Cloning in Elements
By Jerry Koons

The following tutorial outlines the process of "Cloning" or sometimes referred to as the "Rubber Stamp" tool.

This tool can be an extremely effective method for adding desired items or removing undesirable items from the image.

*One note of importance is the legality as well as the moral issues with cloning. Don't create or alter an image that becomes misleading in any fashion **without** clearly noting that the image has been digitally enhanced. Just because we can do it doesn't mean we should.*

Let's look at several examples before digging into the mechanics of this valuable tool.

Removing Unwanted Items

Adding (Replacing) A Smiling Face

Cloning in Elements
By Jerry Koons

Dirty Digital SLR Sensor

Step One
For most cloning tasks, I prefer to add a new blank layer at the top of the layer stack. This permits easier revising, if necessary, as well as more flexibility for reducing opacity for reducing the effect and even turning off the layer to eliminate the cloning effect when desired.
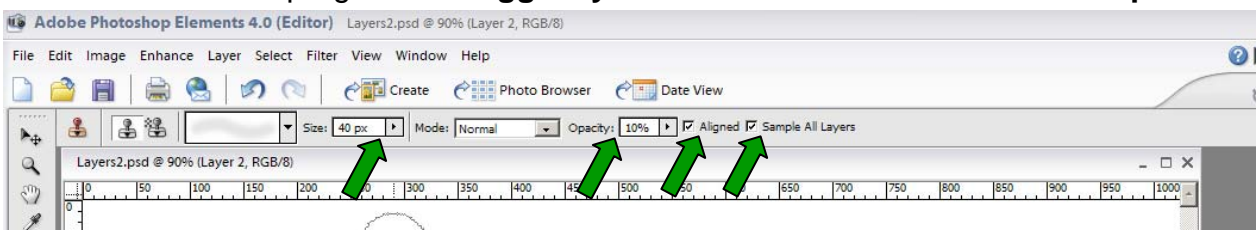
Click on the uppermost layer to make it the active layer and click on the *Create New Layer icon* to add a new blank layer.

Step Two
Click on the *Clone Tool icon* to activate the clone tool.

Step Three
Before we actually start cloning, it would be wise to understand the various options available within the program. **I suggest you read and reread this critical step**.

Normally, I prefer to have the *Aligned and Sample All Layers* boxes checked.
The Aligned option refers to the relationship of the *Source Point and the starting Clone Point*. The Source Point is the exact point of location where the sampling will be taken from. This location may be on the same image or a different image. If the Aligned box is checked, the Source Point and the starting Clone Point will maintain a constant distance apart whereas when the Aligned box is unchecked, each time the cursor is released and restarted, the Source Point will be the initially selected point.

Cloning in Elements
By Jerry Koons

Step Three *(Continued)*

Each cloning task will be specific and you will need to know the differences between Aligned and Unaligned source points. Normally, the Aligned box can be checked but I suggest that you practice cloning both ways to fully understand the differences.

The *Sample All Layers* check box is normally checked on my computer. This option refers to sampling from only the active layer when Unchecked and sampling from all layers when Checked. Since I create a new blank layer onto which I clone, the Sample All Layers box must be checked.

Another important item on the option bar is the *brush size*. The size of the brush is very important and also the brush hardness. During the cloning process, it may be advantageous to change the brush size and/or the brush hardness. A hard brush will have very crisp defined edges while a soft brush will have soft feathered defined edges. Determine whether you want a hard or soft brush and adjust accordingly.

NOTE: It is common to change either the size or hardness of a brush and sometimes both, during the cloning process. Do not be afraid to change either or both and experiment. You can simply click the *Ctrl and Z keys* to undo or use the *Undo History* feature to go back one or more steps.

The *Opacity* of the brush is another important option that permits you to tailor the effect by reducing while cloning. The opacity can be changed at any time during the process to permit cloning some areas at a different opacity than others. A very good technique for certain cloning tasks is to set the opacity lower on purpose and clone several times over a specific area to build up gradually rather than all at once.

A final tip is to change the *source point* frequently to avoid creating *patterns* during cloning. Always look for these patterns and undo or clone over them to eliminate patterns that may appear on the final image. Unwanted patterns tend to "stand out" in the final image and indicate poor work habits and execution.

Step Four

Let's apply this information to several images.

Open an image that needs something removed like the baseball image shown on Page One.

