

MIXING IMAGES AND CHROMA-KEY SELECTION

To create the image shown I used four different sources but the first and most important one was the picture of me taken in front of a green chroma-key screen. The basis of this image is the subject (me) is photographed in front of an evenly lit, pure green (or blue) background.

This is used extensively in television broadcasting. When the weather man stands in front of the weather map in the television studio pointing at it he (or she) is actually pointing at a blank blue or green screen which the producer keys in the weather image.

How does this work? The Chroma-key is based on the “luminance” key. Every thing in the image over (or under) a set brightness level is “keyed” out and replaced with usually another image. The camera image (the weather person) is fed into a mixer (keyer) as the foreground and the background video is also fed into this keyer where the level control is adjusted to cause the blue or green to be replaced with the background video.

Green and blue are usually chosen because they are complimentary to flesh tones so this is a logical choice.

There are a number of software programs today which are intended for making videos in this manner, I have used one called Visual Communicator to make training videos where a subject narrating sits in front of a blue or green screen and afterwards I mix in a streaming video depicting the task.

In our case we are using the green screen for a much simpler objective, to have a stark contrast between the figure and the background allowing for a much easier and cleaner selection with the “magic wand”.



The only problem is that sometimes the background is not evenly lit or slightly wrinkled, causing shadows, but that can be overcome. The biggest problem is clothes that approach the color of the background. (I assume that the subject’s skin tones never are any shade of green unless you are photographing frogs or men from Mars).

I should mention these screens are expensive and a good muslin or rayon one can cost over \$100 for a decent size.

Anyway enough of the theory lets get to the picture creation part.

The picture was created using four different images from different sources. As discussed previously I get stock pictures from a lot of sources (Google Images being one) but I also have a collection of images that I keep from my own shots which I think may come in useful one day.

