Tudor's Guide to a Speedy Computer

This is a guide for advanced users running Microsoft Windows, written for people who know what they do, and they can help themselves in case of computer problems.

     1. Magic speed:

You need the program HDAT2 (newest version, even if it is a beta version) from http://hdat2.com (freeware, no viruses, no commercial tricks).

For every hard disk, remove all (removable) options from DCO (Device Configuration Overlay). In order to get maximum speed gain you should disable the SMART functions, but in this case you won't be warned in time in the case that there is imminent a hard disk failure. If you're not willing to take such risk, you may leave SMART functions active. As a rule of thumb, you may leave enabled NCQ and TRIM.

If you meet a Frozen Security state, be careful if you want to remove it. In some situations, this seems impossible. Read HDAT2 FAQ in order to know how to handle such situations.

For HP, Dell, Packard Bell and Compaq computers, you may have problems if you remove HPA, so ponder well before removing it on such computers, since they may have such hidden partitions with test software.

If DCO seems to be no longer modifiable, then recover DCO settings (do not use F7, but use the Recover menu). Then, set to Remove everything you want to remove, then press S (Set). There can be more pages of options so select Remove for all of them and then press S.

Security functions is a function which 99% of users do not know that it is there and the rest will have no benefit from using it. It is only needed for locking access to your hard disk with an ATA password (master and user passwords) and/or wiping (totally erasing) your hard disk. Chances are that you won't ever need it. If you will ever need it, simply enable it from DCO menu before locking your drive. And, no, it is not meant to protect you from viruses and/or hackers (or, better said: crackers).

Tip: after setting DCO options, it is wise to examine (double-check) them, to see that they are indeed removed. Do not press S again, if everything is ok. If you do change something then, double-check again.

Note: you don't need 48-bits LBA for disks with less than 137 GB. In some cases enabling 48-bits LBA leads to random reboots. But, you do need 48-bit LBA for hard disks of size equal to or bigger than 128 GiB.

     2. Check if your UDMA device has gone PIO. (Optional: install the latest SATA and PATA drivers for your system.) Go to Safe mode. Look at IDE channels in Device Manager. Check if your device is reported as having a PIO connection. If yes, delete (uninstall) that IDE/SATA channel. Verify all IDE/SATA channels and repeat this procedure for every other IDE channel/SATA channel, if needed. "Going PIO" and severe spyware infections are the two major causes for having a very slow system.

     3. Another cause of a slow system is a fault in the number of free clusters (especially on FAT32). For all Windows partitions use one of the following commands, once a week, in order to

logically check **all** partitions:

scandisk /all /autofix (for Windows 9x/ME, will check all partitions, except NTFS partitions)

or:

chkdsk x: /f (for Windows NT/XP/2003/Vista)

wherein x: is a Windows partition, e.g. c:, d:, etc.

Tip: if chkdsk reports that it has found no error, then it is really so; if it does not report that, there was something wrong with free clusters number (free space count) or so.

4. Kill the ASPI layer with ForceASPI 1.8. Use FrogASPI renamed as wnaspi32.dll and put it in C:\WINDOWS\System32\ (or on whatever partition your Windows is installed, instead of C:) .

5. Disable advanced text services.

6. Remove ctfmon.exe, see details on http://support.microsoft.com/kb/282599

7. Set all hard discs on Auto, in BIOS boot menu.

8. Use HDAT2 or a program like AIDA16 or Navratil to find out how many sectors can each of your hard drives transfer in a block of sectors. Set that number in BIOS options (the option Maximum sectors per block isn't that good as one might think.) Such number can be different for different hard drives.

9. Activate 32 bits transfer for every hard disc, if your BIOS has such an option (on some strange motherboards, you may have problems like random reboots if you do this).

10. From Windows Device Manager, for every hard disc, use Enable Write Caching and (if available, for it is only available for Windows 2003, Vista, Windows 7 and Windows 2008 as far as I know) Enable Advanced Performance. Please mind that in case of crash, the risk of losing data increases in such a case.