Cloning in Elements
By Jerry Koons

Step Five

It would improve the image if the head and hand of several fans in the lower right hand corner were removed.

a) Create a new blank layer and make sure it is at the top of the layer stack.   Refer to the *Layers – The Basics* tutorial if you need help doing this task.

b) Press the *S key* to make the Clone (Rubber Stamp) Tool active.

c) Hold the *Alt key down* and select a *Source Point* on the grass in the lower left hand corner area, click the cursor once and release the Alt key.   Refer to the image below.
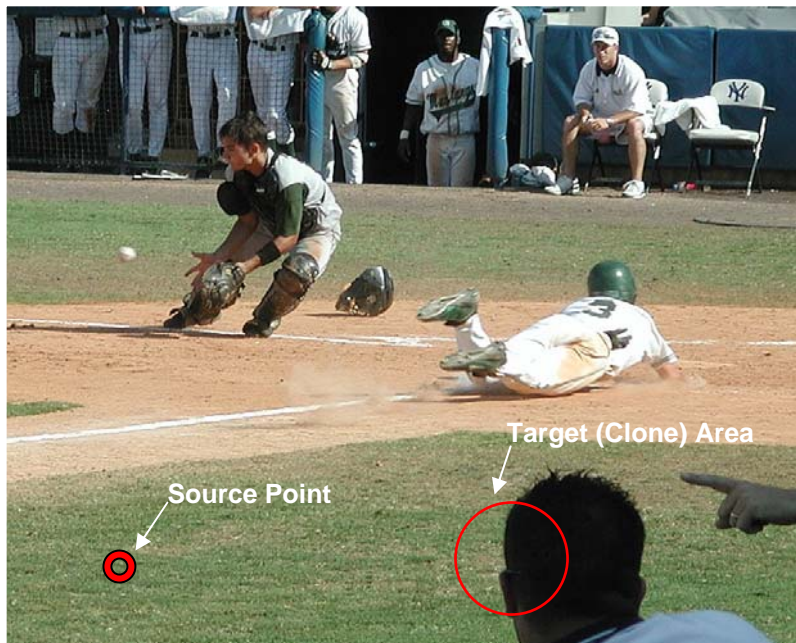
d) Move the cursor to the desired target point and click, hold and drag the mouse over the head to replace it with the grass.   If you go too far, you may pick up undesired areas.   Undo and use shorter strokes.   Don't be afraid of making mistakes. Everyone has to learn the cloning process by what works and what doesn't work.   The Undo feature by either using the Ctrl plus Z keys or the Undo History palette will be become one of your most used features while you master this process.

e) One of the "secrets" of cloning is to change the Source Point as needed to avoid creating patterns as well as keeping your source point at a location from which you want.   On this image, I would probably use at least three different source points to replace the head and hand with grass.

f) Repeat as necessary until the desired results have been achieved.