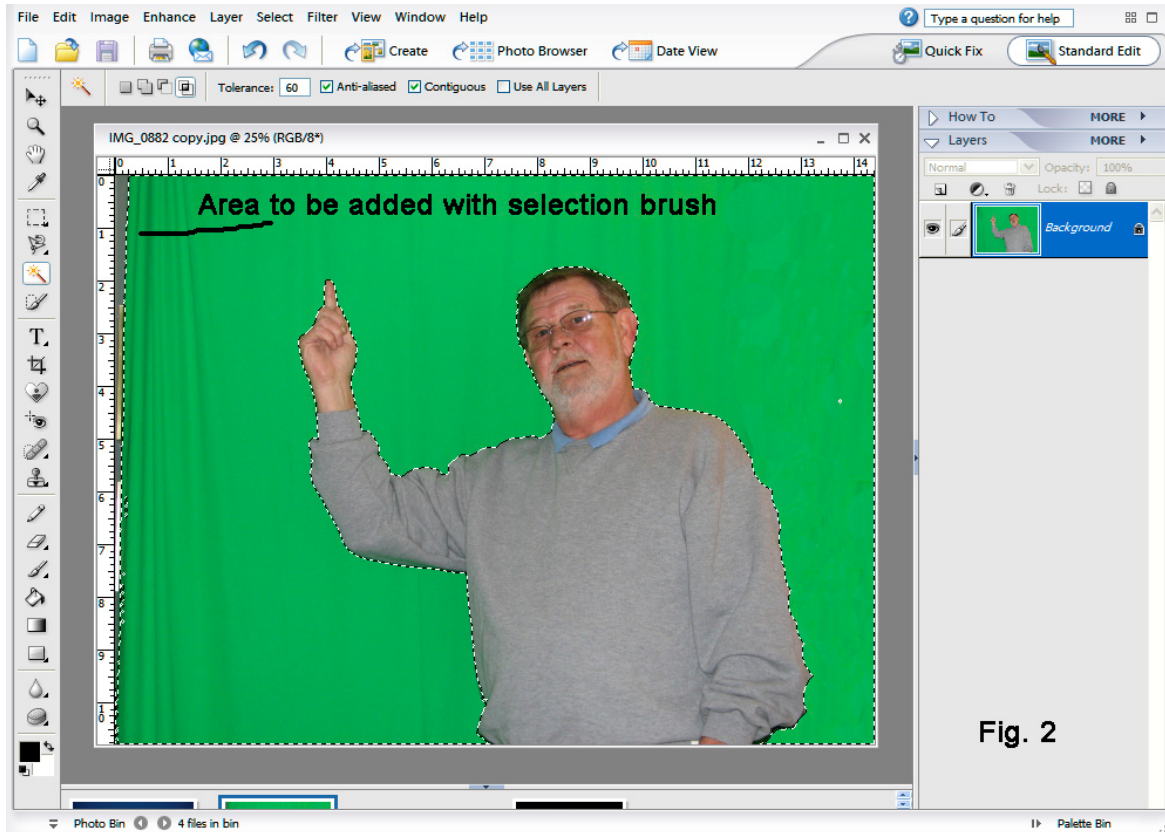
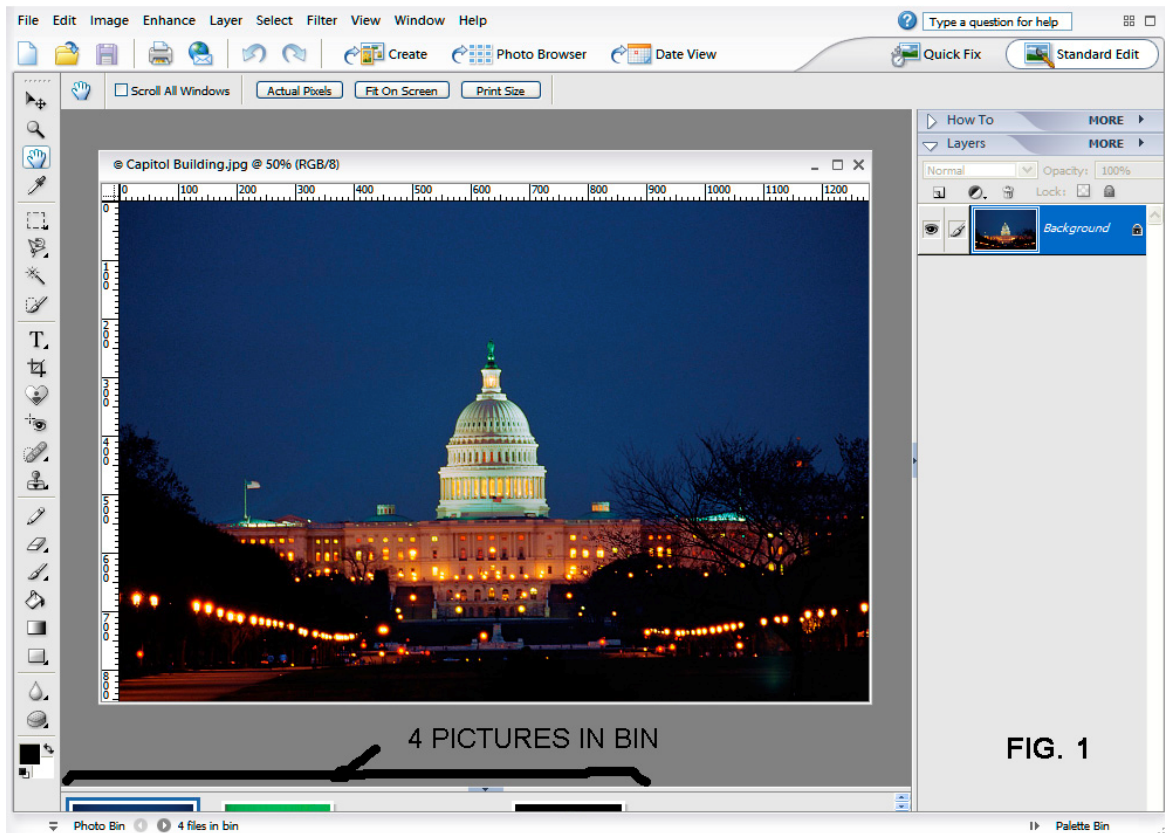
The pictures used were as follows:

	The Capitol Building (Corbis Images)
	Barry in front of chroma-key screen
	Shot of earth from space (Corbis Images)
	Full moon from my back yard

Note it is always a good idea to check the sizes of your images before you begin any project to ensure that they are somewhat in proportion to how they will appear in the finished picture. I have frequently (before I learned better) had a picture of myself put into a background only to find my picture dwarfed the background and it was very hard to manipulate. It is also better to size images before pasting to somewhere near the intended as proportions are easier to control.

