Running CATPAC and Thoughtview with 64 Bit PCs
by Michael Egnoto & Carolyn Evans, 2011

For 64 bit PCs to emulate 32 bit PCs you will need both Windows Virtual Machine and Windows XP (from http://www.microsoft.com/windows/virtual-pc/download.aspx). Note: XP is only available to download free of charge to users of Windows 7 Professional, Enterprise, and Ultimate editions; you may, however, be able to use an XP version from CD or disk if you have one around (although we have not tested that).

WARNING: Download ONLY if you have a legal copy of Windows. There is a Windows validation process that occurs several times during installation, pirated copies of Windows should NOT attempt this.
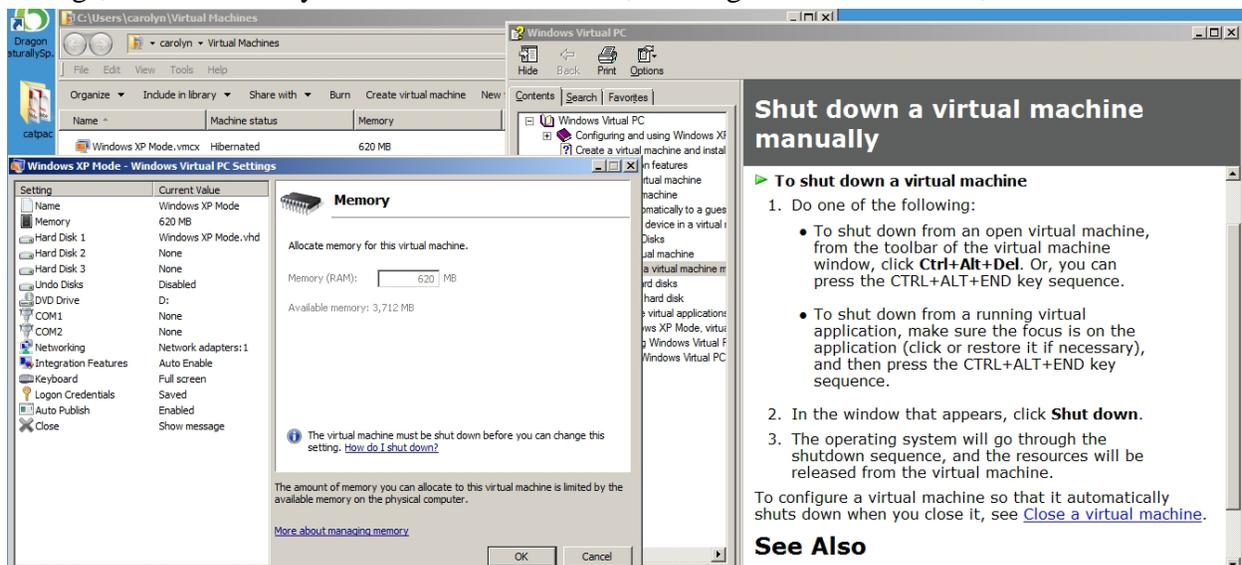
DOUBLE WARNING: Although we hesitate to say exactly how much memory to assign the virtual machine (allocating too much can slow both your virtual machine and the host computer), if possible try to allocate at least 1 gig (1028mb) to the virtual machine's processor. It will run on the default 512mb, but it will be slow and pokey; at even as low as 620mb it runs noticeably faster. More tips to increase speed are below on page 2.

Now, install CATPAC and/or TV32 on your virtual machine by internet download, jump drive transfer, or file transfer. Note for CATPAC: you want to click on the file named "catpac2.exe", not "catpac2.W02", to begin the setup process. If you have extensions hidden just pick a file; if it's the wrong one it won't work but nothing bad will happen. Then you can choose the other.

Viola! CATPAC & TV32 (and all Galileo programs) will run happily in their new home...

Tricks to get more speed out of your XP virtual machine:

Change memory allocation: 1 click start, go to virtual machine, 2 click windows virtual pc (not XP mode), 3 with the virtual machine powered down, highlight it and right click, 4 go to settings, 5 click memory in the left hand window, 6 change allocation in MB, 7 hit ok.

In addition to allocating more ram, several other changes in settings can also yield beneficial results. To change the visual effects, follow these steps. The virtual machine needs to be up and running to perform this action. Any reference to start buttons or run commands need to occur within the XP virtual machine.

First Modification:

1. Click **Start**, click **Run**, type sysdm.cpl in the Open box, and then press ENTER.
2. Click the **Advanced** tab, and then under **Performance** click **Settings**.
3. Click the **Visual Effects** tab, and then use one of the following methods:
   o Click Let Windows choose what's best for my computer to have Windows select the visual effects.
   o Click Adjust for best appearance to have Windows automatically adjust the settings for best appearance.
   o Click Adjust for best performance to have Windows automatically adjust the settings for best performance.
4. Click OK button at the bottom and you done.

Second Modification:

For the adventurous who would like to manipulate particularly large files, you can also reallocate your CPU's processing power. Proceed with caution, as taking the following steps will put you squarely into territory where few tread with their computers. Change settings at your own risk.

To manually change the performance of foreground and background programs, complete these steps (note: if you are unsure what "foreground and background programs" means, maybe now is not the time to change this; you can always do it later if desired).

1. Click **Start**, click **Run**, type sysdm.cpl in the Open box, and then press ENTER to open the System Properties dialog box.
2. Click the **Advanced** tab, and then under **Performance** click **Settings**.
3. Click that **Advanced** tab, and then under **Processor scheduling** use one of the following methods:
   o Click **Programs** to assign more processor resources to the foreground programs. This setting is recommended for most users and is the default setting.
   o Click **Background services** to assign equal amounts of processor resources to all running services. This includes print jobs and applications.
4. Click OK to apply preferences and close the dialog box.

The first modification to the appearance settings gives great results, and is very easy to do and undo. The second modification should only be attempted if you really need additional processing power. In other words, if you find yourself in need of manipulation 2, think of it only as a band-aid style fix until you can get access to a more powerful computer. There are a few more things at http://support.microsoft.com/kb/308417

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The following remedies were tried without success in 86x (32 bit compatibility mode) to allow CATPAC and Thoughtview to run on 64 bit machines as windows XP mode applications. Installing a virtual machine and loading and installing the programs on the virtual machine is, however, the only way that has worked so far.

First, both programs were run with full administrative privileges in recommended settings mode (windows xp service pack 2 32 bit). This was unsuccessful- the installers would not run. Afterwards, the following modes were tried installing with the following compatibility settings:

Windows 95
Windows 98/ Windows Me
Windows NT 4.0 (service pack 5)
Windows 2000
Windows XP (service pack 2)
Windows XP (service pack 3)
Windows server 2003 (service pack 1)
Windows server 2008 (service pack 1)
Windows Vista
Windows Vista (service pack 1)
Windows Vista (service pack 2)
Windows 7

The following settings were also applied to the above compatibility modes after all previous attempts were unsuccessful.

Run in 256 colors
Run in 640 x 480
Disable Visual themes (toggled on and off, it was suspected that perhaps this setting prevented a window from opening up but such was not the case)
Disable desktop composition
Disable display scaling on high DPI settings
Run as administrator.