



# Mobile Computing Short Subjects - What's New and Updated Tips and Tricks

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Since this is about Windows . . . .  
No warranty of any kind available.



# Manual method to reset TCP/IP Stack

- NetShell utility (**netsh**) is a command-line scripting interface for configuring and monitoring Windows Vistanetworking
- **reset** command is available in the IP context of the NetShell utility
- Running the **reset** command, rewrites pertinent registry keys that are used by the IP stack
  - Same result as the removal and the reinstallation of the protocol
- **Command samples:**
  - **netsh int ip reset resetlog.txt**
  - **netsh int ip reset c:\resetlog.txt**

## Checking/adding file associations

- Command line interface command ASSOC will display list of associations with no parameters
- Deleting a file type association for a file name extension by leaving the document type blank
  - **ASSOC .txt=**
- Assigning a file type is accomplished by entering an extension and the type of document of that extension
  - **ASSOC .pdf=AcroExch.Document**

# Finding where Windows puts files

Tree is a command line command which graphically displays the directory structure of a path or of the disk in a drive

- **Syntax tree** [*Drive:*][*Path*] [*/f*] [*/a*]
- **Parameters**
  - *Drive:* Specifies the drive that contains the disk for which you want to display the directory structure.
  - *Path* Specifies the directory for which you want to display the directory structure.
  - */f* Displays the names of the files in each directory.
  - */a* Specifies that **tree** is to use text characters instead of graphic characters to show the lines linking subdirectories.

## Tree has a graphical display

```
Folder PATH listing
Volume serial number is 00000072 8017:F8A8
C:.\
├── .zenmap
├── Bluetooth Software
│   └── sync
├── cds
├── Desktop
├── Favorites
│   ├── Cisco Reference
│   ├── CRM Siebel
│   ├── Everything Else
│   ├── Fabricators
│   ├── Finance
│   ├── FreeBSD Networking
│   ├── Harley Related
│   ├── Humana Reference
│   ├── IBM Sites
│   │   ├── IBM Forums
│   │   ├── Server Community of Practice
│   │   └── Systems Avail Leader Related
│   └── Links
│       ├── Business and Finance
│       └── Common IBM Sites
```

# Display a list of installed device drivers

This command allows you to see what drivers are installed on a system

- **DRIVERQUERY** [/S system [/U username [/P [password]]]] [/FO format] [/NH] [/SI] [/V]

- /S - optionally specifies a remote system to which you may connect
- /U [domain\]user – optionally specifies the user context under which the command should be executed (if no domain is specified, current is assumed)

- /P [password] – if specifying an alternate user, this argument may be used to specify the password for that user. If required and not specified, a password will be requested.

- /FO format – optionally specifies the type of output to display (TABLE, LIST or CSV). Default is TABLE.

- /NH – optionally used to indicate that a Column Header for TABLE and CSV output should not be provided

- /SI – optionally provides information about signed drivers

- /V - displays verbose output (not valid for signed drivers)

## Display a list of installed device drivers

Module Name	Display Name	Driver Type	Link Date
abp480n5	abp480n5	Kernel	8/17/2001 4:51:59 PM
ACPI	Microsoft ACPI Driver	Kernel	8/4/2004 2:07:35 AM
ACPIEC	Microsoft Embedded Con	Kernel	8/17/2001 4:57:55 PM
adpu160m	adpu160m	Kernel	5/30/2001 5:18:22 AM
aeaudio	aeaudio	Kernel	4/7/2004 9:41:36 AM
aec	Microsoft Kernel Acous	Kernel	2/13/2004 10:20:15 AM
AFD	AFD	Kernel	6/20/2008 6:44:37 AM
agnfilt	AGN Filter Interface	Kernel	5/19/2006 9:46:14 AM
agnwifi	AT&T Wi-Fi Support Dri	Kernel	4/29/2004 5:19:16 PM
agp440	Intel AGP Bus Filter	Kernel	8/4/2004 2:07:40 AM
agpCPQ	Compaq AGP Bus Filter	Kernel	8/4/2004 2:07:42 AM
Aha154x	Aha154x	Kernel	8/17/2001 4:51:59 PM
aic78u2	aic78u2	Kernel	5/10/2001 4:23:41 PM
aic78xx	aic78xx	Kernel	5/10/2001 4:23:40 PM
Alide	Alide	Kernel	8/17/2001 4:51:54 PM
alim1541	ALI AGP Bus Filter	Kernel	8/4/2004 2:07:40 AM
amdagp	AMD AGP Bus Filter Dri	Kernel	8/4/2004 2:07:42 AM
amsint	amsint	Kernel	8/17/2001 4:52:01 PM
ANC	ANC	Kernel	3/22/2004 1:08:44 AM
ANCSQ	ANCSQ	Kernel	10/31/2004 8:28:58 PM
Anydlc	Anydlc	Kernel	9/6/2005 2:09:54 PM