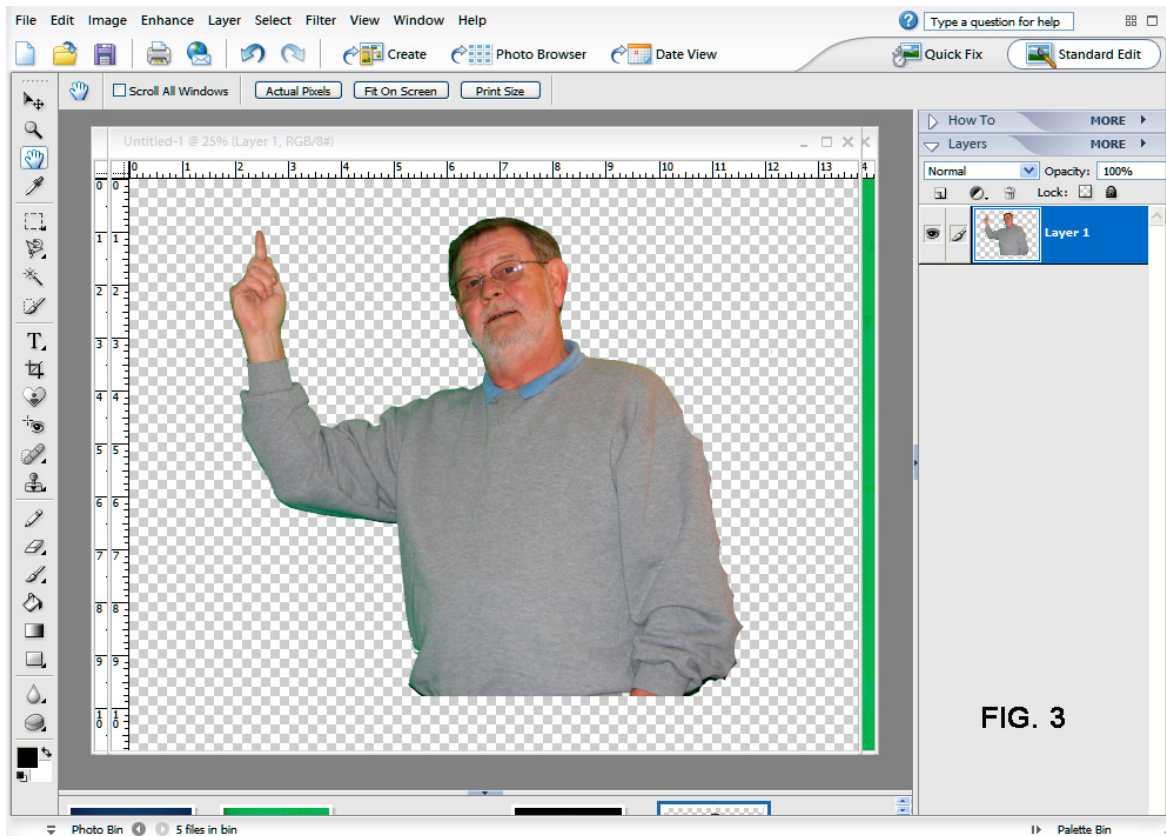
Now after opening Elements I can open the back ground picture. At the same time I open the other three pictures and minimize them to the photo bin. This gives me all the pictures I am going to work on demand. (See Fig. 1 below).

My first job is to cut out the picture of myself from the background. I click on the edge of the image in the bin and it takes over center stage in the picture area. I then use the magic wand tool to select the green background. I have set the tolerance to 60 to allow for the variations in the green background due to lighting, the folds in the material etc. Tolerance should be set as high as necessary to include all the background, as the subject (me) has no green there should be no selection in this area. When using the magic wand, play with the tolerance setting for optimum results. However there is still a small area on the left that must be selected with the selection brush. Using the brush push this area to be included into the background.



After checking the area it is time to go to the tool bar and **Select>Inverse** to change the selection from the background to the figure.

