

## Optimizing and Tweaking Windows 2000

By Kent Ward

In my previous FREE Optimizing and Tweaking books we started right into it, so let's do that again.

The first thing you should do is to update your *Emergency Repair Disk (ERD)*. To create an ERD go to *Start / Programs / Accessories / System Tools / Backup*.

The lowest big button on the new screen that appears is labeled *Emergency Repair Disk*, click on it one time, insert a 3.5" disk in the floppy drive and select *OK* on the pop up screen.

When the ERD is complete you should have another screen simply select *OK* and remove the floppy.

Finally, write the date on the disk (in pencil) and put it in a safe place.

### Windows 2000 Virtual Memory / Page file:

The page file (virtual memory or VM) is a good thing; however even though you assign it an amount of space you do not always get that space in the most efficient manner.

After your system has used the VM the data stays there and is swapped out as Windows thinks is best. While you cannot control this there is a situation that does occur.

When you shut down the PC, Windows is supposed to clear the VM but it does not do so. This can be a good thing IF your system crashes or a program crashed and your file just HAPPENS to be in the VM you can recover the data, but in all reality I have never had this happen. Instead what happens is that when Windows boots, it reloads the data from the VM that is on the hard drive back into itself. This will cause a minimal boot delay but also means resources are immediately used to store the locations of what is in VM and that VM is already being used before you even start anything.

The way to resolve this is to simply have Windows empty the VM (page file) when you shut down the system.

To do this you will need to edit the registry. Go to *Start / Run* and type in *regedit*.

**Just a little reminder, editing the registry can be perilous. If you thought Marshall, Will and Holly had a rough time in the Land of the Lost, you don't want to mess up your registry. Deviating from the instructions here can end you up in more than The Hole (November 2, 1974).**

Now backup your registry, (*File / Export*) be sure that the *Export Range* is selected as *All* and export to you backup file you created to the C: drive.

After backing up your registry you will need to navigate down the left hand column to *HKEY\_LOCAL\_MACHINE / SYSTEM / CurrentControlSet / Control / Session Manager / Memory Management / ClearPageFileAtShutdown* by clicking on the plus (+) symbols.

Double-click on *ClearPageFileAtShutdown* and change the value to 1 (either Hexadecimal or Decimal since “one” is “one” either way).

After making this change, you must restart the computer for it to take effect.

Shutting down or restarting the computer a second time will clear the page file.

Also while we are discussing virtual memory, sometimes Windows places key system files into virtual memory, we don't want this. In order to keep the operating system responding as fast as possible we need all of its files kept in RAM. To prevent the shifting of operating system files into the VM we need to make a registry edit.

**As you can no doubt forget, the journey of editing the registry is more dangerous than when Will and Holly decided to “Follow that Dinosaur” (November 30, 1974). So backup that registry.**

Open the registry (*Start | Run | Regedit*) and back it up (*File | Export*) make sure the *Export Range* is selected as *All* and export to you backup file you created to the C: drive.

Now you need to navigate to *HKEY\_LOCAL\_MACHINE | SYSTEM | ControlSet001 | Control | Session Manager | Memory Management*.

Now you need to double-click on DWORD value *DisablePagingExecutive* and set the value to 1.

### **Video Adjustments:**

To adjust the video settings you have several choices to get to the adjustments.

The quickest method is to right-click on the desktop and then select *Properties* from the menu that appears.

An alternative method is to go to *Start | Settings | Control Panel | Display*.

You should have a new window that looks similar to figure 1.