Keep in mind that sometimes it may be easier to clone over an area that you just messed up rather than undo and start again.
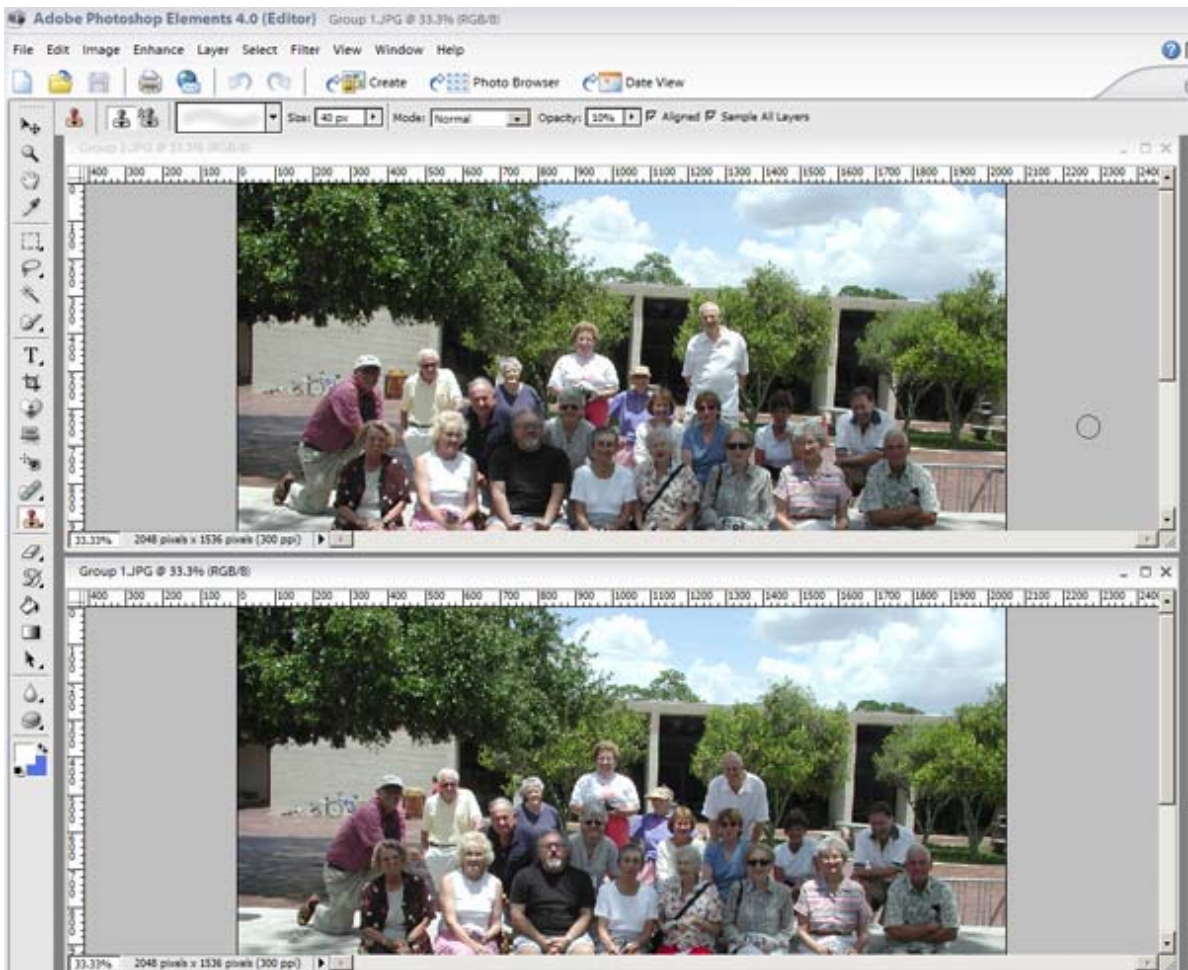
Cloning in Elements
By Jerry Koons

Step Six

The process is basically the same for adding objects to an image. Try this on your own. The following step may help, too.

Step Seven

When you take pictures of a group of people, invariably, one or more people have their eyes closed or a frown that makes the image undesirable. Well, the fix is relatively easy one you feel confident with the clone tool.

a) Select the "good" image and also an image or images with "good eyes" or a "good face" that you wish to clone onto the good image. Open the images.

b) On the Header Bar, click on *Window > Images > Tile* to place one image on top of the other so both can be viewed at the same time. Refer to the screen capture below.

Step Seven - **Continued**

c) Press the Ctrl and + keys to zoom until the desired image size is achieved for one of the images.

d) Move the image within the window until the desired image potion is viewable.

e) Click on *Window > Images > Match Zoom* to automatically zoom the other image to the same ratio.

