



Setting up and using a Video Source with HLImage++ 2005

HLImage++ 2005 has a DirectX Picture tool that was written to support "any" imaging hardware that ships with a supported **DirectShow** driver.

This includes 1394 Cameras, USB Cameras, USB/1394 Frame-Grabbers, PCI Frame-grabbers, and any other hardware that produces an image.

The first step in hooking up the hardware (in this case a Sony XCD-X70 and/or XCD-X70CR camera) is to install the hardware vendor's DirectShow driver. This is a small piece of software written by the hardware vendor, not Western Vision Software. For supported cameras, you can find these drivers on the HLImage++ Setup CD, on Westerns Homepage www.wvision.com, or on the homepage of the vendor of your hardware. They may have also shipped with your hardware. If you purchased the camera from Western, then we will have the drivers available for you to use on our homepage, on the HLImage++ Setup CD, or you can get them in response to an email asking for them sent to support@wvision.com.

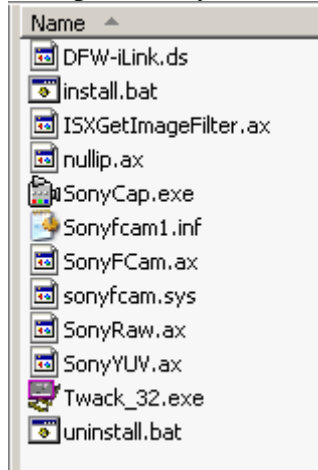
Most installations are similar and follow the setup given in this document. Most installations do not ship with a setup program but require you to follow the installation given below. We will use the XCD-X710CD for this installation to show you how to setup a typical video device. See the manual of your specific hardware for any specific details.

For hardware that ships with an install program, see the "DMK21F04_DFK21F04_Setup" document. It uses a very nice install program.

Step1: The first step is to locate the DirectShow driver. In this case you can download the latest version from Sony's web page or contact western for the driver.

Once you have the driver, unzip the file to some folder of your choosing. The folder should now contain all the files needed for the DirectShow Driver.

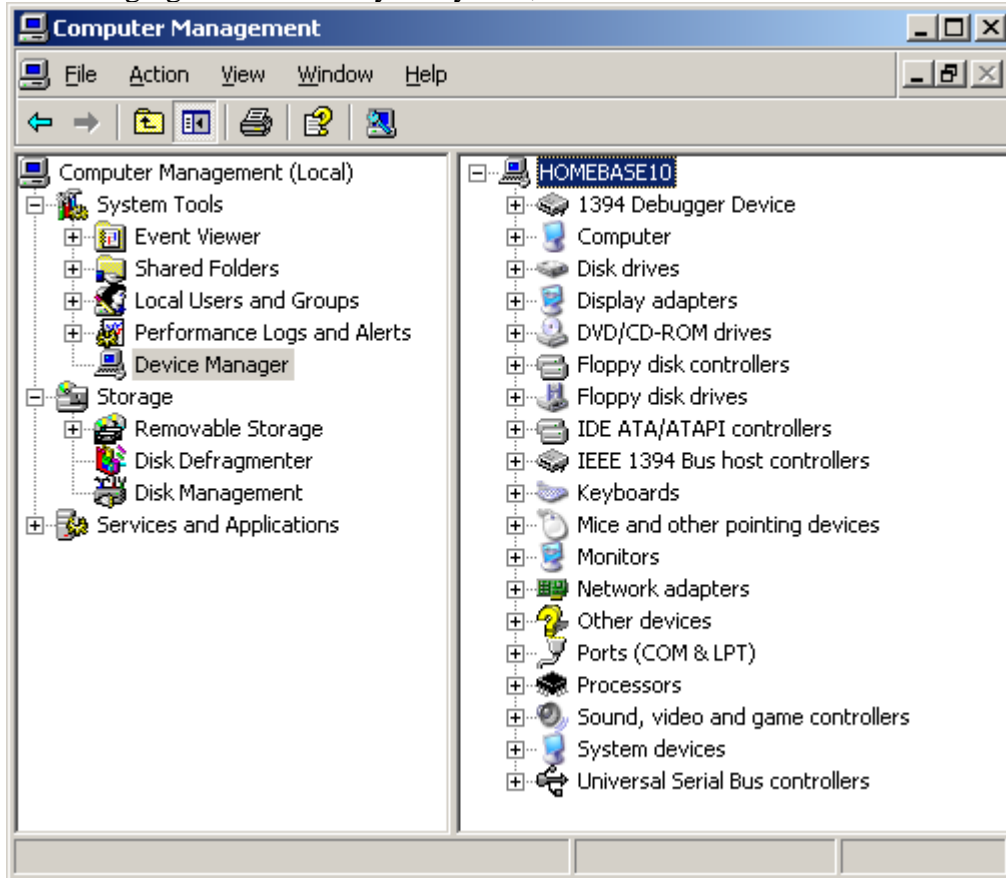
In this case you would have received a file named 'fcam50.zip'. Once you un-zip the file you would see something like this:



This is a common setup. It contains both an install batch file (install.bat) and the driver for the camera (sonyfcam.sys). The *.ax files are DirectShow filters and they are installed when you run the install.bat file.

Step 2: Now that you have the driver files, the first thing to do, before plugging in the camera, is to run any install programs. In this case we will run the install.bat file by double clicking on it. This file copies the *.ax files and installs them to be used by direct show.

