

ComputerEyes Pro....

Inexpensive 24 bit Color Scanning!

By Michael S. Bean



In early, February of this year the Arizona Macintosh Users Group contacted Digital Vision at (617) 329-5400 and obtained a Mac II Color ComputerEyes - Pro Series capture board for our use. This Mac II nibus card plugs into any one of your available Mac II slots and provides you the ability to use any video source for scanning color or black and white images into your computer. Possible sources will include video cameras, video disks, disk cameras and just about any other video source you can think of.

Getting Started...

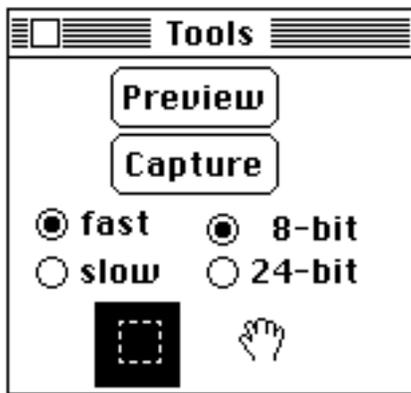
ComputerEyes Pro is easy to run once you have installed the Nibus card and the RCA or 4-pin mini-DIN connection to your video source. Most video sources utilize the RCA connection for video out or come with a conversion connector. For our purposes we utilized a Panasonic Camcorder VHS Reporter #AG-180 which retails for around \$800-\$900. The resolution on the ComputerEyes Pro card is much better than our Camera is able to produce. Our experience has shown that if you have access to an S-VHS camera you will achieve the optimum results as the definition the color card is capable of is still approximately 30% greater than S-VHS units can obtain. The Nibus card has a switch for configuring for S-VHS for this purpose. In order to get

up and running, you will need to install your Apple 32-Bit QuickDraw init in your system folder. Once the init is loaded and you have your video source connected you are ready to restart your Macintosh and give ComputerEyes Pro a try.

I have found on my 8 meg Mac II that if I use init cdev 3.0 and hold down the space bar in order to not load any of my inits that the picture seems to be more refined and contain less jagged edges. My only explanation for this action is that during the scanning process some of my inits may be making system calls that interrupt the scanning process.

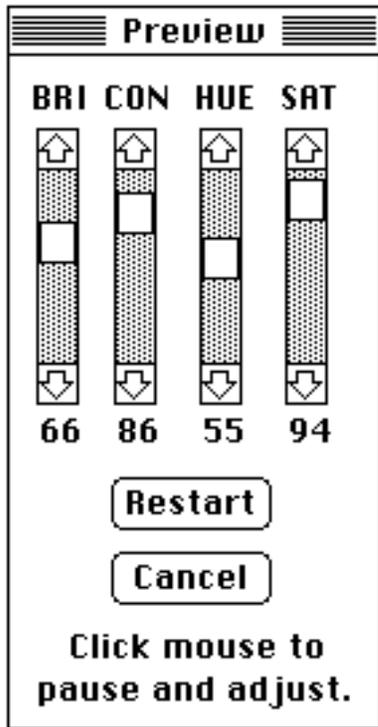
Scanning Tools...

As soon as ComputerEyes Pro is opened the first thing you see is the "Tools" menu in the upper left hand corner. This menu allows you to preview your subject or capture the image using fast or slow, 8-bit or 24-bit modes. The 24-bit slow alternative being for best results but taking the longest to perform. Even in 24-bit slow mode the scanning process only takes about 20 seconds. ComputerEyes captures an image by translating the incoming video signal into thousands of color dots, called pixels. Should you select slow capture then 307,200 pixels are collected and assembled on your 640 by 480 image. A fast capture also produces the same size image but only collects 76,800 pixels, or every fourth pixel in the image. Computer Eyes then calculates this missing pixels by interpolating, or averaging from the nearby pixels. Therefore, slow will produce a cleaner result but takes approximately 15 seconds longer.



