3.1 General Operating System Errors

Whether you use Windows or Linux, there are bound to be operating system level problems that you encounter. In this section, we'll take a look at some of these and how you can get around them.

3.1.1 Out Of Memory Errors

One of the more serious errors you can get in Windows is the "out of memory" error. This kind of problem usually occurs when the operating system's memory has been hogged by a particular offending application or program.

If you encounter this error, try to shut down the applications running in the background by invoking the Task Manager as shown below.

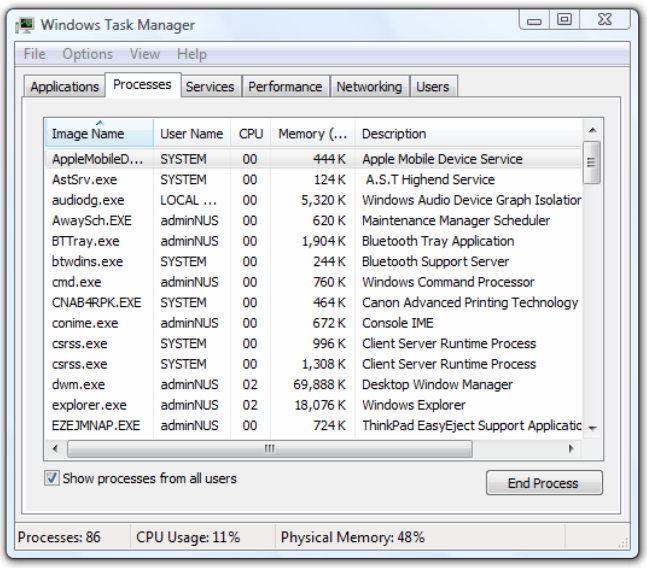

Figure 6: Screenshot of the Task Manager screen in Windows XP

Once you close down the applications, you will hopefully be able to resolve the issue. If all else fails, just reboot the machine and log into Windows again - that should clear off the memory errors.

3.1.2 Duplicate Programs

In Windows Vista, I sometimes find that I have multiple copies of Microsoft Excel running even though I only have one spreadsheet open. Why is this so? The reason is that sometimes Microsoft Office fails to close off previous instances of Word, Excel and PowerPoint properly – especially when those programs "hung" up. Open up *Task Manager*, point to the offending instance of the Microsoft Office program, then kill the process. That should solve the problem.

3.1.3 Excessive Hard Disk Activity

This kind of problem is related to memory. When the computer starts to "thrash", i.e. access the hard disk a lot, it means that the system has run out of memory and is creating a "page file" in your hard disk for "virtual memory". Usually, your system becomes usable once it starts to thrash.

To avoid these frustrating system problems, the best thing to do is to reboot, or get yourself more RAM. This kind of thing also happens a lot more in Windows 98 and Windows 2000. In Windows XP and Windows Vista, and also Linux, memory management is a lot more robust, so you shouldn't run into such problems.

3.1.4 Driver Problems

There are drivers for all the hardware you could possibly ever use in a PC – from video cards, monitors, printers, modems, routers, external disk drives, motherboards, etc.

Drivers have become less of an issue in the later versions of Windows like Vista. This is because Microsoft got hardware manufacturers to have built in support for Vista in their newest hardware, so that there was no need to install additional drivers for that hardware to work in Vista.

However, in earlier versions of Windows, things were not so advanced. Windows in those days had very "generic" drivers which hardware manufacturers could not talk to directly - hence the need for their own proprietary drivers to be installed.

So what's the lesson here? The lesson is two-fold.

First, try to use the latest copy of Windows. I know many folks out there are still unhappy with Vista and prefer to stick with Windows XP – but XP is going down the sunset road and believe me, the latest Vista is much, much more stable due to good service packs being released by Microsoft.

The second lesson is to go for brand name manufacturers when purchasing hardware. If you go for an unknown hardware manufacturer, they might not conform to the requirements of Windows and you will end up having to install the manufacturer's proprietary hardware driver (which is not recommended).

3.2 Specific Application Problems

Ok, so now we cross into looking at specific application problems. These are software problems that cover the whole gamut of applications you might use in a PC. We'll take a look at some of the common problems you might encounter in popular programs and discover how we should troubleshoot them.

3.2.1 Anti-virus Programs

Anti-virus programs (other than the default one built into Windows XP and Windows Vista) are notorious for giving performance problems.

One big, big culprit is Norton Anti-Virus. I know many folks swear by Norton Anti-Virus, but the suite of stuff they load into memory when you start up the PC is just mind boggling. On top of that they run like a gazillion little services in the background, sapping memory from your system.

The biggest takeaway here? Don't use Norton Anti-Virus. And don't use McAcfee (it's also very resource intensive). If you really want to have an anti-virus program installed, then try out AVG – this is a great program that I've been using for years. It's small, light and free. Much, much better than the Norton Anti-Virus behemoth we're all used to.

3.2.2 Microsoft Office Programs

Here, we're talking about Word, Excel and PowerPoint. The comments may also apply to other Microsoft Office components like Microsoft Project, Access and Visio.

Some of the more common problems with Word, Excel and PowerPoint are spelt out below.

- **Recovering from a crash**. Microsoft Office programs (the later versions at least) have an auto save feature that allows you to recover your documents if the system crashes while you're processing a document. When there is a prompt to allow you to recover a document, make sure you select to "Save" the document under a different name. Don't say "Delete" because you might lose the recovered document forever.

- **Saving files in different formats**. Another point about Microsoft Office programs - you might have problems with saving files in different formats. For example, the latest version of Microsoft Office, Office 2007, saves its files in the *docx*, *xlsx* and *pptx* extensions. These formats are not readable in previous versions of Office. So make sure that you go to Office 2007 and specify that you always want to save in the older *doc*, *xls* and *ppt* formats (there is an option in Office to specify this).

- **Duplicate copies running**. The next issue with Microsoft Office programs is the "duplicate" issue which I already mentioned. I sometimes find that I have multiple copies of Microsoft Excel running even though I only have one spreadsheet open. In such scenarios, open up Task Manager, point to the offending instance of the Microsoft Office program, then kill the duplicate process. That should solve the problem.

3.2.3 Games

Another popular category of software is that of computer games. If you're having trouble with your games, there are a number of things you should consider.

- **Video card drivers**. The Number 1 contributor to problems in games, especially 3D games is that of an inappropriate video card driver. Make absolutely sure you have your video card's latest driver downloaded from the manufacturer's website. Install it and keep your card up-to-date to ensure that it can run your games smoothly.

- **Inadequate hardware**. Besides the video card driver, the other problem that causes games not to run is inadequate hardware. Computer hardware requirements are typically spelt out in your computer game manual. Read these carefully and check that your hardware meets those requirements. The hardware components of importance are usually the CPU, amount of RAM and also the video card.

- **Wrong operating system**. Another problem with running computer games? Well, its the operating system. Some games will run in Windows XP but not Windows Vista. Others will run in Windows Vista but not Windows XP. Still others will run in Linux but not Windows. Check which specific version of Windows your game requires so that you can run it successfully.