

Reducing the Windows registry size by removing “non-present” devices

Background

The Windows Registry maintains information about all devices that are or have ever been connected to the system. In the case of PnP devices (such as USB) every incidence of a connection is maintained although only the current incidence is displayed by default in Device Manager. As the number of these “non-present” devices increases the size of the registry will have to grow to accommodate them. This will cause a problem on Windows XP systems which use the “/3GB” switch in their “boot.ini” file as the size of their registry is limited to 12MB.

The Problem

USB KVM (Keyboard, Mouse, Video) switchers will cause a new mouse and keyboard entry in the registry on every reboot of the system. This is also true for any other connected control devices (such as the popular Contour Jog/Shuttle controller) and an additional entry will be made for USB mice (in addition to the standard PS/2 version).

The Solution

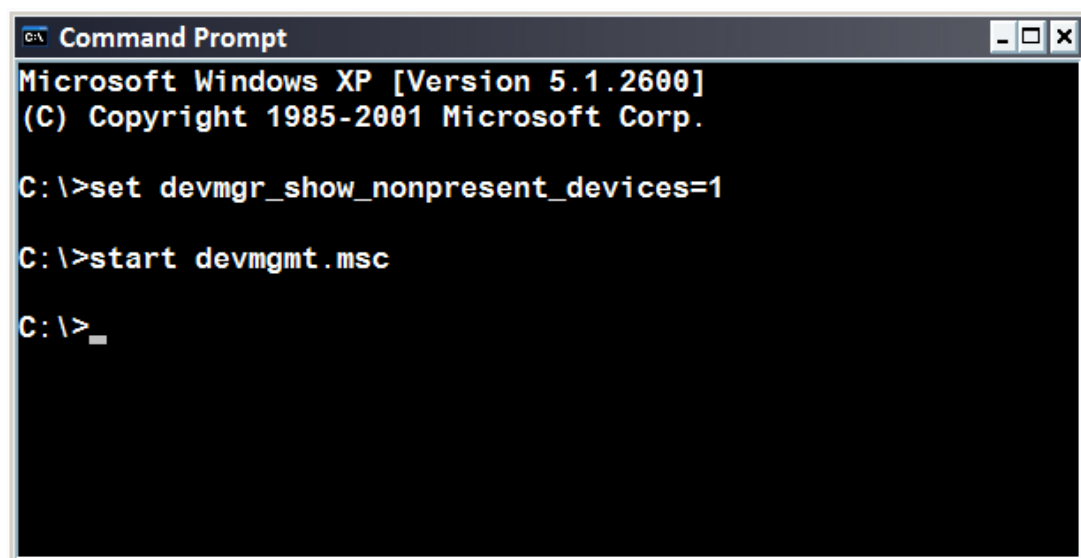
In order to decrease the size of the registry to a level where full functionality is restored, the “non-present” devices must be removed. In order to do this, device manager must be run from a command line window with an environment variable set. In order to do this, first open a command line window – this may be done quickly by holding down the Windows (⊞) key and pressing “R” then typing “cmd” followed by the “Enter” key. First, set the environment variable by typing the following line:

```
set devmgr_show_nonpresent_devices=1 (no spaces around the "=" sign)
```

and then run Device Manager by typing the following line:

```
start devmgmt.msc
```

This is illustrated in the following picture:



