

# NATGUG News March April 2005

## Editorial

I must apologise to all members who had to pay extra postage, I do not know why this should have happened the same number of pages were produced I need to investigate but to be safe I will produce less pages in this newsletter.

Warning to all drivers, if your county is anything like Wiltshire then you will see more mobile speed cameras than fixed, Wiltshire now has nearly double the amount of mobile cameras than fixed ones.

The mobile cameras work over a distance of a mile or more they work in the dark, do not flash and don't need marker lines on the road to catch you, and as a special measure to cut accidents on the M4 from Hungerford to Bath the mobile cameras will be on bridges over the motorway, best of luck to all you drivers.

In the last issue of Natgug news I talked about my recent purchase of a USB IDE Adapter, I have since purchased two more they are extremely useful for any hard drive or CD/DVD recorders. That takes us on to the next problem, shortage of USB ports, I have a small 4 port hub. I have been using this for some time to connect my TV card, Modem, Wireless Network, NetCam and scanner, all these USB devices do not have their own power adapters so they draw their power requirements from the computer or more correctly from the hub. All have been attached to this hub; the hub has no power adapter and draws its power from the computer.

I thought I would purchase another small 4 port hub, I looked at Maplins catalogue, yes they had one so I purchased this at a cost of £19.99 and took it home, on plugging it into the computer and then attaching some of my devices I soon found none would work, Windows reported that the hub did not have enough power. This was soon returned to Maplins and a refund obtained, but the lesson learned is that not all hubs work the same way, I may purchase this hub again because it should run the USB IDE adapters and Maplins have them on special offer this month, Half Price £9.99.

I have been a Maplins fan since they have opened a branch in Swindon, (I note that Poole is to open a branch in 2005 this could be of interest to all our Southern Members). That has led me on to look again at Solar Power, I purchased a 15w panel for recharging car batteries, I have a small inverter to change the 12v to 240 AC, This has not really been tested to any advantage yet as we don't get much sun this time of year. I had looked at getting a professionally installed system on my roof, that would generate more electricity that I would use at times, this could be sold and fed on to the National Grid.

An advantage would be to have some independence from the National supply because some of the excess power would be stored on 12v deep discharge batteries and an inverter would supply the requirements of the house.

The cost of the system would be quite high some £20,000 plus depending on how powerful a

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system would be installed, the Government would meet half this cost I believe.

I have worked out that it would take me some 20 years to recover the cost if the price of power stays the same as it is now, also if I spend this money I would not get interest on it, but on the other hand I would not be paying any tax to the state on interest plus the VAT on electricity at 8%, could go up in the interests of cutting users consumption by increasing the cost.

Lots to think about and work out the cost effectiveness of this type of system. The other side of the coin is that the solar panels would deteriorate over twenty years and would not be so effective as they get older, Has any one looked into this and do you know any more than I do, I would be really interested in your thoughts on this subject.

The competition starts again, with the higher definition TV pictures comes the need for higher storage needs, which developed the need to introduce higher density DVD drives. Once again two completely different systems compete for the market, I know one system is able to store more data than the other and one system is less costly than the other, the systems will offer several hundred gigabytes of storage.

By the time the drives become widely available they will be out of date, the next storage systems now being developed work on nano technology, they use very small packages to store thousands of gigabytes on the size of a postage stamp. This is a bit different to my first floppy disk system; this cost me I think around £370 for a

single sided 35-track 5.25 disk drive, which stored 180k.

## **Homeland Security on the Net**

by Ira Wilsker

[This article is reprinted from the 2003 August issue of "SYDTRUG News", newsletter of SYDTRUG Inc., PO Box 75, PANANIA NSW 2213, AUSTRALIA, where it was brought to you by the Editorial Committee of the Association of Personal Computer User Groups (APCUG), an international organisation to which SYDTRUG Inc. belongs. There is no restriction against any non-profit group using this article as long as it is kept in context, with proper credit given to the author.]

There have been a lot of hoaxes and urban legends mixed with the facts about our current threat level, and things that we as citizens can do to protect ourselves. At a time like this, it is imperative that we get our important and critical information from reputable sources, and not from spam e-mails or rumourmongers.

The U.S. Department of Homeland Security (DHS) has set up a website at [www.dhs.gov](http://www.dhs.gov) where the latest news and information on the topic can be found.