Step 3: We will now use the Windows Control Panel to open up 'Computer Management'. Then we will click on the Device Manager to see all the devices in the system. Then click on 'Imaging Devices' to see what imaging devices are in your system, as such:



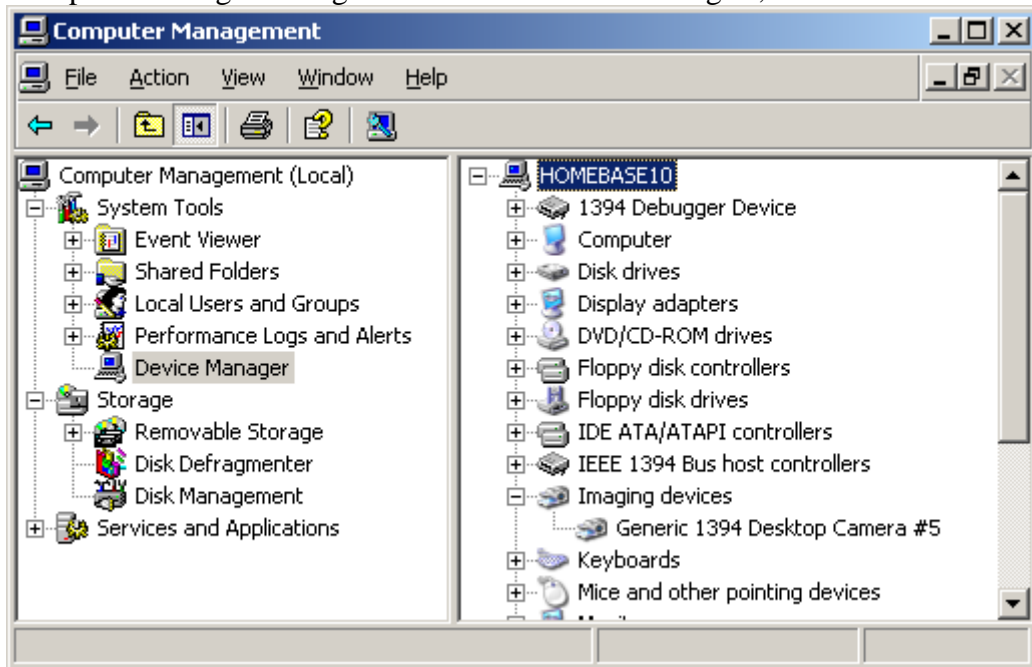
In this case we have "NO" imaging devices in our system. If you had any imaging devices it is a good idea to note them so you can determine which is the new one you will soon plug in.

Step 4: Plug In your hardware. If you are using a 1394 or USB device, simply plug in your hardware. If it is a PCI card, you will have to of course shut down and install it. Either way, after you do so, the operating system will either ask you for the correct driver by running the hardware wizard or it will not.

Step 5: Case 1; The hardware wizard did not launch. If the hardware wizard failed to run, then windows ‘thinks’ it has found a matching driver for your device. This, alas, may not work as expected. Each video driver is normally specific to it’s own device. Although Windows does have drivers for video devices they may not fully support your device and sometimes don’t even run.

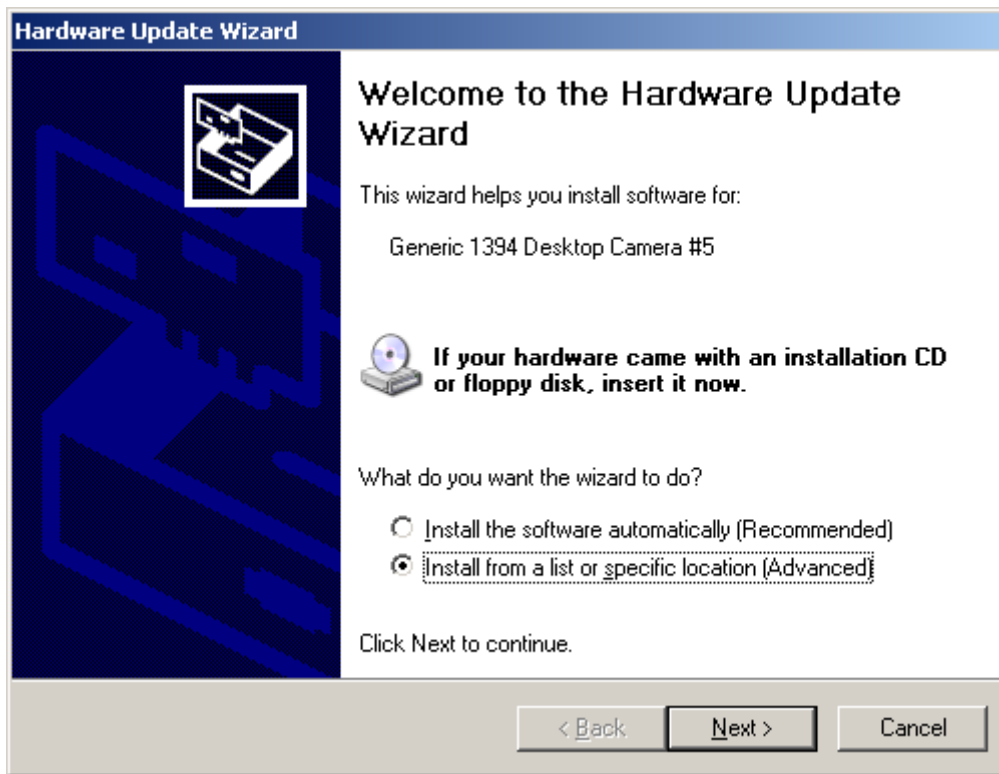
Signed vs. Un-Signed drivers. One of the reasons Windows loaded a driver over the driver that shipped with your hardware is because it was ‘Signed’ by Microsoft and the driver that is specific to your hardware was not signed. Many drivers, even from large companies, do not sign their drivers. This leads to many problems/issues when trying to install hardware drivers.

