# Discussion paper on compiling Audio Visuals with Photodex's ProShow GOLD 5 & ProShow PRODUCER 5

## This discussion paper was prepared in October 2012 by John Spring AV Coordinator at the Melbourne Camera Club

Photodex is the maker of our most popular Audio Visual software product ProShow. It is in use in the majority of Victorian Camera Clubs making AV. Photodex has recently released a very different new Version 5 of their ProShow GOLD and ProShow PRODUCER products. The most recent version is release 5.0.3256 and is considerably different from the previous Version 4.

The following information will be of importance to AV makers using ProShow5 as it will help you become aware of one major issue (many others) that will affect the presentation quality of your EXE AV files which you compile using Version 5 for playback on other PCs (e.g. for judging).

Further information can be requested by eMailing your questions and examples of the issues you are experiencing to John Spring at mcc-audiovisual@melbournephoto.org.au

On it's website Photodex says ProShow Version 5, amongst many changes, has:-

*Improved playback performance and quality*
*ProShow 5 delivers increased performance from start to finish, without any changes to your system. You'll enjoy faster rendering and silky smooth playback with new GPU Acceleration. By offloading some of the heavy-lifting tasks to your computer's GPU, ProShow 5 gives you higher quality playback than ever before.*

Photodex says (in part) at URL: http://kb.photodex.com/2814/playback-performance-in-proshow/

*ProShow 5 introduced GPU Accelerated Rendering. This lets ProShow use your computer's video card to help play your show. When this is available and enabled, you'll typically get much better playback. You can check if ProShow is using GPU Accelerated Rendering by going to Preferences > Playback.*

*Some systems may not be able to use GPU Accelerated Rendering. ProShow automatically tests your system, and if your computer scores well enough we enable GPU Accelerated Rendering. If your score is too low, we disable it. In ProShow, go to Help > About, and you'll see your GPU Benchmark listed. This number is your score. Anything above about a 50 is decent, and anything over 100 is pretty great. If you've got a really low number, your computer is probably in need of some attention.*

*When GPU Accelerated Rendering is enabled, ProShow plays back shows at your full monitor resolution. This gives you the best quality, and is a big improvement over earlier versions of ProShow. However, this means that your monitor resolution has a big impact on performance. If you've got a high resolution monitor (like 1920 x 1080), ProShow is doing a lot more work to play your show. In fact, rendering to 1920 x 1080 is very similar to rendering a full HD Blu-ray disc in real-time. Not many programs can do that real time, but in most cases ProShow will play that just with GPU Accelerated Rendering.*

*If your system doesn't score well enough to run with GPU Accelerated Rendering, or if you've turned it off, ProShow will fall back to what we call the 'software renderer.' When this happens, ProShow renders your show using the same engine that was used in earlier versions. It is slower, so ProShow reduces the resolution. Instead of playing the show at your monitor resolution, ProShow plays your show at 800×600 and zooms it up to your monitor size. That's why you'll sometimes see a little blurriness when playing fullscreen. You can change that size in the preferences, but doing so may cause playback to stall or get a little jittery.*

*So what parts of your computer affect playback? Pretty much all of them.*

- *The CPU. Obviously, the processor in your computer makes a big difference. Faster is always better. The processor does 100% of the work in software rendering, and is still very important in GPU Accelerated Rendering (preparing photos, etc).*

- *The GPU. Your video card is crucial in determining if your computer can use the new GPU Accelerated Rendering. You'll want a video card made in the last couple of years, and you'll want at least 256 MB of video memory.*

- *Hard Drives. Every photo, video and music track in your show lives somewhere on your hard drive. When ProShow plays your show, it has to load each file from the drive. If your drives are slow or having errors, it can cause loading content to take a lot longer. Pulling content from a network drive, or external drive (including USB/Firewire) will almost always cause extra delays. Always use content off your actual hard drives.*

- *Memory. If your computer runs low on memory, Windows starts using your hard drive as RAM. That's really slow. Your computer should have at least 4GB of memory, and 2GB of that should be free when you start ProShow.*

*Sometimes you can greatly improve performance by just rebooting, and using ProShow without starting any other applications. Sometimes running a few utilities to scan your computer for problems can make a big difference. Sometimes it's just time to upgrade.*

