup procedures, or about installing/uninstalling hardware components, you may also benefit from using this handout.

Why would I need to reinstall Windows 95/98/ME/2000 Professional?
The Windows operating system does not typically need to be reinstalled. Three common reasons why you may have to reinstall the software include:

- The user has installed and removed applications numerous times and a necessary file has been deleted or corrupted.

- A virus has affected files important for operation.

- The computer will not boot from the hard drive.

How do I create a Startup disk?
Before you attempt to reinstall a Windows operating system, you will need to create a Startup disk in the event the reinstall fails. It is recommended that you do this as soon as you have your new computer set up and **before** you start having problems. This disk should be labeled with the ID of the computer for which it was made and stored in a safe place. If any new hardware is added to the computer, a new Startup disk should be made.

If you are having problems getting your computer to start up, you can start it by using the Startup disk. To do this, insert the Startup disk in the floppy drive before turning your computer on. This starts the computer from the Startup disk, rather than from the hard drive.

To make a Startup disk for **Windows 95/98**, you will need a floppy disk with at least 1.2 MB of capacity.

Click **Start**, **Settings**, **Control Panel**, and then double-click **Add/Remove Programs**. Click the **Startup Disk** tab, and then click **Create Disk**.

If your computer has a CD-ROM drive, you may need to add the CD-ROM drivers to the disk. Not all Startup disks include these drivers. Test the Startup disk you created to see if the CD-ROM drive works when you boot your computer from the Startup disk. If the CD-ROM drive doesn't work, you need to copy the CD-ROM drivers to the Startup disk. Each manufacturer places its driver in a different location. There may be a CD-ROM directory on the hard drive (e.g., **C:\CDROM**) that contains the files you need. If there isn't a CD-ROM directory, you should contact the manufacturer

of your computer to find out where the files are located. Make a corresponding directory on the Startup disk, and copy all the files over. This is easily accomplished using *Windows Explorer*.

Next, click **Start**, **Programs**, **Accessories**, and then **NotePad**. Open the **CONFIG.SYS** file that is on the Startup disk. Add the appropriate **DEVICE=** line for your CD-ROM drive (for example, **DEVICE=NEC_BM.SYS /D:OEMCD001**). Save these changes. This will vary depending on the CD-ROM drive you have installed on your computer. If you don't know what the appropriate line should be for your CD-ROM drive, contact the manufacturer of your computer. Open the **AUTOEXEC.BAT** file that is on the Startup disk, or create one if the file doesn't already exist. Add the appropriate line for the program that runs your CD-ROM drive (for example, **MSCDEX.EXE /D:OEMCD001 /L:E**). This will vary depending on the CD-ROM drive you have installed on your computer. If you are unsure of any of these steps, call the Help Desk at 646-2999 (press 1) for assistance.

To make startup disks for **Windows 2000 Professional**, you will need four 1.44 MB floppy disks. You should also make an Emergency Repair Disk (ERD) that requires one additional floppy disk.

1. Insert a disk into the floppy disk drive and insert the Windows 2000 Professional CD into the CD-ROM drive.

2. Click **Start**, then **Run**.

3. In the **Open** box, type the following command, replacing *d* with the letter of your CD-ROM drive and *a* with the letter of your floppy disk drive: **d:\bootdisk\Makeboot.exe a:**, then click **OK**.

4. Follow the instructions that appear.

To make an ERD:

1. Click the **Start** button, then **Programs**, **Accessories**, **System Tools**, and then **Backup**.

2. On the **Welcome** tab, click the **Create an Emergency Repair Disk** button.

3. When prompted, insert the floppy disk and click **OK**.

4. When the process is complete, remove the disk, label it "Emergency Repair Disk," and store it in a safe location.

To restore your settings from the ERD, you need your Windows 2000 Professional CD, the Windows 2000 set up disks, and the ERD. During the restoration process, you can press **F1** for more information about your options.

What is *ScanDisk* (*for* Windows 95/98/ME)?

Before reinstalling Windows 95/98/ME, you need to run *ScanDisk* to make sure your hard drive is okay. *ScanDisk* is a disk analysis and repair program. You can use *ScanDisk* to check your hard disk for logical and physical errors, and then to repair the damaged areas.

ScanDisk checks and fixes problems in the following areas:

*   File allocation table (FAT)

*   Long filenames

*   File system structure (lost clusters, cross-linked files)

*   Directory tree structure

*   Physical surface of the drive (bad sectors)

You should make a backup of your files before running *ScanDisk*. If you do not have a backup system already in place, Windows 95/98/ME provides a backup application. You can find it by clicking **Start**, **Programs**, **Accessories**, **System Tools**, and then **Backup**. You will need either a tape and tape backup unit, a writable CD if you have a CD Read/Write unit, a set of floppy disks, or a Zip disk if you have a Zip drive.

You can specify how *ScanDisk* will repair any errors it finds. We **strongly** recommend that the **Automatically Fix Errors** box is **not** checked, as some errors should not be repaired automatically. For example, if *ScanDisk* reports that a file size is being misreported and you elect to automatically fix this error, the file may simply be truncated and you may not notice a problem until it is too late to restore from a backup.

Click **Start**, **Programs**, **Accessories**, **System Tools**, and then **ScanDisk**.

How do I check my hard drive using Windows 2000 Professional?

Click the **Start** button, **Programs**, **Accessories**, and then select **Windows Explorer**. In the window that appears, click on the plus sign next to **My Computer**, then right-click on the drive you would like to check. A menu will appear. Select **Properties**. Within Properties, click on the **Tools** tab, then **Check now...** under **Error-checking**. Click the options desired, then click **Start**.

How do I do a quick reinstall of the Windows operating systems?