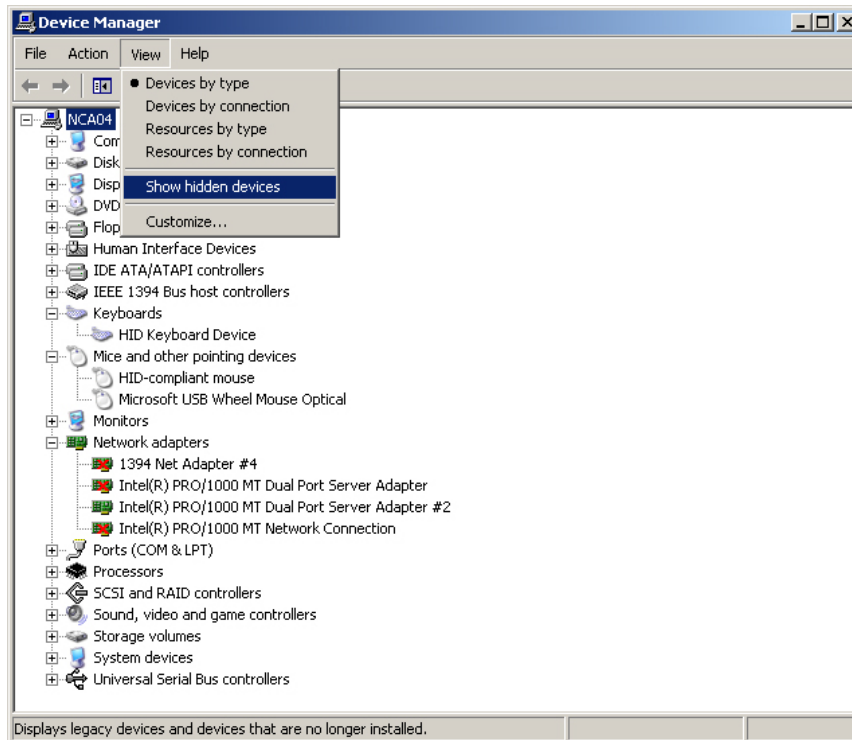
```
Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\>set devmgr_show_nonpresent_devices=1

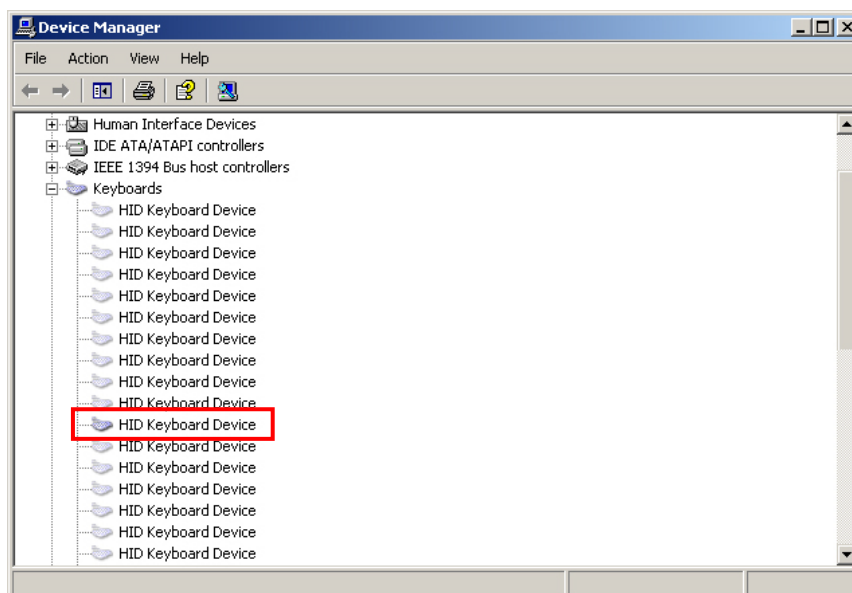
C:\>start devmgmt.msc

C:\>_
```

Once the Device Manager opens, choose "Show Hidden devices" from the "View" menu as shown:

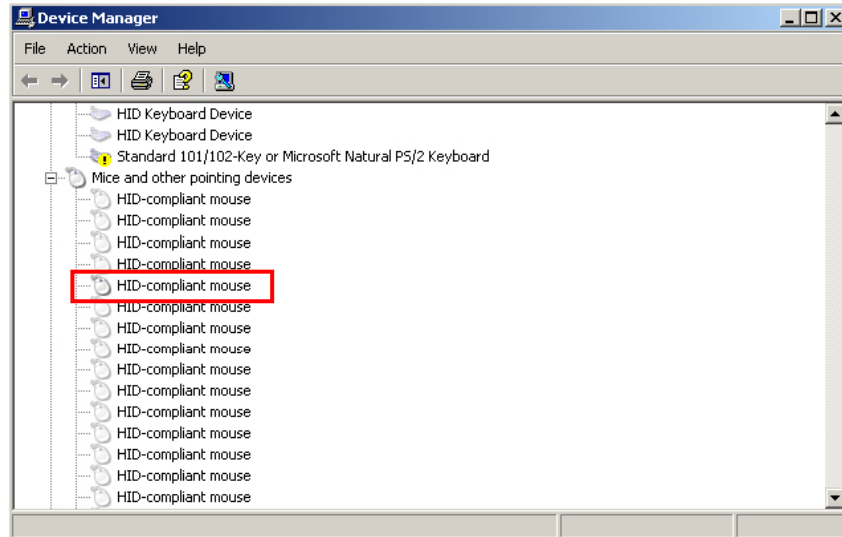


Something similar to the following should appear. All "phantom" devices should be deleted by highlighting them (click once), pressing the "Delete" key and then pressing "Enter".

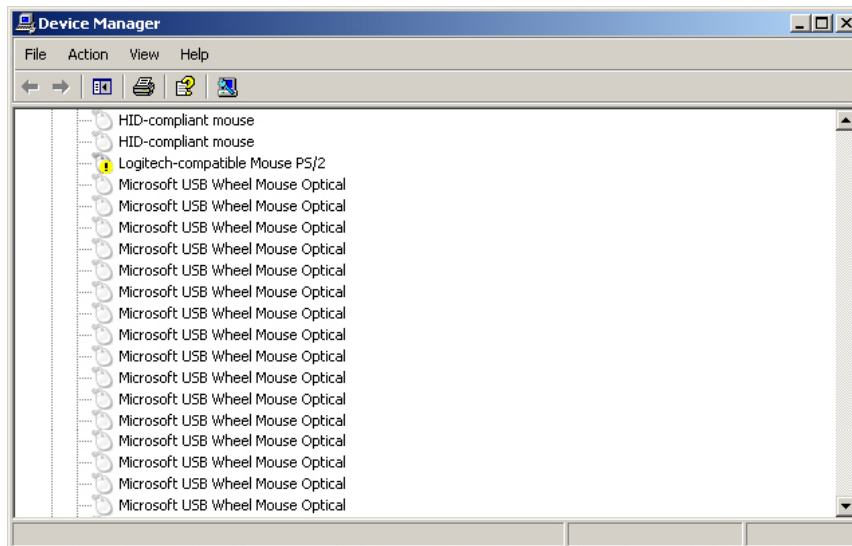


Note that the current device is shown (as highlighted) by a non-ghosted icon. If this is accidentally deleted it will be automatically recreated.

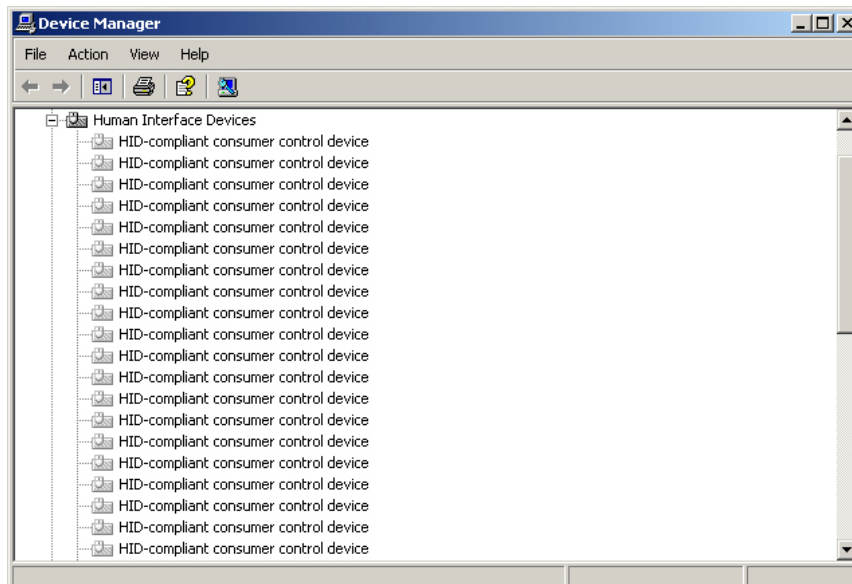
When the keyboard section has been cleaned, move on to the sections for mice as shown below – note the currently active device (highlighted):