A variety of topics are available from this official source, including information on the new "Operation Liberty Shield". According to the DHS web page, "Liberty Shield is a unified operation that integrates selected national protective measures with the involvement of federal, state, local and private responders and authorities from around the country .... Operation Liberty Shield is a comprehensive national plan designed to increase protections for America's citizens and infrastructure while maintaining

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the free flow of goods and people across our border with minimal disruption to our economy and way of life. Operation Liberty Shield is a multi-department, multi-agency, national team effort." Included in the "Liberty Shield" statement is information explicitly on increased security at our borders, stronger transportation protections, and ongoing measures to disrupt threats, greater protections for critical infrastructure and key assets, and increased public health preparedness. Detailed information about these and other important topics is available on the DHS site.

Many of us are justifiably concerned about possible personal threats from terrorists. From the "Threats & Protection" link on the DHS site is comprehensive information compiled from a variety of resources, including the FBI, CIA, National Security Agency (NSA), Drug Enforcement Agency (DEA), the Department of Defense, and other resources. On this web page is also information explaining the Homeland Security Advisory System, which, as I type this, is at "Orange - Threat Advisory High - High Risk of Terrorist Attacks". Advisories are also posted on cyber-risks, and other public health and safety threats. Tips are available for home and community protection, schools, computer protection, and the mail service. Threats from biological, nuclear, and radiological resources are also included. Risks encountered by our telecommunications, power, water, and other utilities are discussed, as well as possible threats to our transportation system, and our agriculture. Financial threats, such as counterfeiting and credit card fraud, as well as identity theft and

other financial threats are explained, and precautions to protect against such risks are disclosed. Potential threats to leadership and symbolic targets are posted.

An affiliated website from the DHS is on-line at [www.ready.gov](http://www.ready.gov). With the heading "Terrorism forces us to make a choice. Don't be Afraid - Be Ready". This site contains a variety of personal protection resources, including emergency supplies, emergency planning, and information resources. Details on appropriate emergency supplies needed in an "Emergency Kit" include food and water, air quality and safety items, materials necessary for first aid, a supply checklist, and special needs items. The special needs' listing includes items for babies, family medical needs such as prescriptions, contact lenses and accessories and eyeglasses, dental needs, and related materials. Some seniors and disabled individuals may also have special emergency requirements, such as communication and mobility necessities that must be provided for in times of emergency. Appropriate additional resources are listed, with links on the web page.

The necessity of an emergency family plan is explained, including information on what to do if a terrorist attack or natural disaster occurs while at home, school, in a vehicle, or in a high-rise building, with an emphasis on "common sense" planning. Information on decision making about whether to evacuate or stay at home in a time of crisis is also included.

Critical information on a variety of explicit threats, and what to do in the

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event those threats become reality is listed. The types of threats covered include biological, chemical, explosive, nuclear, and radiological.

For those wanting a detailed printed brochure on this information, the DHS has a comprehensive one available for download on the ready.gov website, titled "Preparing Makes Sense. Get Ready Now". This brochure is illustrated and in colour, prepared in the Adobe PDF format, and suitable for local reproduction and distribution. Alternatively, the brochure is available for free in a published format by calling 1-800-237-3239.

If anyone is interested in being trained in dealing with these threats, or wishes to volunteer for community service, links are available on the ready.gov site.

Other useful and related official links are available on the ready.gov site. These links include the Centers for Disease Control and Prevention Public Health Emergency Preparedness and Response ([www.bt.cdc.gov](http://www.bt.cdc.gov)), Department of Education Emergency Preparedness Plans for Schools ([www.ed.gov/emergencyplan](http://www.ed.gov/emergencyplan)), the FBI ([www.fbi.gov](http://www.fbi.gov)), Department of Health and Human Services Disasters and Emergencies ([www.hhs.gov/disasters](http://www.hhs.gov/disasters)), Disaster and Terrorism Help ([disasterhelp.gov](http://disasterhelp.gov)), Environmental Protection Agency Emergency Preparedness ([www.epa.gov/ebtpages/emergencies.html](http://www.epa.gov/ebtpages/emergencies.html)), Federal Emergency Management Agency ([www.fema.gov](http://www.fema.gov)), and other similar links.