For Windows XP download dskcache.exe and then execute the following commands:

dskcache +w
dskcache +p

11. Vista bug: after using GNU/Linux command ntfsfix on NTFS partitions, Vista may refuse to start. Solution: perform a chkdsk x: /f with some Windows XP or 2003, or use NTFSPro with the command:

ntfschk /a /f

12. Use Registry Checker and Driver Clean Tool from nero.com . If Registry Checker does not say anything, it is ok, you don't need to worry about that it does not run. Remove all drivers which Driver Clean Tool can remove.

13. Use col1832.exe from hp.com and remove all inexistent hardware devices (yellow exclamation mark). Do not remove software stuff or codecs.

14. Scan your computer for viruses with a good antivirus. I recommend AVG Free for Windows XP. You can also try Clamav, but please mind it is no real-time (on access) virus scanner.

15. Clean your computer from spyware, malware and greyware with Hitman Pro and Trendmicro Housecall.

16. Use programs like RegCompact and RegCompact .NET 2.0 (older freeware versions), in order to compact your Windows Registry.

17. Use RegClean (freeware) in order to clean your registry, after compacting it. Then compact again that registry.

18. Use programs like CCleaner, HD-Cleaner and KillBox (all freeware) to clean the temp files of your Windows. Use SpaceMonger for the big cleanup of your hard disk (an older freeware version works good enough).

19. If your Windows gets too slow, save (backup) your files, rename the documents (and settings) folder, delete the program files folder, delete the Windows folder, delete the Recycler, Recycled, System~1 folders on each (every) partition, and then reinstall your Windows. You will need another Windows/BartPE boot cd/Knoppix boot cd to do that. It will work much faster than the previous. Do that every two or three months, and you'll have a fast computer.

20. Use the program PageDefrag, from Microsoft (freeware). Check the option "always defragment at boot".

21. In case your BIOS or your hard disk does not have options as above, ignore those recommendations.

22. Download bughunter and bhupdater. Unpack bughunter to your hard disk and unpack bhupdater to the same folder. Run bhupdater, then import fixspy.reg into registry. After it is imported ok, reboot your Windows.

23. Use msconfig.

24. Use Advanced Windows Care Personal.

25. Download the Sysinternals Suite from Microsoft. Use Autoruns.exe and disable all entries for files which are no longer there. Pay special attention to the Drivers section: remove all unnecessary drivers. In order to know what a driver does, look that up on the Internet with the lookup option from Autoruns.exe.

26. In order to remove all viruses and malware from your computer: download Knoppix Adriane and burn it to a CD. Boot from such CD. Open a full X session from graphic programs and open a command prompt. Type in the following:

```
$ sudo su -
# apt-get update
# apt-get install clamav
# cd /media
# ls
```

now take a look at the devices listed therein. For each device like hda*, hdb*, sda* and sdb* do

something like (here given for devices sda1 and sda5):

```
# mount /dev/sda1 /media/sda1
# mount /dev/sda5 /media/sda5
# cd sda1
# mkdir virii
# clamscan -r --detect-pua --move=/media/sda1/virii
```

wait to finish the scan

```
# cd ..
# cd sda5
# clamscan -r --detect-pua --move=/media/sda1/virii
```

wait to finish the scan and repeat it for all other devices than sda1 and sda5

27. Install Microsoft .NET Framework 4.0.

28. Use Parted Magic boot CD in order to align your partitions to the megabyte. In order to do this, choose the partition you want to align, resize/move it about 1 MB to the right and choose align to megabyte. It works with any hard-disk, not just with solid state disks.

29. Google is your friend. Use it to find the other programs I speak of. The reasons for the tips provided here are not given in this document. Use Google to find them out. Of course, it is very likely that there's no answer on Google about tip #1, since it is devised by myself.

30. Magic speed #2: use a solid state drive for the operating system.

31. If you have 3 GB RAM or more, disable the virtual memory pagefile.

32. Remember, you are an advanced user and you can take care of your own problems, so don't blame drs. Tudor Georgescu if something goes wrong after following the advices herein.

33. Trademarks may belong to their respective owners.