Reinstalling Windows requires the Certificate of Authenticity for Product ID number. This number can be found in the *Introducing Microsoft Windows 95/98/ME* manual that came with the operating system or on the back of the Windows 2000 Professional CD. (This number can also be found by clicking **Start**, **Settings**, **Control Panel**, **System**, and then the **General** tab.)

Quit all programs. Before you begin, make sure you have a backup of your entire hard drive.

After following the steps above, put your Windows CD in the CD-ROM drive, or disk #1 in the **A:** drive.

Double-click **My Computer**, the **CD Drive** icon, then **setup.exe** or **Install**. Or, you can click **Start**, then **Run**, and type **D:\Setup.exe** (where **D** is the drive letter for your CD-ROM drive). Answer the questions as they appear on the screen. If installing from floppies, substitute the **A drive for the CD** drive.

Reinstalling existing files can take from a few minutes to an hour to run. During this reinstall, you may be asked questions about overwriting existing files. Typically, if you are asked to replace something with an older version, the answer is **No**.

This install will leave all files in their current place. It just reinstalls any system files that are missing, with a more current date, or of a different size than on the CD.

How do I completely reinstall the Windows operating systems?

If reinstalling Windows over the existing files does not correct the problem, you may need to reformat the hard drive and reinstall everything. This process also requires the Certificate of Authenticity for Product ID number.

Before you begin, make sure you have a backup of your entire hard drive. The formatting process removes everything from the hard drive, including all your data files, so you will need to restore them from your backup.

Quit all programs.

Create a Startup disk(s). If you will be reinstalling the operating system from a CD drive, make sure your Startup disk has the necessary CD-ROM drivers installed (see pages 1–2).

If *ScanDisk* did not run automatically, run it to see if there are any errors. On Windows 2000 Professional, run **Error-checking**.

Depending upon the state of the hard drive, you may be able to just format the hard drive, then reinstall the operating system. From a DOS prompt (for example, **C:**), type **FORMAT C:** to reformat your hard drive. **This will delete everything on your C: drive!** Once this is done, if you have a CD-ROM drive on your computer, make a CD-ROM directory on your hard drive (**MD CDROM**). Then, copy the CD-ROM drivers from your Startup disk to that directory by typing **COPY A:\CDROM*.* C:\CDROM**.

If the **Format** command doesn't recognize your **C:** drive, you will need to run *FDISK* first to partition your hard drive. From a DOS prompt, type **FDISK** and enter the information about your drive. Once *FDISK* is complete, you should be able to format the drive using the instructions above.

If you do not know how to format your hard drive or run *FDISK*, call the Help Desk at 646-2999 (press 1).

Once you have reinstalled the operating system, you may need to reinstall the software that came with your monitor and/or Ethernet card. This software should be on a disk that came with the component, or you may be able to download it from the Web site of the manufacturer of the component.

How do I install hardware components after Windows has been installed?
Before installing new hardware, it is always a good idea to have your Windows media — either disks or CD — in hand, as well as the Certificate of Authenticity for the Product ID number. You can find this number in the *Introducing Microsoft Windows 95/98/ME* manual that came with the operating system or on the back of the Windows 2000 Professional CD. (This number is also found by clicking **Start**, **Settings**, **Control Panel**, **System**, and then the **General** tab.) Although the Windows software is not always required for installing a new hardware component, the CD may contain the required drivers.

You do not need to reinstall the operating system if you add hardware to a computer. Windows has a feature called "Plug and Play" that enables you to simply install the new hardware and reboot the computer. Plug and play should detect the changes. If you need specific information about your new hardware, you should consult the manual that came with your computer or the hardware device.

If new hardware is not detected, click **Start**, **Settings**, **Control Panel**, then double-click the **System** icon. For Windows 95/98/ME, click the **Device Manager** tab. For Windows 2000 Professional, go to the **Hardware** tab, then click the **Device Manager** tab. Check to see if you have an entry for 'Other Devices.' If you do, see if the new component is in that folder. If it is a fairly standard component, you may want to remove it from that folder and reboot your computer to see if Windows will put the device in the correct location (for example, network adapters; sound, video and game controllers; etc.).

After installing new hardware, click **Start**, **Settings**, **Control Panel**, then double-click the **System** icon. For Windows 95/98/ME, click the **Device Manager** tab. For Windows 2000 Professional, go to the **Hardware** tab, then click the **Device Manager** tab. Make sure that none of the devices have a yellow exclamation point or a red X on them. This is an indication that there is a conflict between devices or that a device is not installed properly.

If Plug and Play does not detect new hardware, click **Start**, **Settings**, **Control Panel**, and then double-click **Add New Hardware**. Answer the questions as they appear on the screen.

How do I remove hardware components after Windows has been installed?
Before removing hardware, it is always a good idea to have your Windows media — either disks or CD — in hand, as well as the Certificate of Authenticity for the Product ID number. This number is found in the *Introducing Microsoft Windows* manual that came with the operating system or on the back of the Windows 2000 Professional CD. Although the Windows software is not always required for removing a hardware component, it may be.

You do not need to reinstall the operating system if you remove hardware from a computer. Simply click **Start**, **Settings**, **Control Panel**, and then double-click **System**. For Windows 95/98/ME, click the **Device Manager** tab, the component to be removed, and then click the **Remove** button. For Windows 2000 Professional, go to the **Hardware** tab, then click the **Device Manager** tab.

This feature is also useful if a device is not working or if it is conflicting with another device. In this case, remove the device, then reboot the computer. The Plug and Play feature should detect whether the hardware is still present and then you can make the appropriate changes to the configuration.

If you have any questions, contact the Computing Help Desk at 646-2999 (press 1), send electronic mail to **Help@dartmouth.edu**, or contact your division's computing support office.