f) You can either move the slider bars to have the second image "match" the location of the first image or click on Window > Images > Match Location to achieve a relatively close match.   An exact match is not necessary.   You simply need to be able to see both the source and the target.   Refer to the screen capture below.
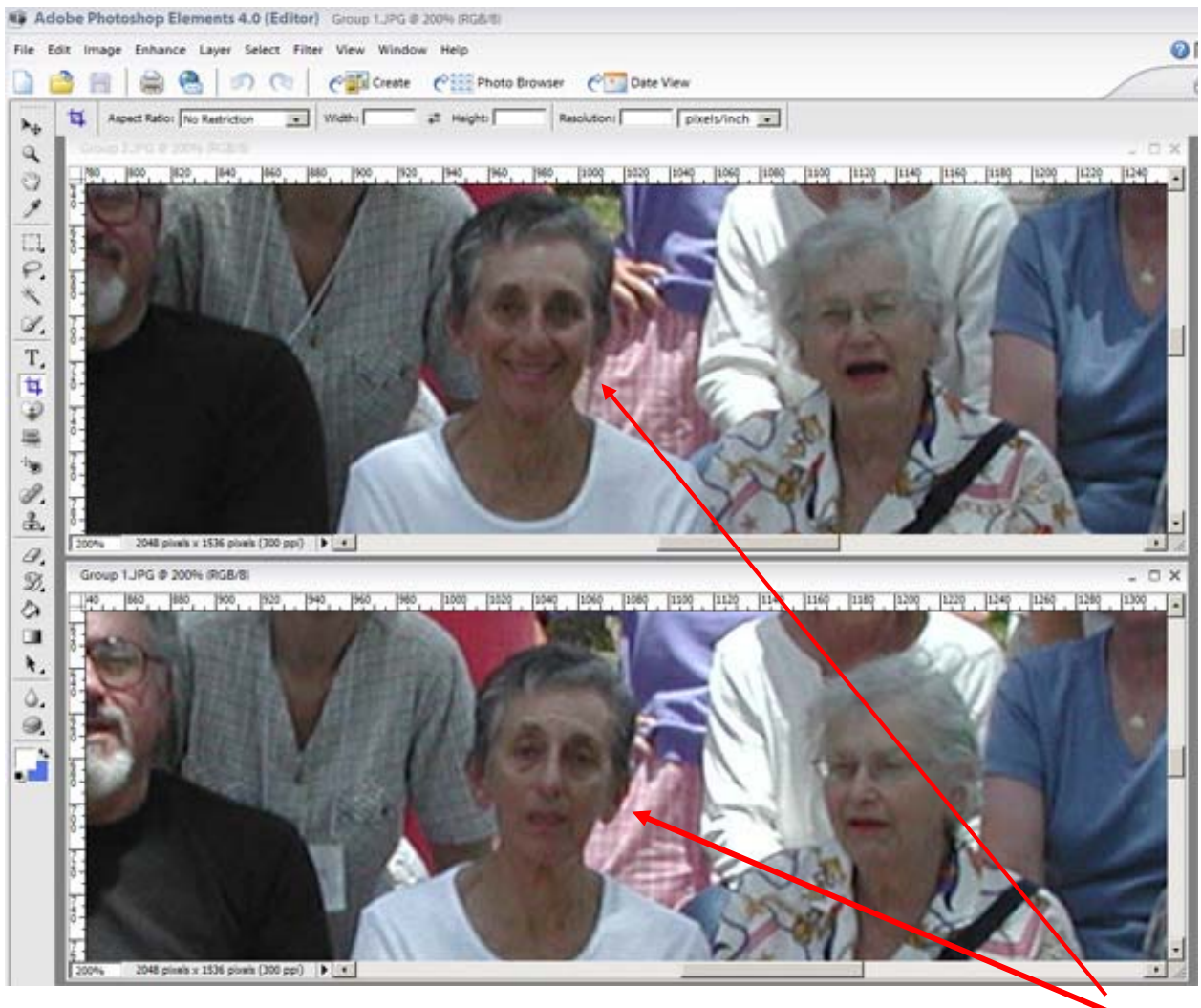

Note that the lower image is the "good" image and we want to clone the smiling face from the upper image onto the lower one.

Cloning in Elements
By Jerry Koons

Step Eight

a) Create a new blank layer on the target image (the one you are going to clone to)

b) Click on the upper image (Source) to make it active.

c) Press the *S key* to activate the *Clone Tool*.

d) Move the cursor to the center of the nose and press and hold the *Alt key* and click the mouse button to set the source point.

e) Click on the lower image to make it active.

f) Move the mouse to the lower image (target) and place the cursor on the center of the nose and click and drag to clone just the eyes, nose, mouth and chin from the upper image onto the lower one.   Refer to the image below.   NOTE that the face has been cloned onto the "good" image.