### Where to find the GPU Benchmark number when running ProShow 5 (Gold & Producer).

Run either of the ProShow 5 software on your computer and then click on the **HELP** drop down menu on the tool bar, next click on the last of the drop down items '**About ProShow'**. A small active window will pop up and one of the items presented (see montage image immediately below here) will be the GPU benchmark number of the computer.
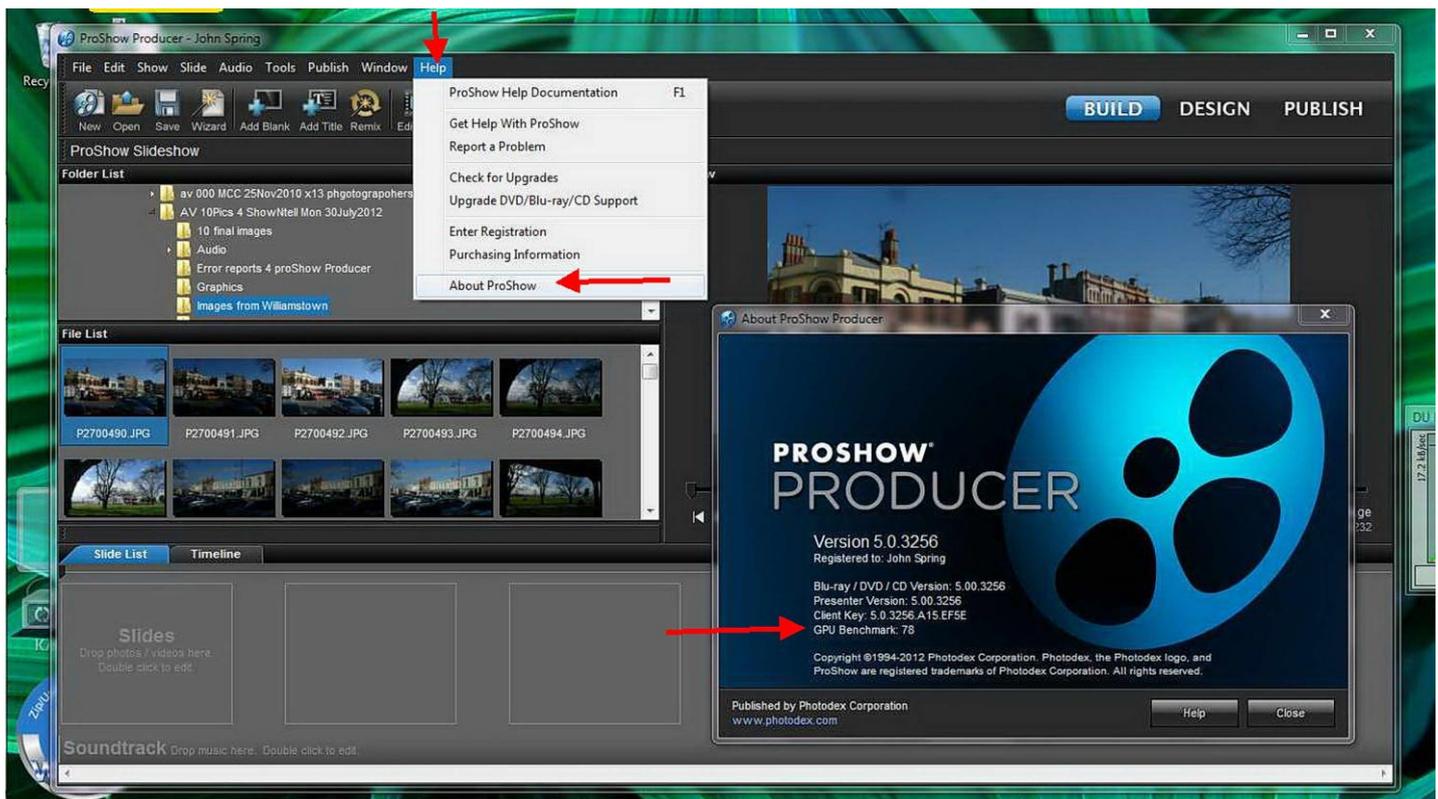


The GPU Benchmark number of 78 is shown in the above example taken from my Laptop computer. This GPU benchmark figure has been noted to vary on the same computer depending on many of the computer's start-up and memory configuration and availability factors. Not all of these factors are currently understood and the Photodex explanations are insufficient for a detailed understanding of why and how GPU Benchmark numbers sometimes vary considerably on the same computer. For example my Laptop's GPU Benchmark number has been as low as 38. However time and experience with producing and showing AVs will give a better understanding on the application and importance of the new GPU benchmark feature.