# Special circumstances may require modification of the routing table

- Route ADD is the command for adding new routes:
  - `route ADD xxx.xxx.xxx.xxx MASK xxx.xxx.xxx.xxx xxx.xxx.xxx.xxx`
  - `route ADD "network" MASK "subnet mask" "gateway ip"`
- From a 192.168.1.0 network
  - With a gateway at 192.168.1.12
  - Configured to access the 10.10.10.0/24 network
  - Route add statement like this:
    - `route ADD 10.10.10.0 MASK 255.255.255.0 192.168.1.12`
- Route ADD changes only stay across reboots if the -p flag is used:
  - `route -p ADD 10.10.10.0 MASK 255.255.255.0 192.168.1.12`

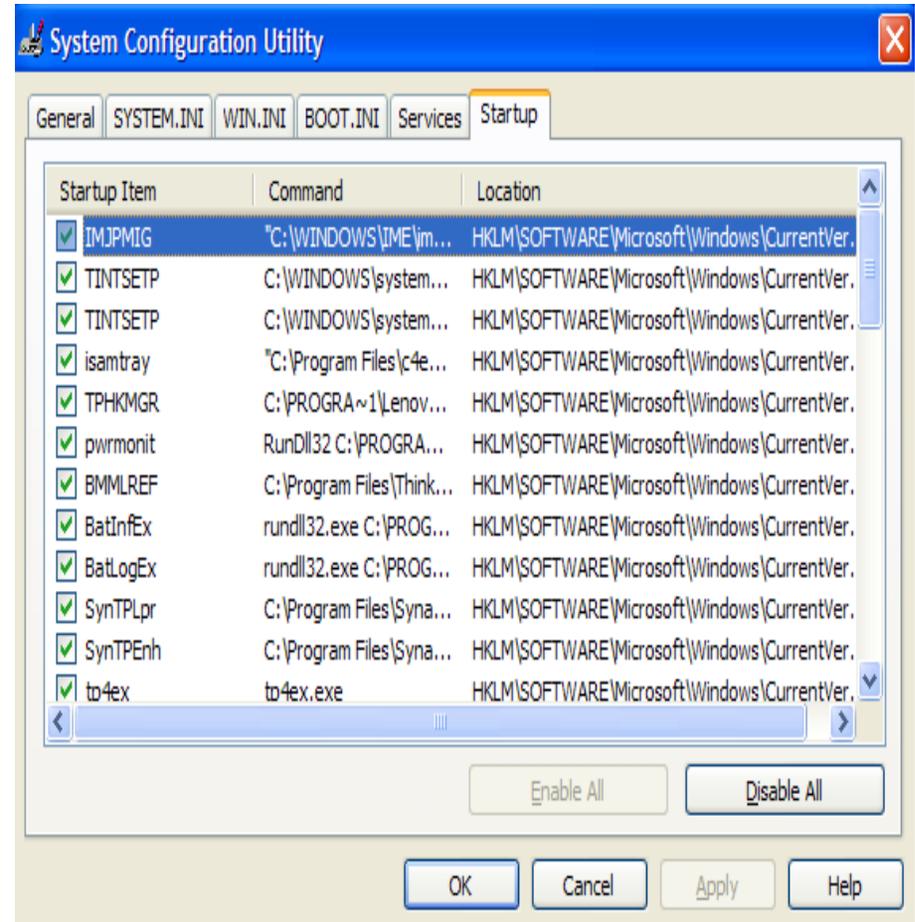
# Conversion of older file systems can be accomplished without formatting

The CONVERT command allows conversion of FAT partitions to NTFS

- Data is not lost as would be the case with a FORMAT
- CONVERT must have exclusive access to the drive, if attempting to do this to the primary drive the follow may be encountered:
  - Convert cannot gain exclusive access to the *driveletter.*, so it cannot convert it now. Would you like to schedule it to be converted the next time the system restarts (Y/N)?
- Answer Y and then reboot the machine, CONVERT will process the partition
- Conversion will be run prior to the start of the next session