Unlike any other major threat previously faced by our country, the Internet has now become a valuable resource of reliable information that may literally be lifesaving. As has been said many times in the past, "information is power", and in this case, information may mean survival.

## Tech Talk

by Brian Jacobs - Coastal Area Users Group  
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This month's subject is the trials and tribulations of doing simple things with a Windows computer.

My wife wanted some pictures off our web site to send to her grandfather, who doesn't own a PC. Seemed a simple enough request. Since I produce the web site on my "Purple Haze" Win NT box, I thought I would use it, without thinking about the problems this might engender. It was easy enough to bring up Dreamweaver and then copy the pictures over to Word. There I discovered that you are extremely limited as to where the pictures would be placed, leaving enough room for text explanations of each picture.

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No problem, I thought, I'll just fire up MS Publisher and then place the pictures where I wanted them, leaving text boxes for position holders. Thought I might even show my wife how to use Publisher to type in the text, rather than write it out by hand after printing. Of course, when I went to browse for the pictures, I get an error message from Publisher to the effect that this part of Publisher is broke -- did I want to repair it. Sure, why not. Went through my CDs to find the install disk for Office 2K, put it in and was then told that it was the wrong CD - please insert the proper disk. I think the name it is looking for is data2.msi while my CD insists the file is called Data2.msi. Did you see the difference? Took me a few tries, I'm slow, but one is in caps and one isn't. So no repair this time. And how Publisher screamed and threatened when I tried to not repair it, with dire warning of impending program failure if I didn't repair it Now!

So far so good, but now the problems mounted. I was going to browse for the Save as location, intending to put a copy on hard drive, then another on a floppy. It was only two pages and 10 pictures so the file shouldn't be too large. Wrong! Turns out the file is way too large for a floppy, even in zipped format. No prob, I'll just burn a CD. No, that won't work. I have an lomega CD-RW that I got on special at CompUSA a few years back after being told by both lomega and CompUSA that it would run under NT. Of course, it didn't. Runs fine under Win2K but not NT. Which meant breaking open the box, installing my Win2K drive, changing jumpers and slaving the NT drive and then burning the CD. Instead I

decided to send the file e-mail. Yahoo choked twice on attaching the file, so I went to my ATT account. After waiting a long time for the file to attach here, I decided that the easy way to print this file was to crawl under my wife's desk and unplug the printer, attach it to Purple Haze and print it, then put it back on her machine.

After looking at what I would have to move to get the printer cable out from behind the desk and fling cabinet, I decided to just move over to her PC, using the backup CD of the web site. Discard the file on Purple Haze, end the Internet connection and redo everything on her PC.

I am almost positive that next month's column will be the hoops I learned to jump through as I try to network several boxes, to prevent this type of problem in the future. Of course, I could buy another printer, but that would be too easy. And her printer works perfectly well for what little printing we do. Maybe go wireless network? Nah, too much money for wireless this soon after the holidays. Think I will get a 5 port hub, a few Cat 5 cables and a few LinkSys or 3Com 10/100 cards to install. Then I can have Purple Haze (Win NT), my Dell laptop (Win2K), my wife's PC (also Win2K) on my own mini network. I'll also install my Win2K HD in Purple Haze and make sure that connection also works. And I won a copy of Win XP Pro at the CAUG holiday party, so I think I'll find a spare HD and install XP on Purple Haze and network that. Humm. That means two network cards and drivers, three OS's, a mini-hub and my laptop. Should be a breeze.... Go on, just shoot me now....

## **Ask Not What You Can Do For Your Computer But What Your Computer Can Do For You**

by Elise M. Edgell  
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For many years I have been looking for hardware and software that I could buy for my computer to make it faster, smarter, have more colours, give it more memory, and be able to run more printers, scanners, modems, and various other gadgets. It always seemed that I never had the funds to purchase what I really needed to be able to edit photographs, print high quality photos, have a computer fast enough to run the software to do all the marvelous things available.

Now it seems that computers have evolved to the point where the necessary CPU speed, sound, video, RAM memory, monitor, broadband connection to the Internet, and printers are powerful enough and inexpensive enough to enable people to do all the wonderful things that were previously out of reach. The use of the Internet and digital photography are two very popular uses of the home computer.