## What we do know currently:

When playing a Version 5 ProShow EXE file you can 'right click' with the computer's mouse button and a small window will pop up over the AV with further options (left of montage image below) to click on. Clicking on the last option '**Playback Stats'** will pop a new window (upper right of image below) giving a great deal of statistical information about how the AV EXE file is being played and presented and the computer's operations.
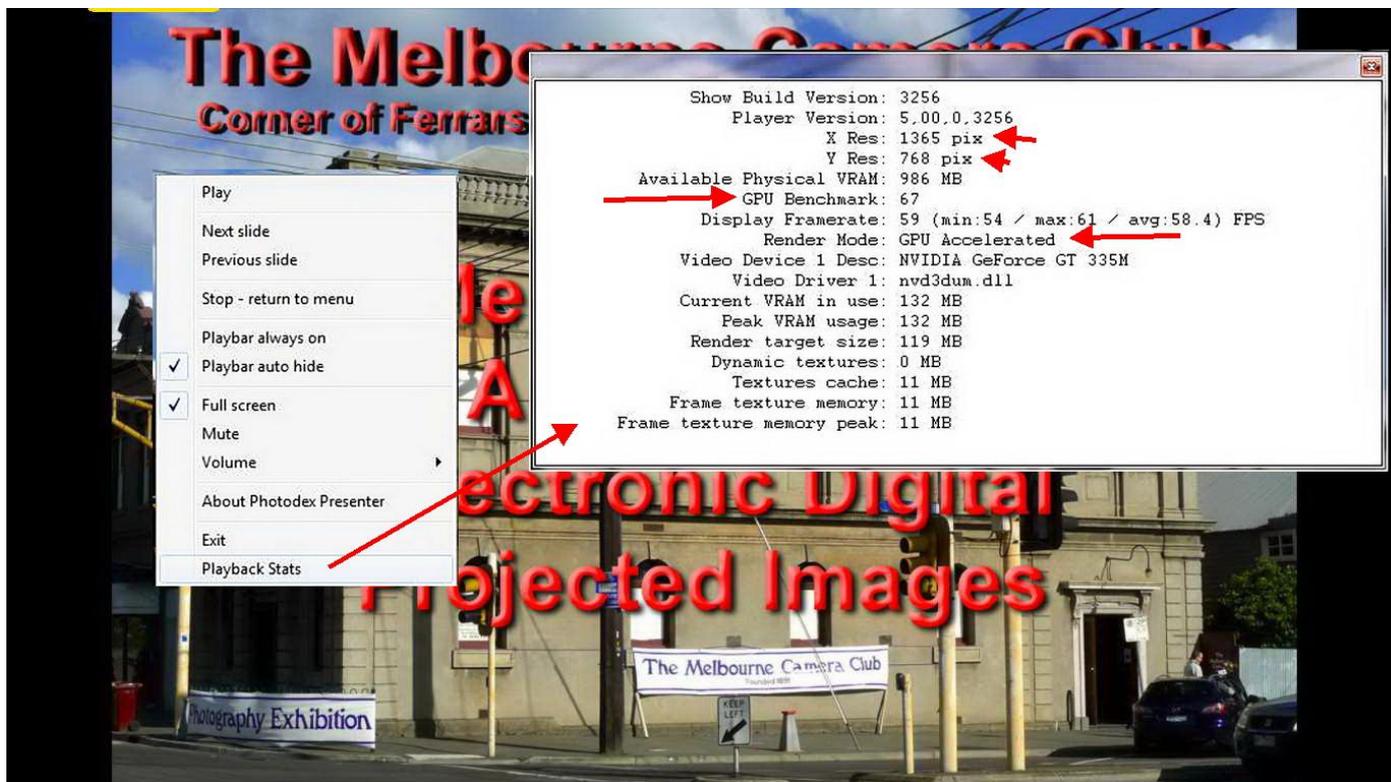


You can see in the Playback Stats pop-up window the GPU Benchmark of 67, and that the image shown has a resolution of 1365 pixels horizontally and 768 pixels vertically and further that the rendering is being undertaken in GPU Accelerated mode (ie directly addressing the video card). Other information and stats are also provided and the author is still working out how the remainder should be interpreted? Remember a computer can have multiple and different GPU benchmarks?!

What can happen when an AV author has produced a Proshow V.5 1920x1080 output EXE file, and because the playing computer is older and/or under GPU powered, the software downsizes the AV to 800x600 so it processes in software rendering mode (not GPU accelerated mode) and then upscales the viewable image.  The AV runs but the image presented has large pixels and looks like it has been made with very poor resolution images.  BUT THE AV PLAYS.

It does seem to me that from now on knowing the minimum GPU Benchmark of the computer which will play your AVs at a competition judging or exhibition showing will be an essential part of the chain of information needed in order to compile your AV & make an EXE file which will play correctly on another computer. The new VAPS computer has a production GPU Index of about 90.

Where AV's are produced using version 5 of Pro Show or Producer for the VAPS Interclub a benchmark GPU play rating of 85 should not be exceeded to enable correctly replaying by VAPS.

The VAPS AV Committee is to be more actively involved in the Interclub AV judging and convention presentations of AVs. Our every effort will be made to run AV's as the authors made them. When unsatisfactory playing results for interclub AVs occurs, contact will be made with the Club & the AV maker(s) to hopefully resolve the problems in time for the Interclub judging.

Further explanations will be posted when I/we have more details and experience to guide AV makers and others playing back Audio Visuals made with ProShow 5 software.