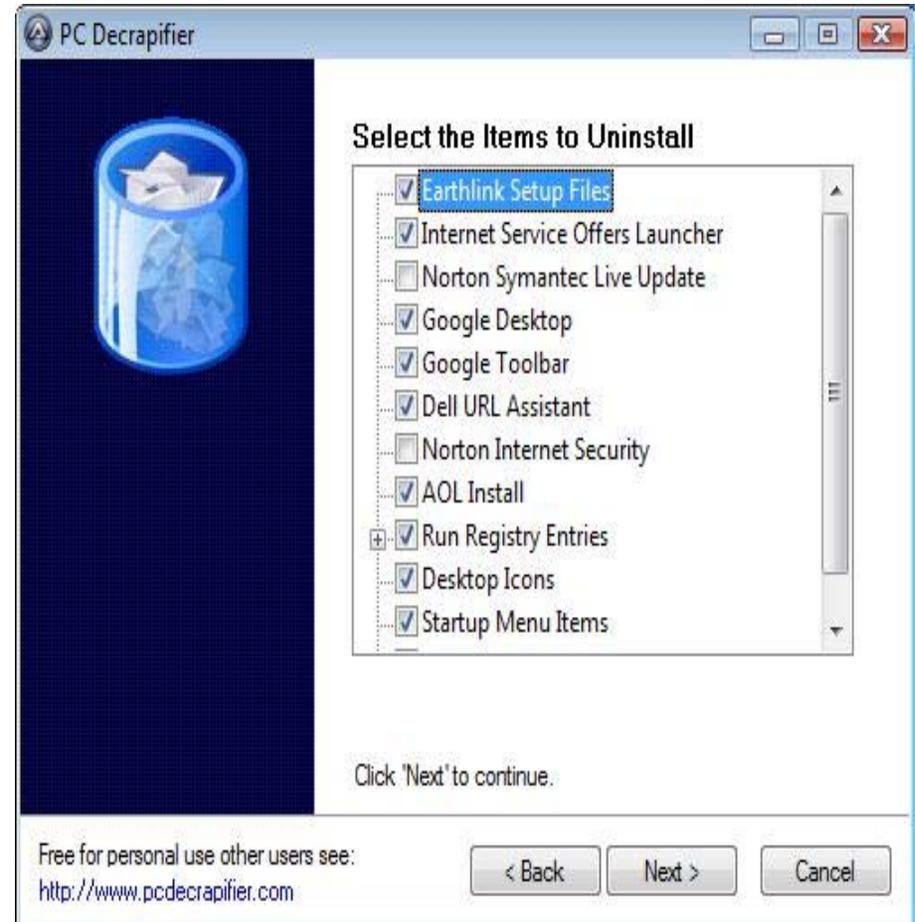
# Junkware can be prevented from starting by modifying the startup list

- From “Run” under “Start” type in “msconfig” and press enter
- Examine the Startup tab for anything that looks unusual
- Uncheck the ones which should not be starting
- Test to see the system is OK
- Can also use to customize quick startups