g) Close the upper image without saving and perform any additional required tasks on the "good" image before saving.
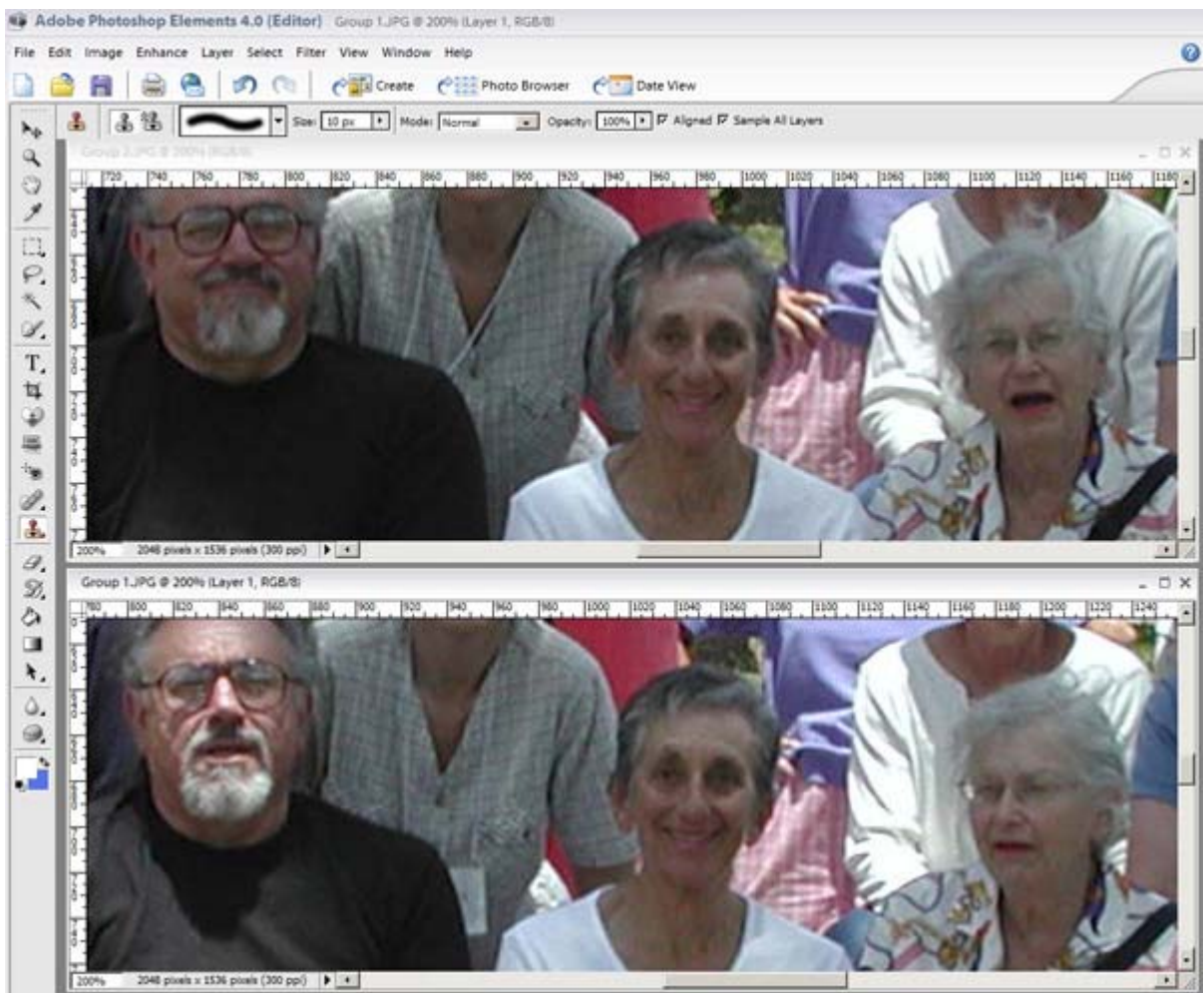
Cloning in Elements
By Jerry Koons

Step Nine

Another good use for the Clone Tool is removing those awful dust spots that sometimes occur on digital SLR cameras after changing lenses.

Of course, the better action plan is to clean the sensor filter but that is another topic and one that many people feel very uncomfortable doing themselves.

Below is an example of a dirty sensor on a digital SLR camera.

Cloning the spots in areas of solid color is very easy but it requires more work to clone the areas when they cover multiple colored areas, especially the areas with a lot of detail.

The process is the same.   Select the source point and clone over the target area using the appropriate brush size and opacity.

One of the critical items to remember is to identify all of the dust spots so they can be removed.   A missed dust spot on a beautiful print can drive you crazy when you know it's there or even worse, when someone else points it out to you.

My favorite method for identifying dust spots is to set the camera on *Manual,* set the exposure for the *Sunny Sixteen Rule* and manually set the focus to infinity and point the camera straight up or at a Northern sky and take a picture. It should be a cloudless sky because white fluffy clouds may mask the dirt spots.   Any dark areas on the image will be dust spots.   Identify how many as well as the size and location so you can remove them.

before

After