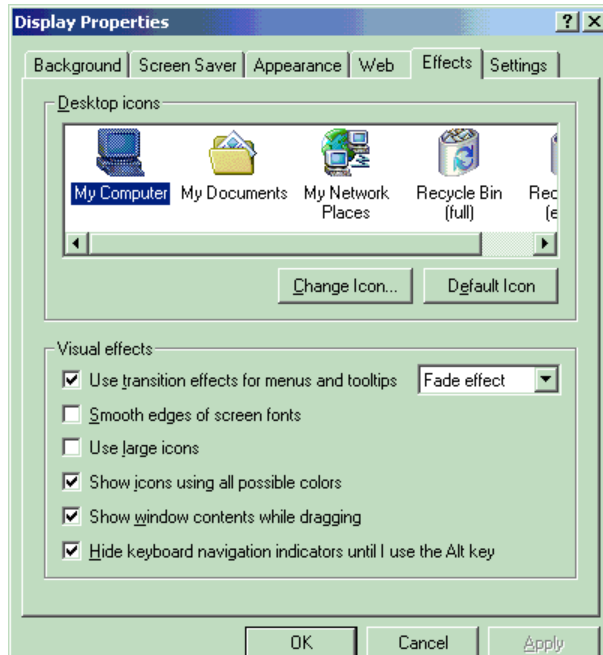


Figure 1

By clicking on the *Effects* tab you can optimize the way items are drawn on your computer.

If you have built in video then I would recommend that you remove the check marks by *Use transition effects for menus and tooltips* as well as *Smooth Edges of screen fonts* and *Show icons using all possible colors*.

If you have a video card with 16 MB or more of video RAM then go ahead and leave these boxes check as you like.

The next tab you should adjust is the *Settings* tab (figure 2).

Once you have clicked on it you can change the *Colors* and *Screen Area*.

For just a brief overview, if you are not running 3D games or doing 3D modeling, I would suggest setting the *Colors* at *16 bit (High Color)* the resolution depends upon your monitor but a minimum of 1024 by 768 is recommended.

By clicking on the *Advanced* tab at the bottom of this screen you will have a new window appear that brings up more specific properties.

On this new windows under the *General* tab make sure *Apply the new display settings without restarting* is checked.

Under the *Adapter* tab (figure 3) you can find out the make and model of your video card at the bottom if this screen is *List All Modes*.

By clicking on this you can automatically set all configurations available with your monitor and video card combination as in figure 4.

Depending upon your use I would be sure that you use at least 72 Hertz (Hz).

Select *OK* to apply any changes.

If List *All Modes* is not available you can go to the *Monitor* tab and select the refresh rate there as in figure 5.