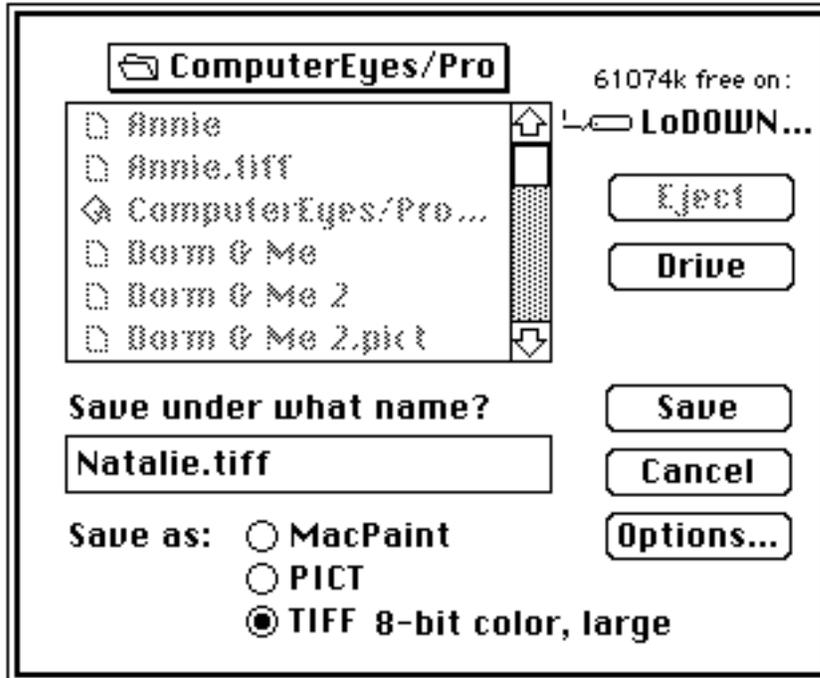
Preview... in the preview mode you are shown a reduced screen of approximately 4" by 2.5" in which a refreshed screen is shown every few seconds. The screen is updated based on your adjustment of the "Preview" controls which include brightness, contrast, hue, and saturation. Utilizing this method you are able to fine tune the parameters of your picture prior to

actually capturing it. I found myself spending quite some time trying to get the colors, brightness and contrast just the way I wanted it. *In some future release of the software it sure would be a time saver if there was a button you could push that would try to automatically set these functions.* When you hold down the mouse the scanning process is stopped so that you can re-adjust the Preview controls, then you push the start button to continue the screen update.

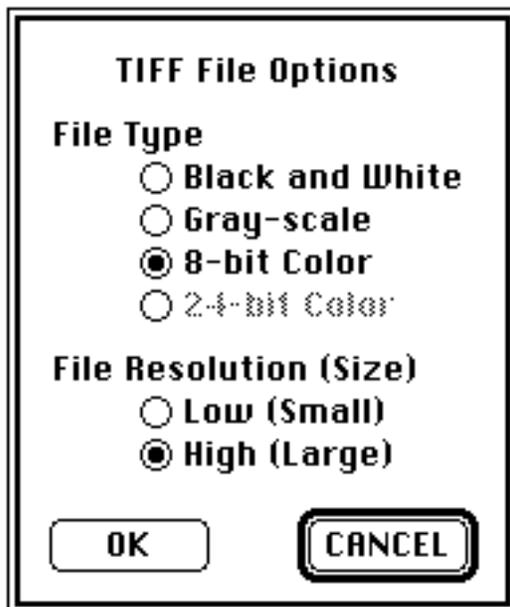


Once you have the Preview window looking the way you want it your next step is to push the cancel button and return to the Capture screen. Under the File menu you will now select new and a blank page will fill the screen. Next you make sure your subject is still and that you have selected the appropriate 8 or 24 bit scan rate.

Capture... Now push the Capture button and wait approximately 20 seconds if you selected the 24-bit slow scan. The Macintosh will beep once the scan is done and notify you that the pallet is being built. In about 20 more seconds you will view your picture. Once your picture is scanned the way you want it you can save it in a variety of formats. The options you have available are MacPaint, PICT II or several forms of TIFF.



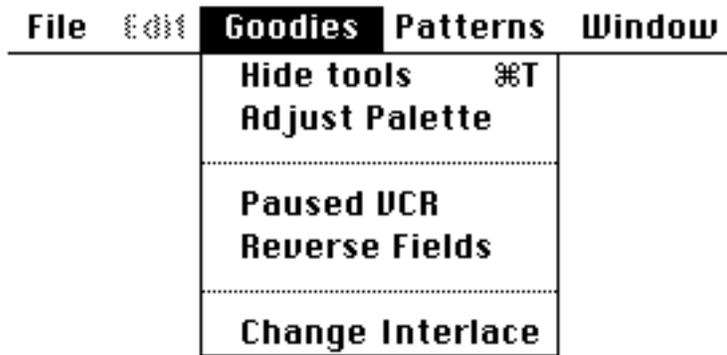
If you push the Options button you are presented with several other TIFF file saving options.