To fix this issue, we will now tell Windows the exact driver to load. Open Computer Management again and select ‘Driver Manager’, as such:



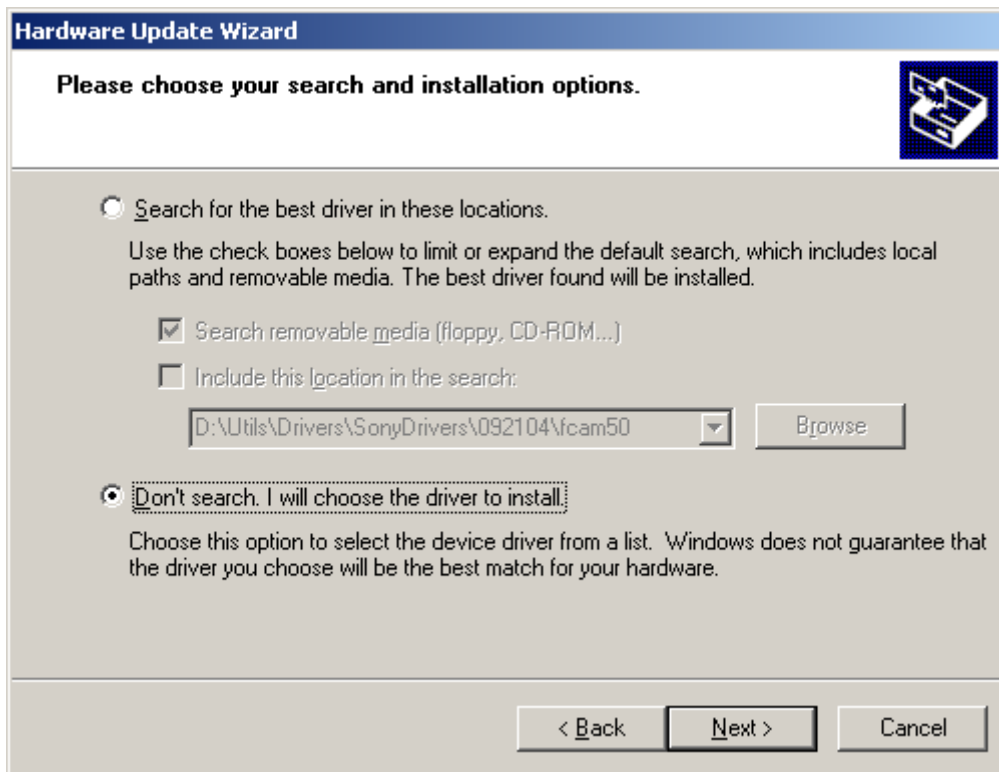
As you can see, a generic driver got loaded for the specific Sony XCD-X710CR camera. Although this driver may work, it will not let you take full advantage of the camera. You can select this item and right click it to bring up its properties. If you do, you may see that the driver is a generic Microsoft Driver.

Thus, we wish to change the driver for the camera to the driver that was made specifically for it by Sony. To do so we right click the item and select ‘Update Driver...’ as such:

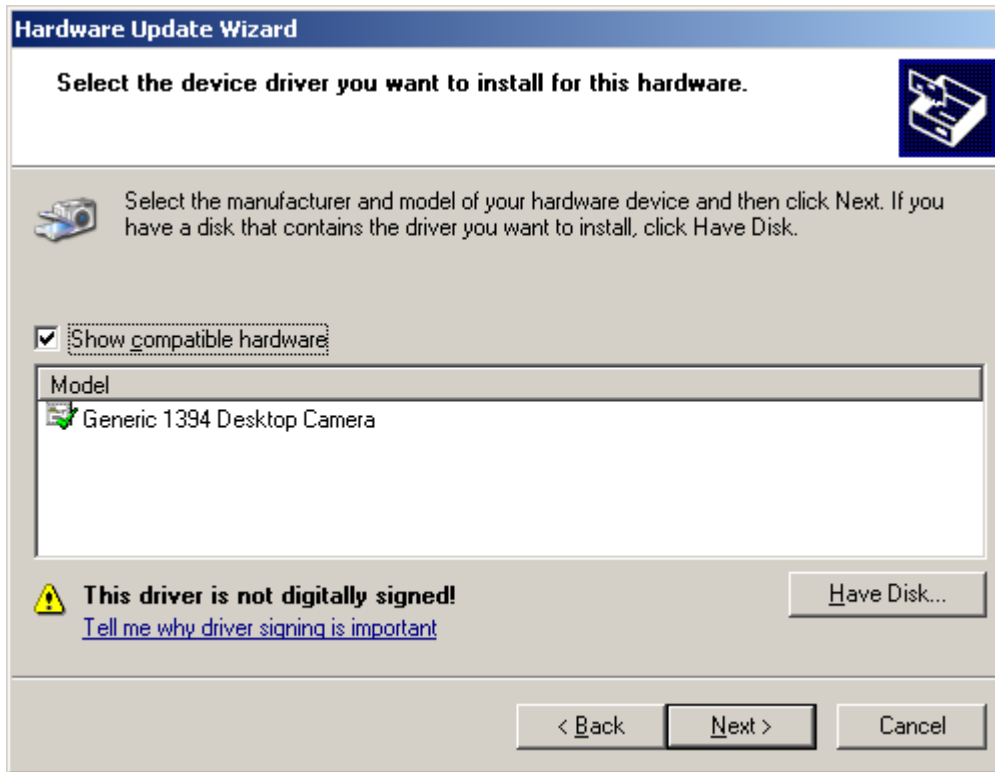


Since we wish to load a specific driver, we choose “Install from a list or specific location” as shown, click next:

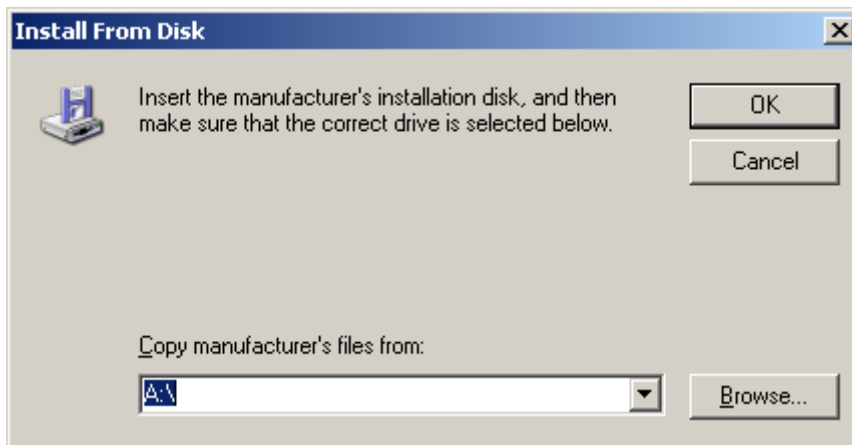
Case2: At this point, the procedure is the same as if the Hardware Wizard launched when you plugged in your hardware.



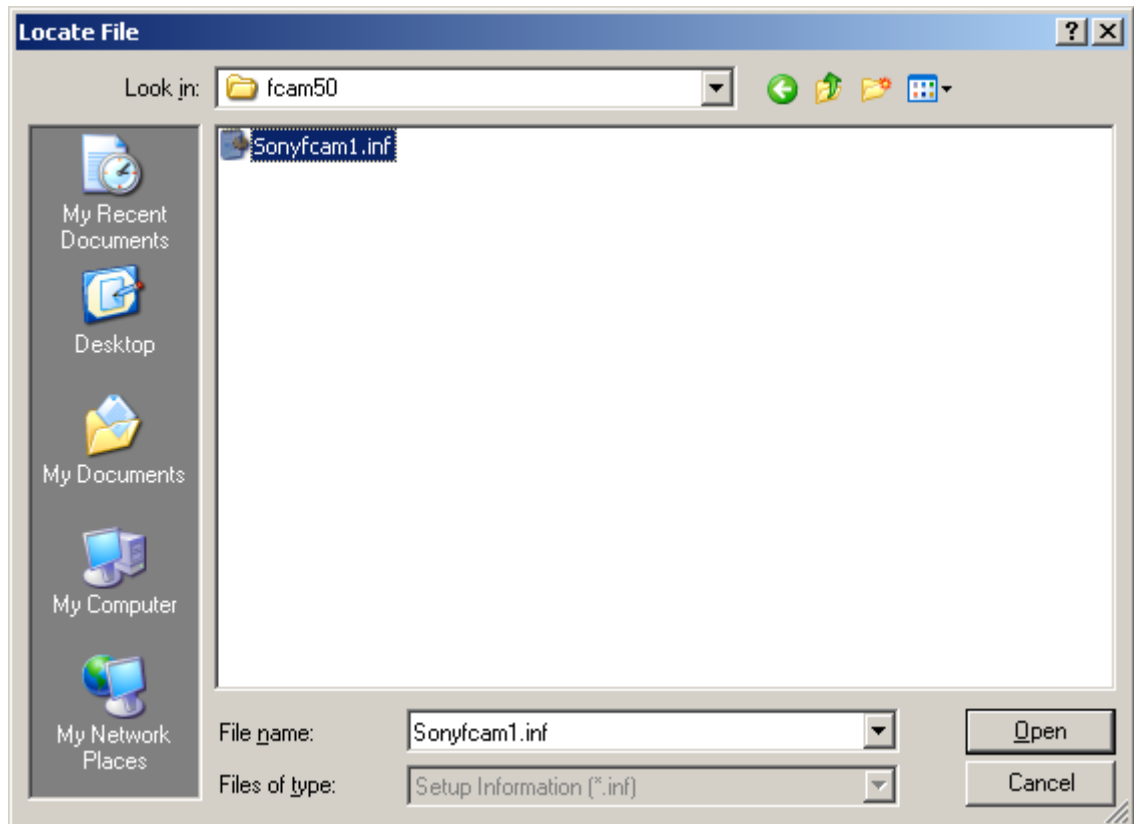
We do NOT want the wizard to search, so we select as shown, and click next:



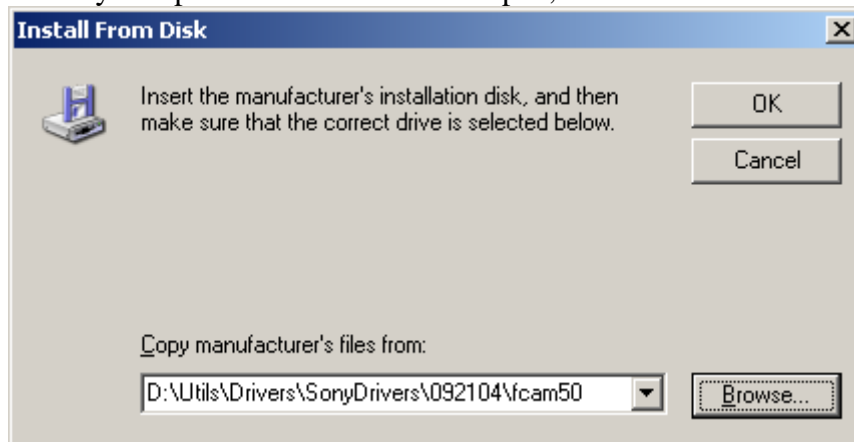
The wizard will show us what it again ‘thinks’ we may wish to use, but we wish to use a specific driver. Thus, we use the ‘Have Disk...’ button to locate the exact driver. Click the “Have Disk...” button, as such:



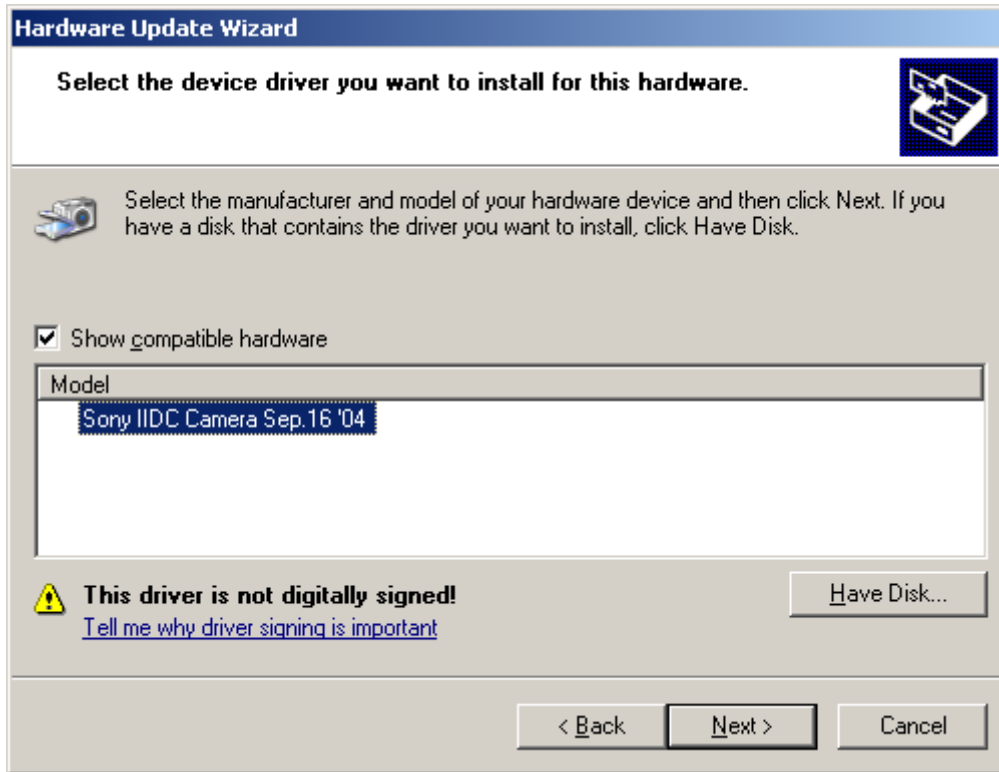
The wizard is asking us to tell it where the specific driver is located. Click the ‘Browse...’ button and direct it to the folder with the Sony driver in it that you unzipped in step 1 above, as such:



Select your specific driver and click Open, as such:



and then click OK:



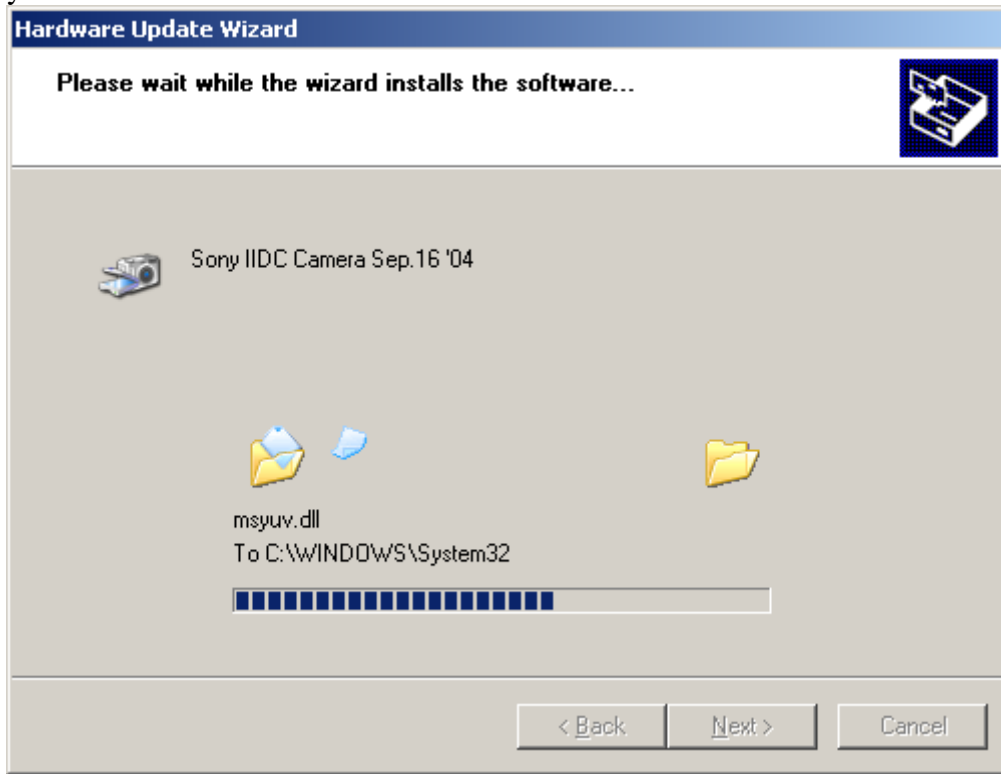
Now the wizard lists the specific driver, as shown. Select it, as shown, and Click “Next>” to install this driver.