But what else can we let the computer do for us ? It is obvious in our club that we have an aging membership. It is time to let the computer start assisting us in the things we do. There are some features built into Windows that can make life easier. It is possible to enlarge the size of the type on the monitor. The speed that the mouse moves can be changed to compensate for a hand that is not as steady as it once was. The colour scheme in Windows is changeable. There are many choices as to what appeals to you or as to what makes it easier for you to read the text on the screen. Also, many programs let you change the colour scheme to make it easier for you to read the screen.

Have you ever thought about having the computer read to you ? There are programs that are able to read any text file. This means that any text that you can copy into Windows Clipboard can be read to you. It can read your e-mail, help files, documents, books, web pages, etc. One such program is iSpeak by Fonix. It also has a place where you can enter your own text and the program will say each letter as you type it and each word as it is completed. Then the text can easily be copied and pasted into your favourite word processing program or e-mail program. The thing that I found very interesting is that when I did some searching on the Web for information about the program there was a whole list of things that it can do for you, none of which indicated that it would be very helpful for anyone with impaired vision.

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There is a program called Zoom Text by AiSquared that is aimed at the vision impaired market and has an add-on which will read the text out loud, but it is a much more expensive program.

Do you have a problem with carpal tunnel syndrome or are the joints just not working as well as they once did? Are you not a touch typist and have trouble seeing the keyboard? Programs such as Via Voice by IBM and Dragon Naturally Speaking allow you to write text by dictation and even control the functions of the computer with voice commands. In the past these programs weren't very efficient because they take a very powerful computer to work properly. I think the current computers are approaching the necessary computing power.

Many programs can also be used on a PDA such as a Palm or a Pocket PC. Such devices can be very useful because they are easy to take with you when you leave your computer. A PDA can remember megabytes of names, addresses and phone numbers that you are having trouble remembering (Senior moments?). They can be easily programmed to remind you of appointments (time to take pills?), lists of things to do, directions on where to go, etc. About the only requirement is that a person has the ability to read.

E-mail is getting very popular with Seniors but how many people are using the Internet to order groceries? Shopping can be a major problem if you can no longer drive. Public transportation leaves a lot to be desired.

Being able to place an order from your computer and have it delivered is more than a convenience for many people. Also, many pharmacies allow you to order refills of prescriptions on their Web sites. There are many other sites that will mail your prescriptions to you. Using a search program such as Google is also a good way to get information about any medication that you are taking (and about anything else that interests you). You can do all of your shopping using the Internet. Not being able to walk around a shopping mall is no longer a bar to the Shop Till You Drop syndrome.

There are other devices that can be used in the home in conjunction with a computer or in a stand-alone capability that can make life much easier. When it is difficult to get around, it is handy to have a remote control device to turn lights on and off, control a fan, room air conditioner, or any other small appliance. Having a remote video camera in position to show who is at the door is also very handy. There are also devices that can be worn on a cord around the neck, so in case of an emergency, help can be summoned at the press of a button. Telephones for hearing impaired are available for free in California (with the proper documentation).

The many helpful uses of a computer are not restricted to the elderly. People of all ages may have a disability. And, you don't have to have a disability to let your computer make life easier and more fun.

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I would really like to hear from anyone who is using or knows of interesting programs or devices that can be used to improve the quality of life for so many of us. Please e-mail me with any suggestions or ideas at [EliseME@aol.com](mailto:EliseME@aol.com).

## Windows Up Grade Options

by Michael Horowitz  
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This is a change of pace -- a letter so complete and detailed, it's almost an entire feature in itself. It's from Plus! Subscriber -- and computing instructor -- Michael Horowitz (thanks, Michael!), and contains a wealth of great info, especially on two lesser-known upgrade options.

I'm personally more in favour of clean installs than Michael is. As Michael says, a clean install can be a good choice if the version of Windows you're upgrading has problems, because a clean install is a fresh start -- none of those problems get carried over to the new setup. I like clean installs because, in my experience, almost all versions of Windows that have been in use any significant length of time do have problems.

Even if your current version of Windows seems to be OK, there's a good chance that something isn't right, somewhere in the system. A clean install gives you a fresh start, no matter what.

But if you follow Michael's wonderfully-detailed advice, you'll see that there's more than one way to accomplish a clean install; and that clean installs are just one of several options. Michael, take it away:

When considering installing a new version of Windows on a computer, the first issue is whether your computer is fast enough for the new operating system. Microsoft and others publish both minimum and recommended horsepower (cpu speed, installed RAM and available hard disk space). You can learn about the horsepower requirements for Windows XP at <http://www.microsoft.com/windows/xp>.