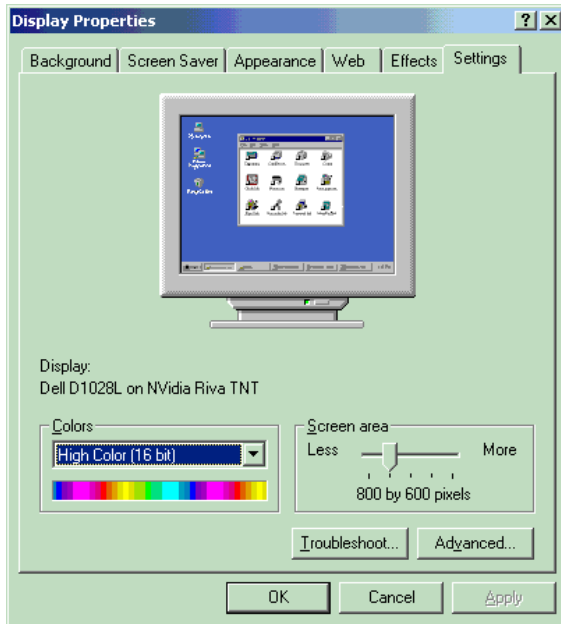


Figure 2

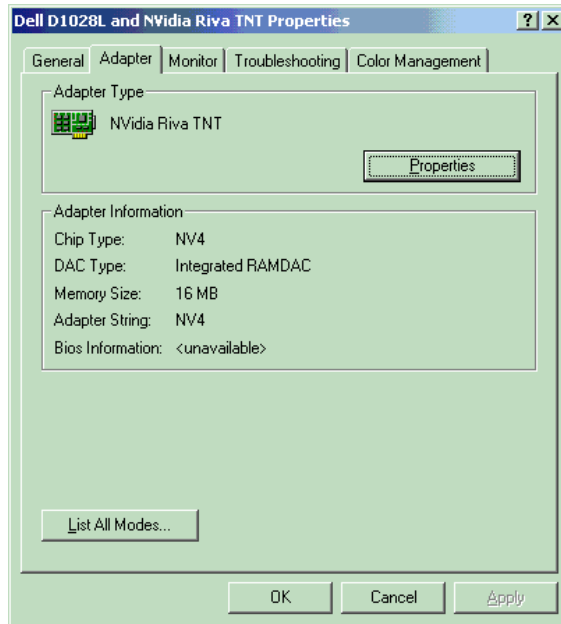


Figure 3

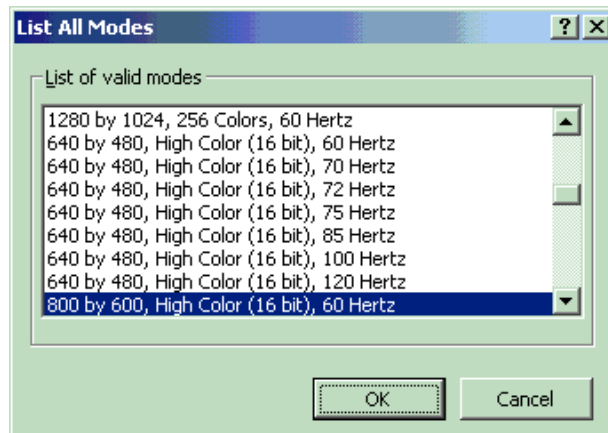


Figure 4

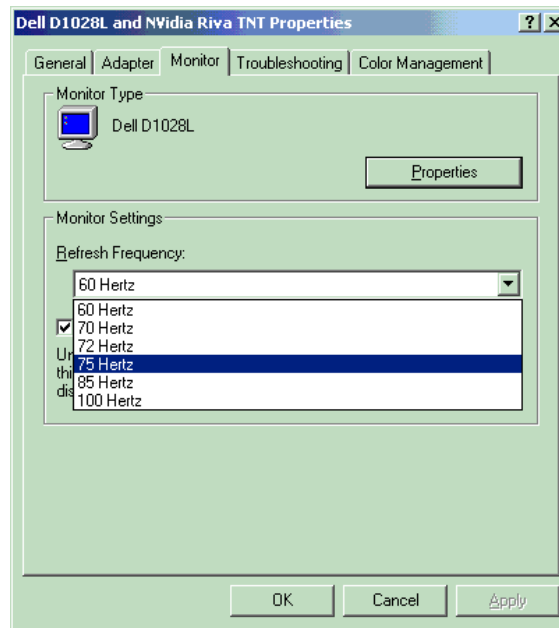


Figure 5

### Is the floppy drive checked each time you open (double-click) My Computer?

If this is happening to you, the probable cause is an incorrect registry value. This is fairly simple to correct.

**Before you make the following changes to the registry, be sure to first back it up. By the way Roy Rogers and Dale Evan might have always had a happy ending however; entering or changing data other than specified here will make you shed more tears than you did with the passing of Trigger.**

1. Click *Start / Run*.
2. Type *regedit* in the box.
3. Click *OK*.
4. Navigate to: *HKEY\_CURRENT\_USER \ Software \ Microsoft \ Windows \ CurrentVersion \ Policies \ Explorer* by clicking on the plus signs on the right column.
5. Double-click the *NoDriveTypeAutoRun* entry and change the value to *95*. See Figure 6.
6. *OK* your changes and close *Regedit*.
7. Restart your computer for the changes to take effect.
8. When your computer has restarted, open *My Computer* and check to see if your drives appear immediately in the window without the system first attempting to access the floppy drive, you should hear the floppy if it is being accessed.

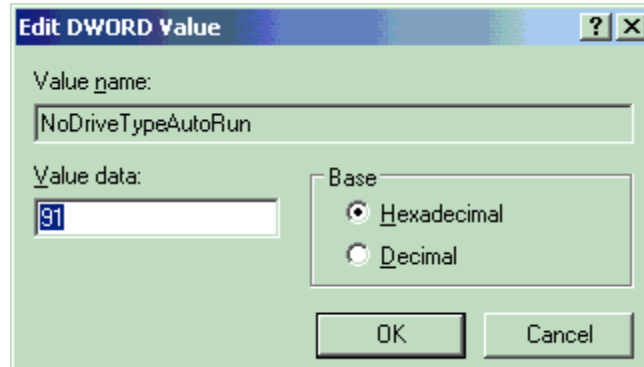


Figure 6

### Disable unneeded services:

Services are small programs that run in the background of your computer's operating system and are stored in RAM upon boot up. If you do not need the service having it running is a waste of RAM and processor time as well as quite possibly a security issue.