The driver will start to be installed and the wizard may tell you that it is not signed.

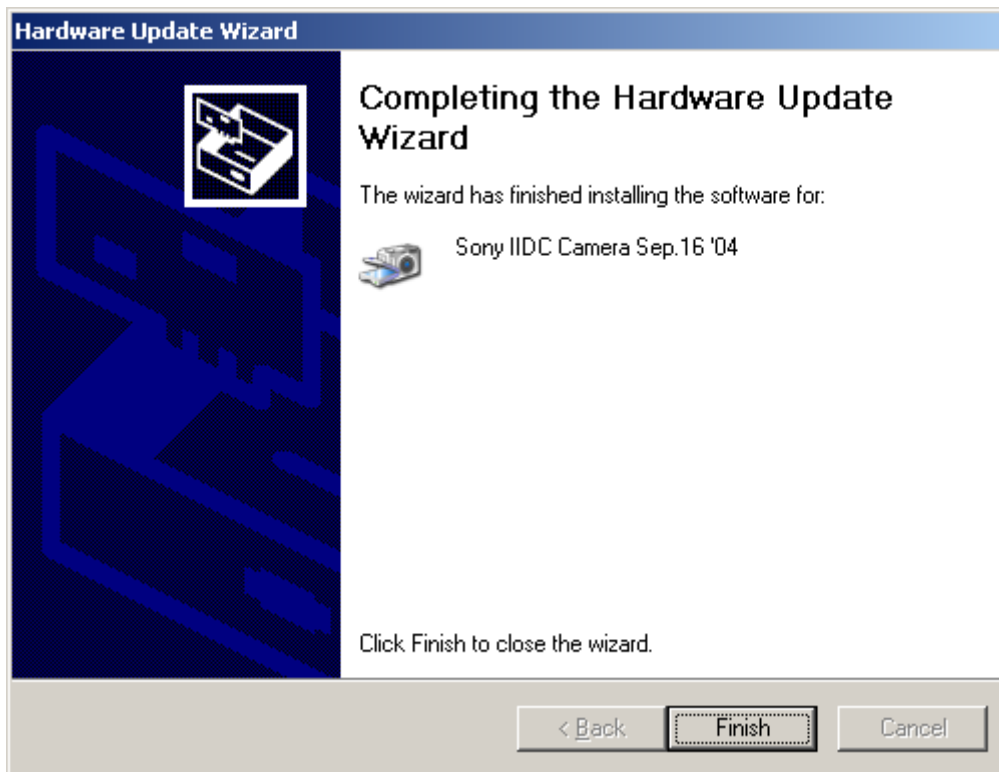


After reading about “Un-Singed drivers” and their associated risks, click ‘Continue Anyway’ if you wish to use the specific driver that shipped with

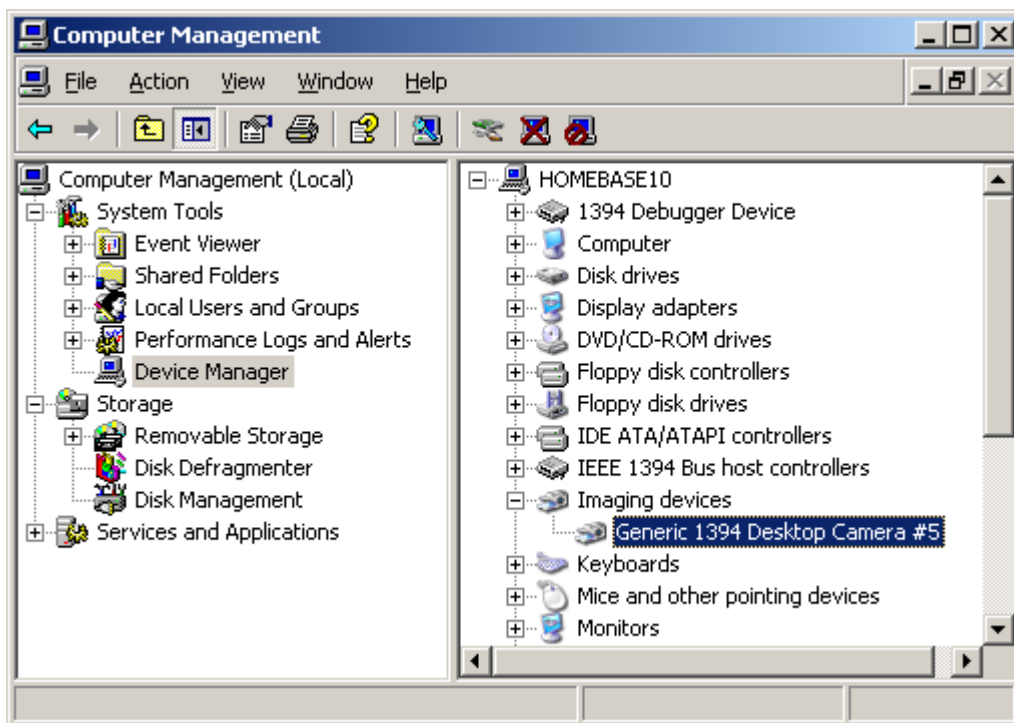
your device.