The second issue is whether your computer and surrounding hardware is supported by the new version of Windows. Microsoft publishes a Hardware Compatibility List (<http://www.microsoft.com/hcl>) where you can see if Windows is supported on your computer. In addition, you should check your printer, scanner and other hardware to see if there are drivers for the new version of Windows. This is especially of concern when moving from a Windows 9x family OS to an NT class version of Windows (NT4, 2000, XP).

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Software also has compatibility issues. Not all software runs on all flavours of Windows. Any software that you want to continue to use, should be checked to make sure it is compatible with the new version of Windows. Windows XP was the first version of Windows to address this issue. It has a feature that attempts to fake out a program so that it thinks it is running under an older version of Windows.

If you decide to install a new version of Windows, the next issue is how. Most people discuss two options. There are actually four ways to run a new version of Windows on your computer.

A new version of Windows can be installed as either an upgrade of an older existing copy of Windows or on a new empty hard disk. An upgrade install places the new copy of Windows on top of the old copy. A clean install puts the new copy of Windows on your computer as if the old copy never existed. There are pros and cons to each approach.

## Upgrade installation:

Con - You lose the old copy of Windows. It is clobbered by the new copy being installed over it. Should there be any problems with the new copy of Windows, you can't fall back to your tried and true old copy. Con - Compared to a clean installation, an upgrade install is more likely to cause problems in the future. It's complicated, in a world where simpler is better. Pro - Your existing applications, data and settings remain more or less unchanged.

## Clean installation:

Con - You lose not only the old copy of Windows, but everything that was previously on your computer. All your data and all your applications. Obviously this requires that you first back up all your data files. Don't forget any files -- if you fail to back up a file, it is lost for ever. It is easy to forget that e-mail or an address book also needs to be backed up. Pro - From a technical perspective, a clean installation is simpler and less likely to cause problems in the future compared to an upgrade installation. Con - It requires re-installing all applications and customising things from scratch.

An upgrade installation is not always an option. It depends on the old and new versions of Windows. The rules for Windows XP are presented later.

Also, you should not do an upgrade installation if the old version of Windows is having problems. If your motivation for a new copy of Windows is to fix problems with the old version, then do a clean installation of either your current version of Windows or a new version.

Further complicating things is the fact that many (most?) copies of Windows that you buy in a retail store are not designed for a clean install. They are referred to as "upgrade" copies. Upgrade versions of Windows are much cheaper than "full" versions but are only for people who already own a prior copy of Windows. For example, the upgrade version of Windows XP Home Edition is under \$100, the full version is \$200 (as of February 2003). The upgrade version of

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Windows XP Professional sells for about \$200, the full version is about \$400. Upgrade versions of Windows are intended to be used to upgrade an old version of Windows. They require proof of ownership of a previous version of Windows. When you do an upgrade installation, the proof of ownership comes from the old version of Windows found on your computer. For a clean installation, you need to provide a CD-ROM from the earlier version of Windows as proof of ownership. Even though you own a previous version of Windows, you may not have a CD-ROM to provide as proof. Many computer manufacturers stopped providing this years ago. Instead they provide only a recovery CD-ROM.

It is safe to say, that both upgrade installations and clean installations are poor choices. There are two other options that offer none of the downsides previously mentioned. These next two options let you run both the old and the new version of Windows on the same computer. In effect, you can have your cake and eat it too.

The downside to these alternative approaches is that they require some technical skill and additional software.

The third alternative lets you run either the old or the new version of Windows, but only one at a time. When the computer starts up (boots) you are presented with a choice of which version of Windows to run. The fourth alternative, lets you run both the old and new versions of Windows concurrently!

## ---A Third Alternative---

Installing two versions of Windows on one computer is done by giving each its own dedicated partition. The old copy of Windows remains where it is, but its partition will likely have to be shrunk. The new copy of Windows is installed in a different, and new, partition. The vast majority of personal computers have a single partition whose size is the full size of the hard disk. In this case, this single partition has to be shrunk and a new partition created in the space freed up.