To get to the services window go to *Start | Settings | Control Panel | Administrative Tools | Services*.

### Services to consider turning off:

*Computer Browser* allows your PC to show itself on a Peer-to-Peer network.

*DHCP Client* (leave it on if you are on a network and receive automatic IP addressing).

*DHCP Server* (leave on if this is the newest operating system on your Peer to Peer network or is a "server" otherwise turn it off).

*DNS Server*: Performs DNS name lookups for itself and clients for Active Directory.

*IIS Admin*: Allows the system to be used as a web server either to the Internet or Intranet.

*Remote Registry Service*: Allows someone else to connect and edit the registry.

*Server*: Allows resource sharing on a server level.

These are not all of the services just the main ones you should be aware of.

### Removing unneeded files and programs:

If you are used to Windows 95 or 98 and its ability to control what is added or removed during the installation process you were probably dismayed to see, or in this case not see the choices of what to install. On top of that if you go to the *Add/Remove* portion of your system you will find that many things you would consider common are not listed.

If you have Administrative privileges you can change this.

First log on with the administrative account.

Next you need to make sure you have hidden directories visible (*Windows Explorer | Tools | Folder Options | View | Show Hidden Files and Folders*).

Open *Notepad* (*Start | Programs | Accessories | Notepad*) and open the file *sysoc.inf*. It is located in the *C:\winnt\inf* folder.

You will need to change the *Files of type* from *Text* to *All Files* from the drop down arrow.

Once open you will notice the word *Hide* in a lot of places, simple remove it (Hint, use the *Replace* command and type in "*Hide*," (without the quotes) for what to find and in the *Replace with* box simple enter a blank space by pressing the space bar.

Make these changes under the [Components] section.

Once the changes are made save the file *sysoc.inf* and make sure not to save it as a text file (*File | Save As* and on the new screen at the bottom next to *Save As Type* change to *All Files* by clicking on the down arrow.

Now, go back to the *Add/Remove* (*Start | Settings | Control Panel | Add Remove Programs*) feature and there they are, more stuff to get rid of.

Go ahead and remove *Fax Service*, *Character Map* and *COM+* unless you use these features (yeah right!) also I would go under the *Accessories and Utilities* section and remove *Imaging*, *Indexing Services*.

If you do not use *Outlook Express* go ahead and remove it, it is a security hole to watch out for.

### Removing OS/2 and POSIX:

Windows 2000 also has features that are installed that not everyone needs. If you are on a home network or no network go to the *Add/Remove Programs* box (*Start | Settings | Control Panel*) and remove *Indexing Service*.

There are also some additional components that Microsoft has decided that you need that I haven't used in well, er, never. They (Microsoft) install OS/2 and POSIX automatically. What? You don't know what OS/2 or POSIX means? All the better to eat you with my dear! Oh, sorry flashback to story time last night. Now where am I? Oh yeah, typing on a PC helping you, the brilliant people of America out. Back to removing OS/2 and POSIX. To do this requires a threefold approach.

1. First delete the *os2* directory, you can find it under *c:\winnt\system32*. Don't worry all values will not be deleted; we will take care of that in step three.
  - a. Open *Windows Explorer* by pressing the *Windows* key (located between the *Ctrl* and the *Alt* keys) and the *E* key at the same time and then releasing them both quickly.
  - b. Now navigate down the left hand column bar click on the *+* sign next to the *C:* and then *Winnt* and finally click one time on the *System32* folder. The *os2* directory will appear in the right had window pane.
  - c. Click one time on the *os2* folder and then click on the red *X* on the tool bar or press the *Delete* key on your keyboard. That red *X* is the delete button.
2. Next you need to edit the registry.