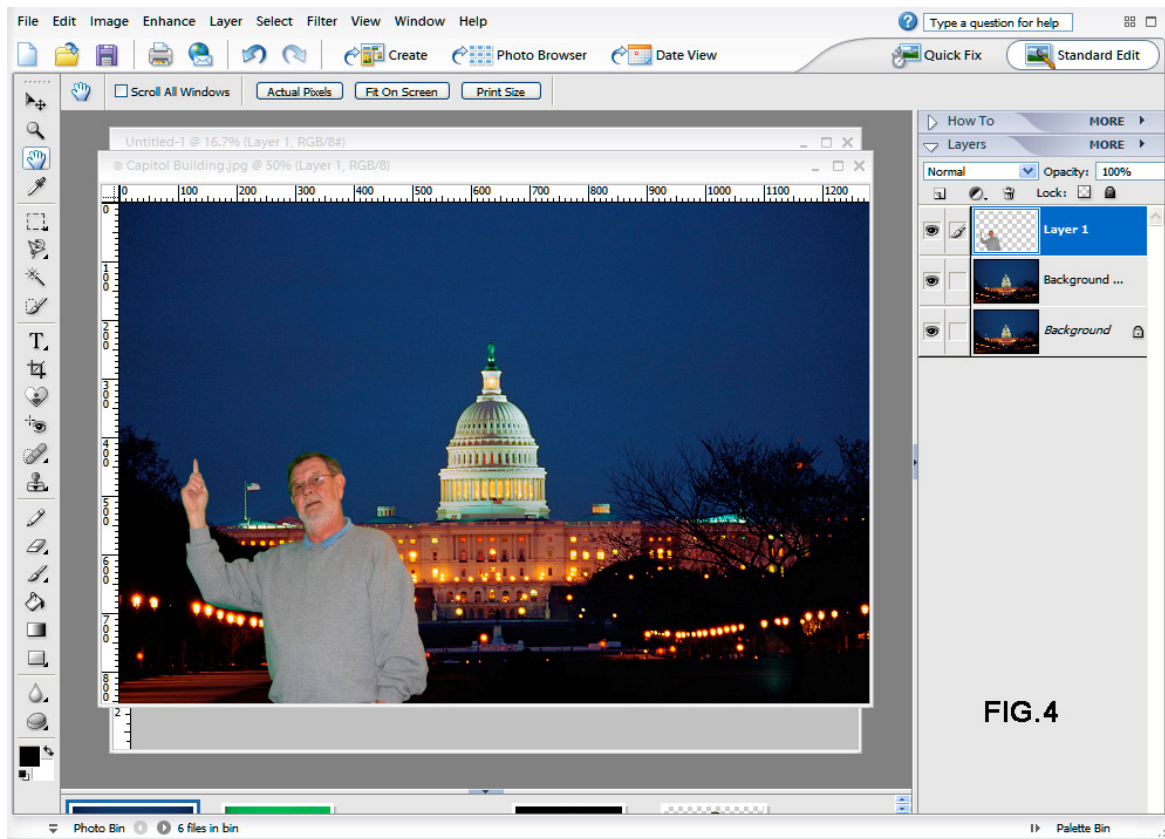
Most instruction books would tell you now to go to **Edit>Copy** to copy the image to the clip board and then revert to the original image and paste it in. This will work but my experience has shown me that doing by this inevitably there are some pixels included that you do not want. A better way is to create a new file and pasting the picture into the transparent background. See Fig. 3



If you look closely at the image you will see a black area under my left arm and the arm itself looks a little strange. These areas can be treated with the eraser tool after pasting but it is much easier when you are working with a neutral background. Also remember that you can only store one image in the clip board at a time for pasting so that if you decide later you need this image for something else you must go through all the steps to recreate it. This way I can save this image and use it wherever I want.

So I will massage (with the eraser tool) the edges of this image to get a cleaner look and remove all the unwanted pixels. Remember if you take off a little more than you intended, unless it changes the image drastically you are only adding a transparent area. I find this method makes the difference between an image pasted in that looks OK and one that seems to belong.

I can now bring up the Capitol picture from the picture bin and paste the figure into it. See fig.4.



I had adjusted the picture for size and therefore it did not need a lot of adjusting after pasting. Using the move tool on the layer I can position the figure anywhere in the image.

Now I bring up the globe picture and follow the same procedure of selecting it and pasting it to a transparent layer for tweaking before copy and paste into the main image.

I follow the same procedure for the full moon and position it wherever I want.

The image when finished is shown below. This is a good exercise in manipulating pictures, handling images in the picture bin, resizing images, arranging objects etc. The main thing is to keep track of where you are at any given time, check which image is active, which layer you are dealing with and if in doubt change image or layer names to keep them straight in your mind!

On a side note the image shown in the click for larger image is slightly different from the one below. Can you spot what it is? Answer at the next SIG meeting!



By the way if anyone would like copies of the images I used (the earth, full moon) e-mail me for copies.