This approach is referred to a multi-boot or dual-boot or side-by-side installation. The terms refer to the fact that you can boot (techie speak for "start up") either of two versions of Windows.

No version of Windows comes with software that can non-destructively resize a partition. This requires a commercial product, known generically as partitioning software. Among the available software is Partition Magic from PowerQuest, Partition Commander from V Communications, Partition Expert from Acronis and Partition Manager from Paragon Software. There is also a free program, Ranish Partition Manager but the user interface is said to be very difficult and for a job like this, it is better to have technical support available. Note that resizing a partition is potentially a dangerous thing. Always back up your most important files first and run a full disk check beforehand.

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Also, this approach requires more hard disk space than either a clean install or an upgrade install. After all, two separate and independent versions of Windows reside on the computer. Be sure to check the amount of available space on the hard disk before even considering this approach. In general, figure on two gigabytes of disk space as a minimum amount for installing an NT class version of Windows and one gigabyte for a version of Windows in the 9x family.

It is also possible to add a second hard disk to a computer and have each hard disk dedicated to one version of Windows. The advantage to this approach is that it can save the cost of partitioning software. In fact, a large enough hard disk can be had for roughly the same price as the partitioning software. Choosing an OS at start-up time could be handled by either the new version of Windows (if it is an NT class), the system BIOS or commercial software such as System Commander or Boot Commander. Nonetheless, you may opt for purchasing partitioning software for reasons explained below. The general approach of having different versions of Windows installed in different partitions can be used with any two versions of Windows. If done correctly, it does not matter which version of Windows is installed first or second.

The advantages of this are many. You can fall back and use the old OS if the new version of Windows causes trouble. You can migrate to the new version of Windows gradually rather than in a big bang. Software and/or hardware that is not supported in the new version of

Windows can be run from the old one.

Also, the new version of Windows is installed cleanly which means it's less likely to experience problems.

The down side is that it requires a reasonable amount of technical skill to set up.

However, if the old version of Windows is from the Windows 9x family and the new version is from the Windows NT family, and there is an available empty partition for the new version of Windows, then the new version of Windows has some crude, but usable features for managing the two versions of Windows.

During installation of the new version of Windows, the old version will be detected. Thereafter, the new version of Windows offers a list (menu) of Windows instances on the computer at start-up time. You get to choose which copy of Windows to run every time the computer starts up. I am not a big fan of this approach, however.

For one thing, the description of the older version of Windows is sometimes wrong. Also, files get installed in the partition where the older version of Windows resides. If the time ever comes that you want to get rid of the old version of Windows, it is very difficult. Finally, one copy of Windows sees the files that constitute the other copy, an accident just waiting to happen.

A far better approach is keep each copy of Windows totally separate, distinct and unaware of the other copy of Windows. This way, a problem in one copy of Windows cannot affect the other one.

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Also, each copy of Windows can be re-installed, removed or upgraded with no effect on the other copy. On their own, the NT class versions of Windows cannot keep two copies of Windows totally isolated from each other.

There are also software programs that manage multiple copies of Windows on a single computer. The most popular such program is System Commander from V Communications. It offers a list of operating systems that you can choose from each time you start the computer. The software is easier to deal with than the corresponding features in the NT class versions of Windows.

However, multi-boot software such as System Commander costs money and can be confusing to install. Also, it gets in the way of the normal Windows startup process, so if Windows fails to boot, debugging is all the more difficult. I'm not sure if it can keep each copy of Windows totally separate. Total isolation of each copy of Windows requires up-front planning to hide the partition with the old version of Windows. At the time the new version of Windows is installed, the computer thus appears to have an empty hard disk. This worked better with the 9x versions of Windows. Windows 2000 and XP will see the hidden partition at install time, but they can be directed to ignore it both at install time and after the fact.

You can have total isolation each OS, a 100% normal boot process (i.e. no multi-boot software) and still run either OS.

The trick is a program called program called pqboot included with PartitionMagic which has to be installed in each copy of Windows. The computer will always boot the last used OS. If this is not the OS you want to run, pqboot can be run to shut down the current OS, hide its partition, and boot the other OS. There are DOS and Windows versions of pqboot. The DOS version supports command line switches. In the best case scenario, there can be an icon on the desktop that invokes the DOS version of pqboot to shut down the current version of Windows and start up the other version. This automated OS switching requires only that the user double-click.