Additional information page added Sat 20 October 2012  ( new ProShow Build version 5.0.3280 )

The Melbourne Camera Club's current 2009 iMac which run Windows 7 using Apple's Boot Camp software with ProShowProducer 5 bld3280 returns a GPU Benchmark of 23 (see blue image below). When a ProShow5 EXE HD (1920x1080) production is 'run' and the screen display is 'right clicked' and the option 'Playback Stats' is chosen the GPU Benchmark is ZERO and the rendering is shown as being undertaken by 'Software' with the resolution reduced to 800x450 (16ratio9). Also refer to the Playback Stats on the previous page for the exactly the same EXE but run on my more recent ALIEN LapTop. The images produced in the EXE running below and seen on a 4m wide screen with a big venue EPSON 5750 digital projector look considerable degraded with large pixels giving the false impression that the author used poor quality photo-images in making the AV.
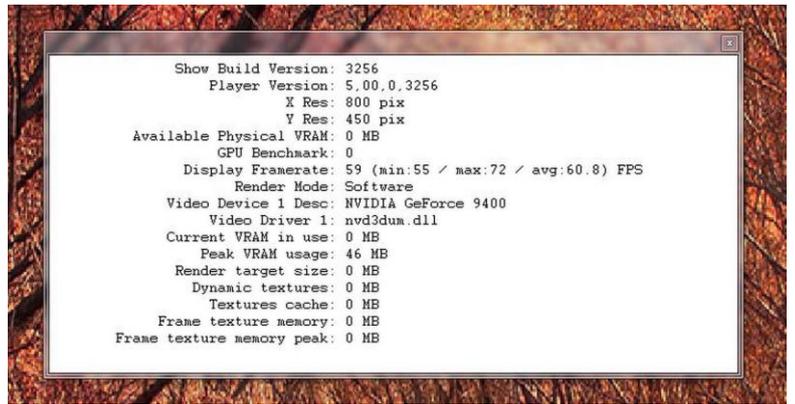




I recommendation that AV workers when sending or taking their Audio Visuals for running on another computer send both the ProShow5 'EXE' file and a HD Video file (MOV or MP4). If the Windows Computer running your EXE Audio Visual cannot run it in GPU mode and has to use software rendering it would be better to run the HD Video version which should give a far better quality presentation.

Another area within ProShow5 that AV makers should be aware of is under the toolbar EDIT drop down option there is a 'PlayBack Preferences' function that pops a smaller active window as shown below – see left image for my LapTops and right image for the MCC's current computer's playback preferences. This is a new area in ProShow5 which effects creation of EXE & PX shows.
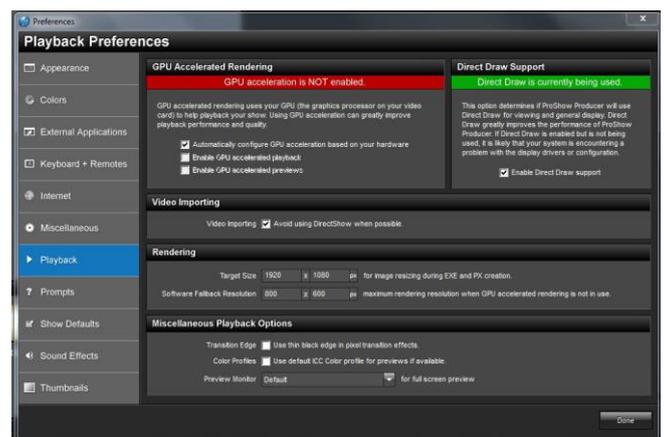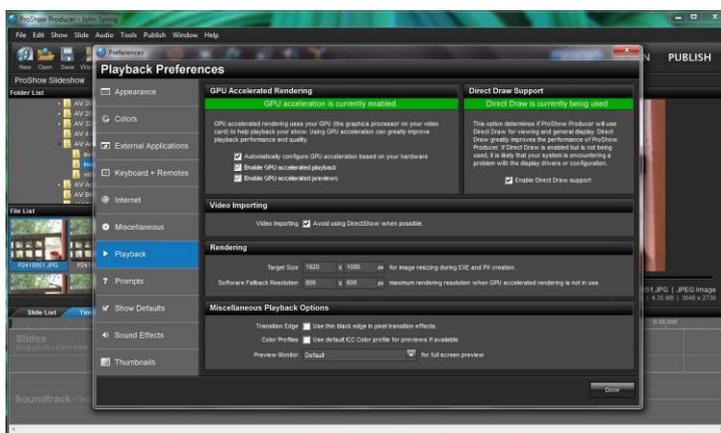




*This is the Melbourne Camera Club's first floor Gallery & major presentation area with a 4m screen and where we use an EPSON 5750 large venue projector for showing digital images, presentations and Audio Visuals.*