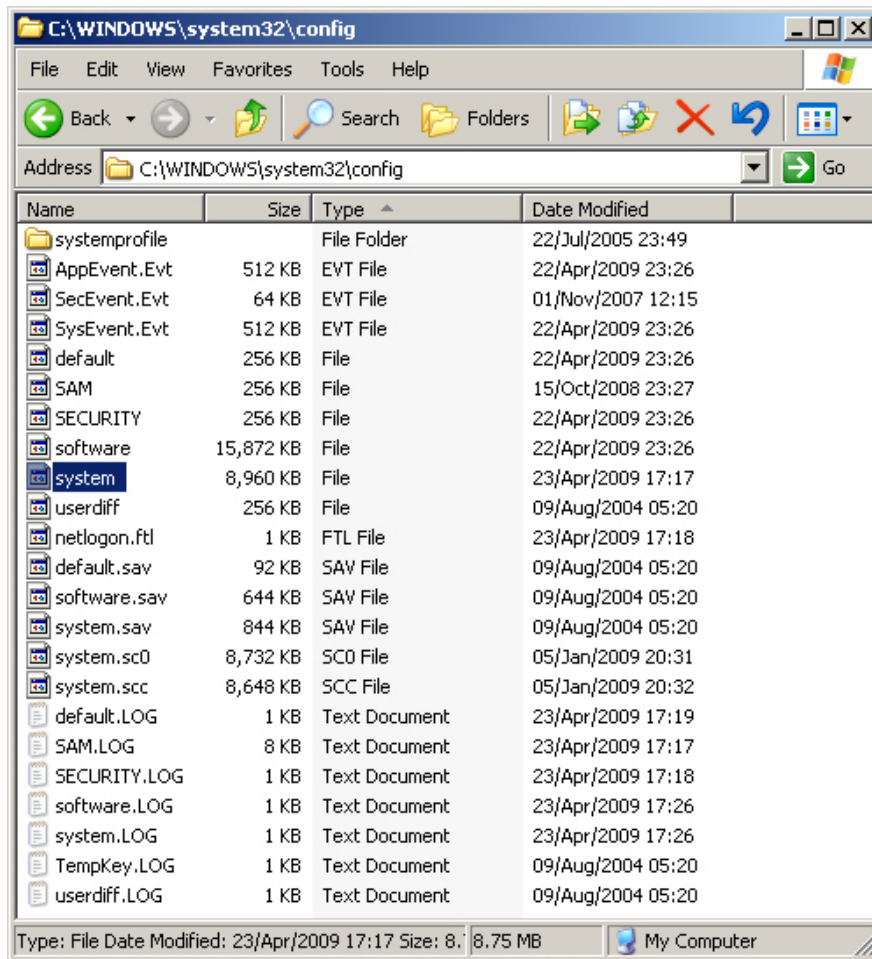
The following picture illustrates the entries for phantom USB mice which must also be removed:



And finally the entries for any other switched USB devices must be removed as well:



When the deletions are complete, check the size of the registry file by opening an Explorer window, navigating to "C:\Windows\System32\config" and displaying the "Details" view. The file in question is called "system" with no extension. In the picture below it is shown as being 8MB after deletion of all phantom devices.



The system should now be rebooted to allow the changes to take effect.