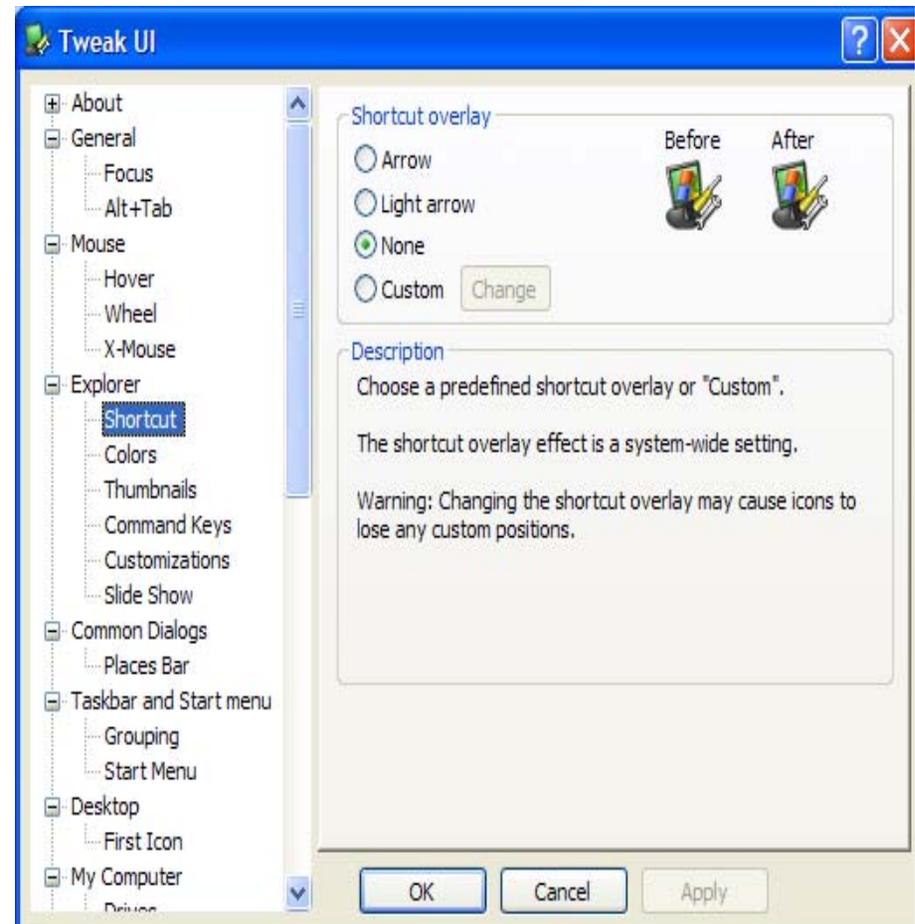
## New PCs often come with an amazing amount of unwanted trialware

- Can be removed manually for the most part, but that is time consuming
- Freeware available to mass remove trialware
- Remove Empty Program Folders runs at the end of the process to clear out any folders in the Program Files directory
- <http://www.pcdecrapifier.com/>



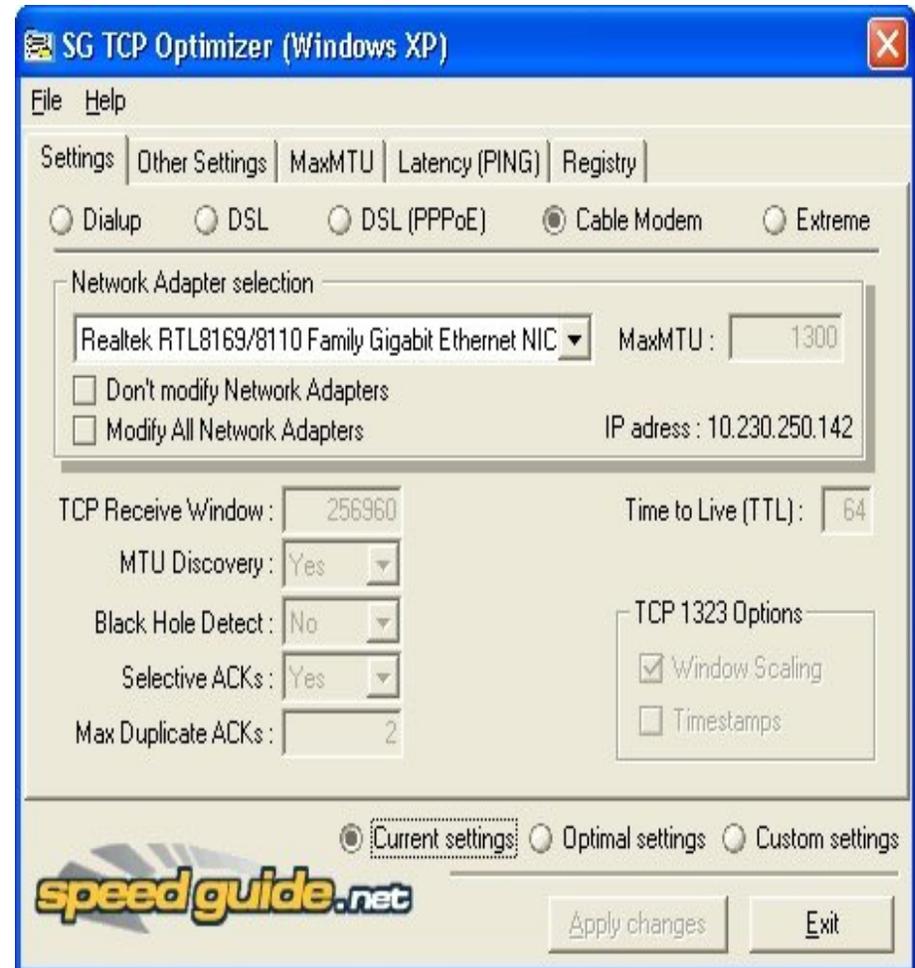
# TWEEKUI is a Windows extension to customize the User Interface