Data files can be made visible to each OS by placing them in a logical partition within an extended partition. Pqboot makes no changes to logical partitions. Of course, this data partition has to be formatted with a file system (FAT16, FAT32, NTFS) supported by both versions of Windows.

Finally, there is yet another totally different approach. Providing the best of all possible worlds, this approach lets you run both the old and the new version of Windows at the same time. You start up Windows, in the same manner you start any other application, such as Word or Excel.

This is done using virtual machine software. Two companies offer this software for home use, VMware ( <http://www.vmware.com> ) and Connectix ( <http://www.connectix.com> ). They vary in the flavours of Windows they support and in cost.

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Vmware costs \$330, Virtual PC from Connectix is \$230. Connectix was acquired by Microsoft in March 2003. These products are installed on the old version of Windows (known as the host OS), just like any other software. When you run them initially, you create a Virtual Machine with a virtual hard disk and virtual RAM. You install a new copy of Windows (known as a guest OS) inside a Virtual Machine. Virtual machines are logically powered on and off, simulating a real computer. Powering a Virtual Machine on/off is somewhat akin to opening and closing a document with a word processing program.

There is no limit to the number of Virtual Machines you can define and use other than the hard disk space on your computer. The speed of your CPU and the amount of RAM in your computer, limit the number of Virtual Machines that be run concurrently. When a Virtual Machine is running, the interface to it is a normal Windows window, which can be minimised and maximised. The virtual machine is just another running application. You can switch between a virtual machine and other applications in the usual way (task bar, alt-Tab, etc). VMware offers a full screen mode, running a virtual machine in full screen mode makes it really look like a real computer.

VMware and Virtual PC have limitations on the versions of Windows they can be installed onto and the versions of Windows (and Linux) that can be installed in a Virtual Machine.

In addition, the guest OS may have limitations that prevent it from

running inside a Virtual Machine. Two examples are BIOS locked copies of Windows and the product activation feature of Windows XP.

One caution with VMware, the thirty days of technical support starts the day you get the software, whether you install it or not.

Note again, these final two approaches require a non-trivial amount of technical expertise.

Most likely, the new version of Windows you will be installing is XP. Many programs originally written for Windows 95, 98 or Me will not run correctly under XP. For the most part, the burden of researching this falls to you. For every program you care about, go to the web site of the vendor to see if it is supported under Windows XP. Be especially sure to check your anti-virus and firewall programs.

As for an upgrade install (XP on top of an older version of Windows), the Home Edition of XP can be installed on top of only Windows 98 and Windows Me. The Professional Edition of XP can be installed on top of Windows 98, Me, NT4 (only SP6) and 2000. If you are running Windows 95 (or 3.1 for that matter) you can not upgrade to XP, instead you will have to opt for one of the other three approaches.

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If you are installing XP on top of an older version of Windows, then you can use a program on the Windows XP CD-ROM called the upgrade advisor. It checks for some programs known to be incompatible with Windows XP. You can run it from the XP CD (assuming it is the D disk) with D:\i386\winnt32 - check upgrade only. This program is very limited in its scope however. These articles offer some advice specific to XP upgrades: Article: HOW TO Troubleshoot Windows XP Problems During Installation When You Upgrade from Windows 98 or Windows Me.  
[http://support.microsoft.com/default.aspx?scid=kb;en\\_us;310064](http://support.microsoft.com/default.aspx?scid=kb;en_us;310064)

Article: Last Call for Windows XP Upgrades. PC World Magazine. May 2002. Tips on how to do an upgrade installation of Windows XP.  
<http://www.pcworld.com/resource/article/0,aid,86927,00.asp>

Article: Windows XP Professional Upgrade Center  
Information from Microsoft on the four steps to upgrading to Windows XP. <http://www.microsoft.com/windowsxp/pro/howtobuy/upgrading/default.asp> Article: Bugs and Dust Balls: A 'Clean' Installation. The New York Times October 24, 2002 by Sarah Milstein  
The horrors of upgrading from Windows 98 to XP. The article contains a number of technical mistakes.  
<http://www.nytimes.com/2002/10/24/technology/circuits/24basi.html>

## Disk Investigator T

by Robert A Lewis - The Dayton Microcomputer Association, Inc.

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<http://www.theabsolute.net/sware/clndisk.html>

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