The Wizard will then install your drivers and all files needed by your driver.

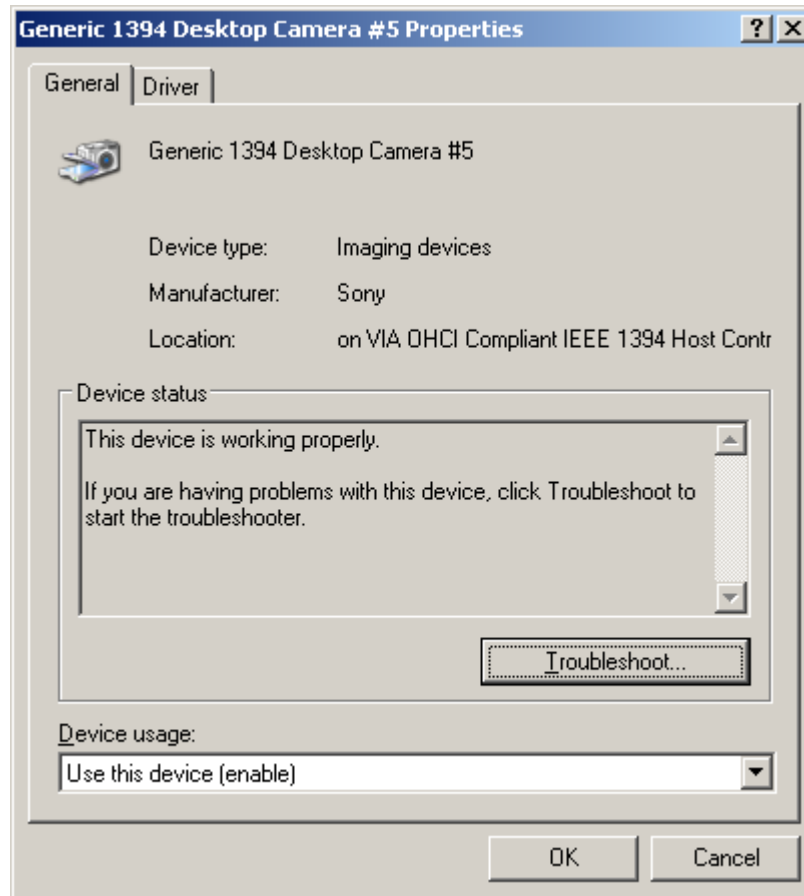


It will notify you about the successful install, click 'Finish' to finish the install.



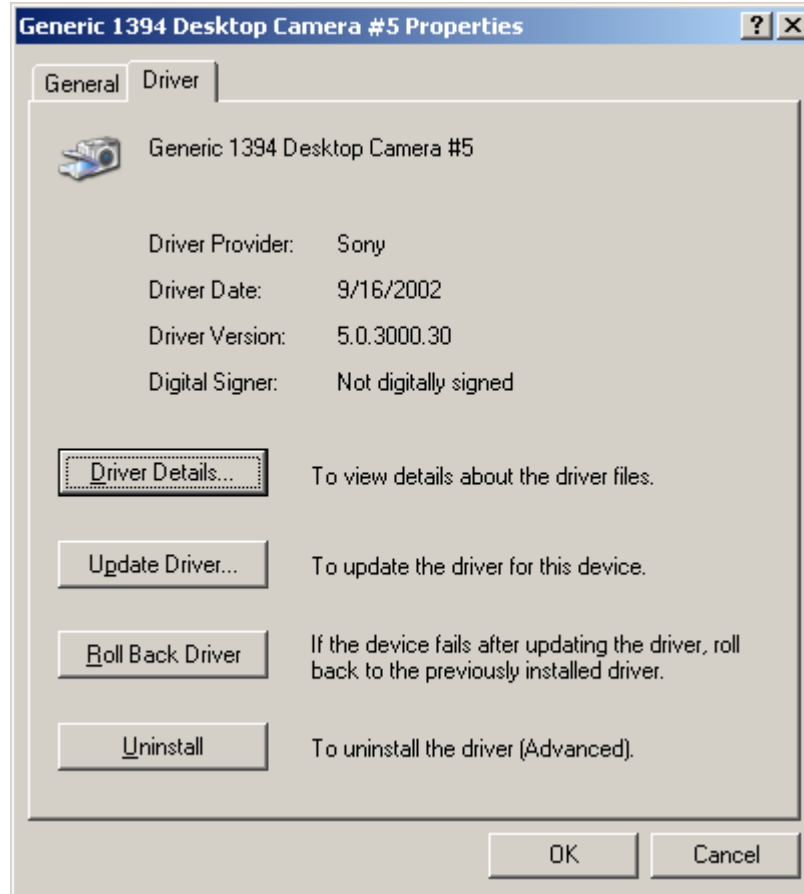
This will place you back in the Computer Management window, as shown,

and the name on the device may be the same. Some devices will list a better name and some won't. Right click on the item and select properties, as such:




You should see the very important Device status "This device is working properly". If you don't see this, your device may not be working properly.