- A number of settings are available to change the look and feel of the user interface
- Among other things is the switches for Shortcut overlay
- Resolution for thumbnails
- Turning on/off balloon tips
- Controlling autoplay for drives



## Default network settings for Windows can leave much to be desired

- MTU size influences the network response
- Settings for dial-up are not optimum for broadband nor for **Point-to-Point Protocol over Ethernet (PPOE)**
- Tool use avoids pitfall of registry modification
- Use ping command to determine optimum size
  - `ping -l 1472 -f www.dslreports.com`



## Forcing iPhones to make a quick exit

- On rare occasions when an iPhone is running slow or an app hangs and won't allow quitting or access other apps, the Force Quit option is a handy way to make a quick exit.
- To Force Quit, you want to hold the Home button for approximately 6 seconds.
  - This closes all background processes and currently running applications.
  - Keep in mind: Performing a Force Quit in Mobile Safari clears the cached pages,
  - When the browser is relaunched, the tabs will reload just as they were left.
  - If using the newer iPhone 3G, you need to press and hold the Sleep/Wake button until the Slide To Power Off screen appears,
  - Then press and hold the Home button for 6 seconds.

# Help for Locked up iPhones - recovery mode

- If your iPhone ever freezes and becomes unresponsive, even after rebooting and connecting the USB cable to your computer, then you might need to put it into Recovery Mode.
- This should work as long as you are running the latest version of iTunes.
  - First, plug your USB cable into your computer (don't plug in your iPhone just yet), and then
  - Hold the Power button down until you see the Slide To Power Off message.
  - Turn your phone off and press and hold the Home button while connecting the USB cable to your iPhone.
  - Continue holding the Home button until you see the Apple logo followed by the Connect To iTunes message.
  - A message should appear that says iTunes has detected an iPhone in Recovery Mode.



## After Recovery mode, restore will be required

- Performing a restore will completely wipe the device of songs, videos, contacts, photos, calendar information, and any other data and files added
- The restored iPhone will be factory-fresh.
- Before performing a restore, make sure you're running the latest version of iTunes, and if not, install it before proceeding.
- Next, connect your iPhone to your Mac or PC and select it in iTunes.
- If your iPhone is frozen and iTunes fails to recognize the device at this point, press and hold the Home and Power buttons for roughly 10 seconds, and then release the Power button while still holding the Home button.

# Restore will give you a factory fresh installation



## Taming the unruly BlackBerry

- When a BlackBerry gets unruly, hangs, disobeys your commands and is generally being an ornery little smartphone, try the basic battery pull
- Pulling out the battery is known to resolve application errors, theme issues, data failures, and more.
- With the device still powered on, remove your BlackBerry's back cover to reveal the battery.
- Remove the battery, wait approximately 30 seconds before you reinsert it, and then reboot your BlackBerry.
- If this doesn't do the trick, try a soft reset, which requires you to hold down the ALT-Right Shift-DEL keys for roughly two seconds.

## Disappearing Blackberry call logs and messages may be a cry for help

- If your call logs and messages begin disappearing for no reason, your BlackBerry might have begun systematically deleting older content in an effort to free up enough internal memory to remain functioning
- The first step is to check the device's remaining free memory
- Access Settings from the Home screen and then select Options and Status to see space information.
- Alternately, you can press and hold ALT-Shift-H. View the File Free status, measured in bytes
- Any more than 12MB free is sufficient and that your BlackBerry wouldn't be gobbling up old data

# If there is less than 12M free, you'll need to do some house cleaning

- Try clearing the Browser cache.
  - From the Home screen, scroll to the Browser application, press the trackball to launch the browser,
  - Press the Menu key, select Options
  - Then select Cache Operations.
  - From this menu, you can clear History, Content Cache, Pushed Content, and Cookie Cache using individual Clear buttons. All content is cleared when no more buttons are available to select.
- To free up additional space, remove any applications you no longer use.
  - From the Home screen, select Settings, Options, Advanced Options, and Applications
  - Then highlight the application you want to uninstall.
  - Press the Menu key and select Delete to remove the app.
- Another way to free memory is to delete the BlackBerry Sample Video that comes already loaded on your device.
  - Select Settings from the Home screen
  - Choose Options, Advanced Options, and Applications.
  - Highlight the BlackBerry Sample Video,
  - Press the Menu key, and then select Delete.