**Houston we have a problem. Editing the registry is a dangerous task. Following my steps exactly will result in success; failure to follow my steps will lead you to**

**a painful and horrid death on the island if Reinstall in the dungeon of LostAllOfYourData.**

3. To edit the registry go to *Start | Run | Regedit (or regedt32)*. Make sure that *My Computer* in the left window pane (at the top) is highlighted. If it is not, then click one time on it.
4. Next go to *Edit | Find* and enter *OS/2* (capitalization does not make a difference so *OS/2* and *Os/2* and *os/2* will all be found) under *Find What*.
5. As the files and folders are found, delete them (by pressing the *Delete* key on your keyboard) and then select *Yes* to confirm.
6. To find the next *OS/2* file or folder, press the *F3* key at the top of your keyboard.
7. After removing all *OS/2* values go back to the top of the registry by clicking and dragging the scrollbar up to the top and clicking one time on the word *My Computer*.
8. Now go back to the *Find* command and enter *os2* in the *Find* command and do the same as you did for *os/2*.
9. Do NOT delete any *POS2* files!
10. Next go back to the top and enter *POSIX* and remove all instances of it. Remember, pressing the *F3* Key will find the next instance of *OS/2*, *OS2* or *POSIX* automatically. When complete, exit the registry.
11. Finally, go back to *Windows Explorer* and the *c:\winnt\system32* folder.
12. Manually delete *posix.exe* and *psxss.exe* by highlighting them (click one time on one) and then pressing the *Delete* key on your keyboard.

### Removing the old DOS filename extensions:

If you have your hard drive formatted as NTFS then you can turn off the old DOS 8.3 file system.

If you do not know what this is, the 8.3 file system allowed users to only have eight digits or characters for the file name, a period and then a three character extension.

The NTFS file system duplicates every filename you have to maintain backward compatibility to DOS and Windows 9x computers.

The folder *My Documents* is also saved as *mydoc~1* for backward compatibility.

If you do not have any Windows 9x or DOS computers that you are networked to or if you are not on a network then you can disable this duplicating feature and free up not only some hard drive space but system resources like RAM and CPU time.

To make this change you will need to edit the registry again.

1. To do so go to *Start | Run* and type in *regedit*.

**Watch out Captain Janeway, by improperly editing the registry you will be assimilated by the Borg and sent to the starship AllWorkGoneByeBye for indoctrination into the land of GottaStartFromScratch. So back up that registry, all of your critical data and set those phasers on a rotating frequency.**

2. Once in the registry navigate the left column by clicking on the plus (+) signs next to *HKEY\_LOCAL\_MACHINE | System | CurrentControlSet | Control*

3. In the left window click one time on *FileSystem* There should be several lines of data now in the right hand window, D
4. Double-click on *NtfsDisable8dot3NameCreation* and change the value in the box to 1 (the number one).
5. Select *OK*. Close the registry and restart the computer.

### Setting up Msconfig:

Msconfig is a configuration program that lets you control some items and services that start when your computer starts up. It also has the ability to change some other boot settings.

If you have Windows XP you can copy the *Msconfig* files to your Windows 2000 machine and get the benefits of Msconfig.

To do this go to your Windows XP machine, place a blank formatted floppy in the disk drive or a USB "thumb" drive and copy *Msconfig.exe* and *Msconfig.chm* to it. Next take the floppy or USB drive to your Windows 2000 computer, insert the disk and copy the files from the floppy to the *C:\windows\system32* folder.

Once you have Msconfig installed run it by going to *Start / Run* and typing in *Msconfig*.

Under the *Services* tab of the new window that appears you can double check the services that you turned off earlier in this section are actually off.

A couple of additional services might not have been available earlier that you should consider removing are *Smart Card Helper*, *Smart Card* (these are for using ID cards to log onto a computer), *wireless configuration* (leave this alone if you have a wireless network).

Well, that is enough tweaking of Windows 2000 for now. I hope you are enjoying these PDF books and articles on [www.TheWeeklyGeek.com](http://www.TheWeeklyGeek.com). Check the web site regularly for new tips and tweaks.

Until we meet again, have a virus free day.