Click the driver tab, as such:

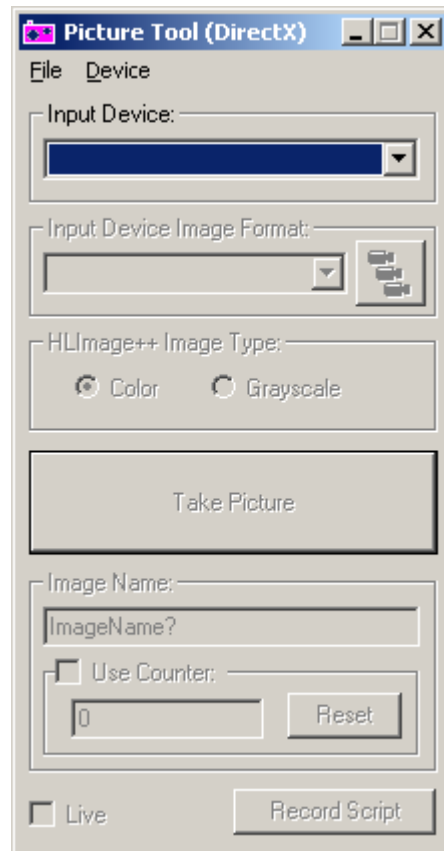


You can see that the driver is from the manufacturer, in this case 'Sony'. Click ok and close "Computer Management".

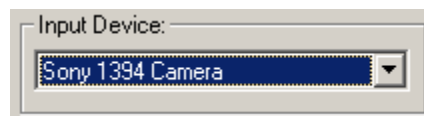
Your hardware should now be ready to use.

Step 6:  Using your Hardware in HImage++ 2005 with the DirectX Picture Tool.

Open the DirectX Picture Tool by clicking on the  Camera Icon in the toolbox. This will open the DirectX Picture Tool as such:



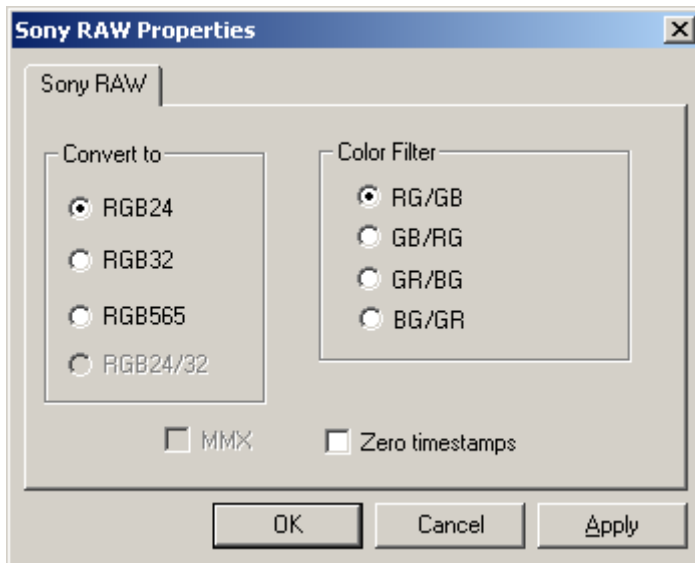
Select your camera from the list of input devices. All imaging devices that have direct show drivers that are successfully installed in your system will be listed in this drop down. Select the Sony XCD-X710cr camera, as shown:



Extra Step for Sony Color XCD-X71CR camera: The Sony transfers its data over in a RAW Bayer format. We need to tell the tool, if desired, to convert this raw image into a color image. To do so we select the menu item



Load Bayer Filter. We can then use the menu item 'Change Bayer Filter' to set the options for the Bayer filter, as such:



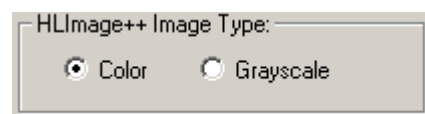
Setup as shown and click Apply followed by OK.

End of extra step for Sony Cameras.

Select the 'Format' that you wish to capture, such as 640x480 color, as shown:



Select if you wish to use a color image or a grayscale image. If you are using a color format, it is best to use a color image, as shown:

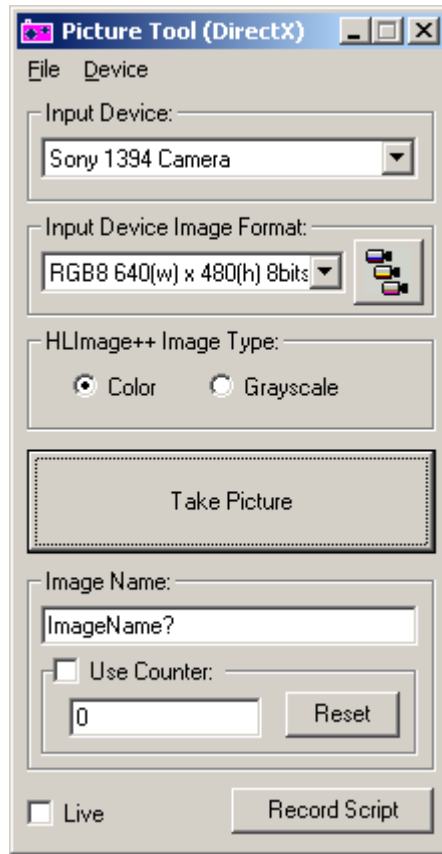


Your camera is now ready to take pictures. You can now use the Take Picture button to take a picture or you can use the live check box to see a live image. Viewing a live image is useful to setup the cameras settings.

To change the cameras settings open the settings box by selecting the menu item Device | Device Properties.

Each camera will have a different Device Properties Box, as it is part of the DirectShow driver itself. Use the controls to setup the camera while viewing a live image. When finished, close the properties box and turn off live image by un-checking the live checkbox. Then take images with the Take Picture button.

Your tool should now look like the following:



If you have questions, please send an email to us at support@wvision.com

Known Issues with Sony Camera Line:

1. The formats 512x384 and 1024x384 do not work and if selected will crash the system. Do not select these formats. You can select custom formats using the



button and using the Format7 options.

2. End of known issues.