# Linux allows listing the processes in a tree format

- **# pstree**  
init-+-acpid  
| -atd  
| -crond  
| -cups-config-daemon  
| -cupsd  
| -dbus-daemon-1  
| -dhclient  
| -events/0-+-aio/0  
| | -kacpid  
| | -kauditd  
| | -kblockd/0  
| | -khelper  
| | -kmirrord  
| | -2\*[pdflush]  
| -gpm  
| -hald

# Linux has an arbitrary precision calculator language

```
bc [ -hlwsqv ] [long-options] [ file ... ]
```

bc is a language that supports arbitrary precision numbers with interactive execution of statements. There are some similarities in the syntax to the C programming language

```
# cat sqrt  
#!/bin/bash  
if [ $# -ne 1 ]  
then  
echo 'Usage: sqrt number'  
exit 1  
else  
echo -e "sqrt($1)\nquit\n" | bc -q -i  
fi
```

# Need to number lines in a file, Linux has a command for that

- # nl nonumfile.h | numfile

1 /\*

2 \* This file defines a set of standard extensions

3 \*

4 \* Version : 1.1.1

5 \*

6 \* Author: J Searls - JPL

# Linux can tell you about program dependencies

- **ldd** prints the shared libraries required by each program or shared library specified on the command line

**ldd** /usr/java/jre1.5.0\_11/bin/java

libpthread.so.0 => /lib/tls/libpthread.so.0 (0x00bd4000)

libdl.so.2 => /lib/libdl.so.2 (0x00b87000)

libc.so.6 => /lib/tls/libc.so.6 (0x00a5a000)

# Ever need to print man pages? Linux has a command to help with that

- Col filters out reverse (and half reverse) line feeds so the output is in the correct order with only forward and half forward line feeds, and replaces white-space characters with tabs where possible
- # PAGER=cat  
# man less | **col** -b > less.txt
- # cat less.txt
- # *Less* is a program similar to *more* (1), but which allows backward movement in the file as well as forward movement. Also, *less* does not have to read the entire input file before starting, so with large input files it starts up faster than text editors like *vi* (1). *Less* uses *termcap* (or *terminfo* on some systems), so it can run on a variety of terminals. There is even limited support for hardcopy terminals. (On a hardcopy terminal, lines which should be printed at the top of the screen are prefixed with a caret.)

# No Footprint Portable Apps



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start 2 Firefox CBL.ucd ~... Windows ... 114.0 Se... Replace a... Microsoft ... 12:11 PM

# Eradicating Hard-to-remove Windows Virus(es)

- Build a “Live” Linux CD (or Flash Drive) with a few extras:
  - ClamAV and ClamTK (for the GUI) & get current updates
- Mount infected hard drive so that ClamAV can see the drive. (If you are using a distro like Ubuntu the icon will most likely appear on your desktop; just double-click on that icon and the drive will be ready for you.)
- Open up ClamTK.
- Configure ClamTK to scan **recursively** and do a thorough scan on the mounted drive.
- Run ClamTK.
- May need to run MBAM and Avast from drive in Virtual Box
- Return drive to Windows box and you are good to go!

# Websites for tools

- TweakUI
  - <http://www.microsoft.com/windowsxp/downloads/powertoys/xppowertoys.msp>
- XTEQ X-Setup
  - <http://www.xteq.com/products/xset/>
- StartEd
  - <http://www.outertech.com>
- Spybot S&D
  - <http://www.safer-networking.org/en/download/>
- Adaware SE
  - <http://www.lavasoftusa.com/software/adaware/>
- TaskInfo
  - <http://www.iarsn.com/taskinfo.html>
- TCP Optimizer
  - <http://www.speedguide.net/downloads.php>
- Driver Manager
  - <http://www.l5sg.com/products/downloads/drivermanager/index.php>