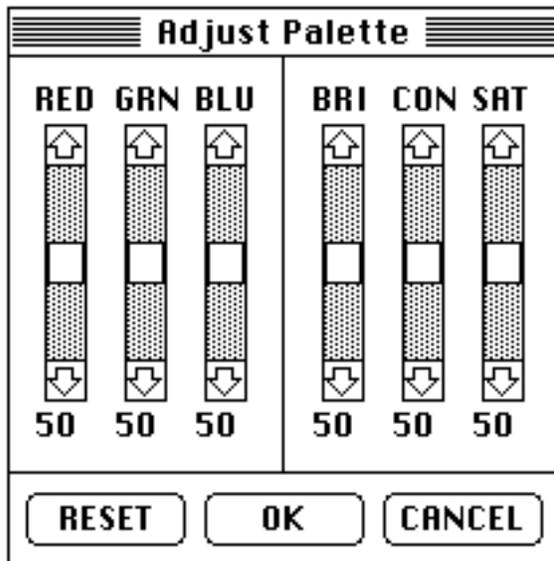
Your ComputerEyes Pro pictures can be opened by your favorite color paint programs such as PhotoPress and Pixel Paint or be placed in desktop publishing platforms such as PageMaker, Quark, Design Studio or any other programming source. I have placed Color pictures in HyperCard and accessed

them with the Show Pict XCMD. These graphics show up nicely on any color Macintosh.

After the Capture... Many scan packages do not offer a way to alter scans once they are saved. With the ComputerEyes Pro files you can still perform picture manipulation. Under the "Goodies" menu you have the ability to "Adjust Palette".



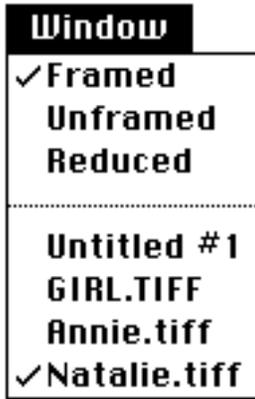
By selecting the "Adjust Palette" menu you have the ability to control red, green and blue along with brightness, contrast and saturation. Moving any of these slider controls will allow you to alter the appearance of your picture and save the results.



Several other features are available within the "Goodies" menu but we had mixed results using them. *The manual and the company state that you are able to scan still VCR signal but we have found that if your VCR signal flickers in the pause mode your results will be very poor.* Therefore, I would

not count on a good picture from a paused VCR unless you have sufficient play heads to keep the picture very steady. Reverse Fields and Change Interlace are also available. We found little or no difference in picture while using these options. They may be of more help under different conditions.

Views and Patterns...



Under the Window menu you have the option to see a framed display, unframed, or reduced. This menu also allows you to select which picture to move to the front and a list of all the pictures currently open.

One nice feature of ComputerEyes Pro is that it allows you to decide if you want your picture to be Color, Grayscale or displayed as a halftone. These options allow you to change your output immediately to fit the environment you will be working in.



Color... The pictures I am about to show demonstrate how the conversion looks on a Macintosh Monitor. This scan was captured in 24-bit slow mode and saved as an 8-bit TIFF file. The first picture is the color version and was pasted into Microsoft Word 4.0 using the clipboard. The image is displayed in 4, 16, 256 or 16.7 million colors based on the Apple control panel setting. (This probably will not print properly in the Newsletter as we are still printing in a black and white world).



Grayscale... The next picture is simply the same color picture translated to GrayScale output. This grayscale image can be imported into Image Studio, PhotoPress or any number of other programs for manipulation and touch up. The image can be displayed in 4, 16 or 256 shades of gray based on the Apple control panel Monitor settings.



HalfTone... ComputerEyes in the HalfTone mode simply makes the picture usable in the MacPaint, SuperPaint or other bit mapped paint programs by dithering the graphics. This flexibility to utilize your graphics in any conceivable platform is a very valuable feature.



The combination of these options and the fact that just about all of your graphic manipulation can take place after the scan is completed makes ComputerEyes Pro a great value. I just wish I had an S-VHS camera so that our resolution in these pictures could be about 40% better.

Color Scanning Value...

If you have looked at color scanners you will find that most run in excess of \$1,500.00 and that products like the Mass Micro FX board run even more. The ComputerEyes Pro version retails for \$449.95 and you can find it for \$345.00 from Maya Computer at (800) 541-2318 or other mail order houses. This unit has many nice features and can even perform adequate flat bed scanning if you have a good camera and a proper platform. I would suggest ComputerEyes -Pro to anyone who needs 3D scanning functionality or cannot justify the Sharp 450 color flatbed scanner.

It would appear that we are finally reaching a point in Macintosh history where color scanning will be available to more than a few.... With this advent I would like to toast Digital Vision for a job well done. Hopefully many more color platforms will be available for under \$500 in the future.

The RasterOps Color 364 board appears to be another exceptional product based on statistics. If I can get one to review, I will issue a future review on it as well.

The Arizona Macintosh Users Group awards ComputerEyes Pro with four (4) AMUG's out of a possible five and congratulates them on a great low cost product!



Happy Mac'ing,

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