

Being Smart in Photoshop CS3

by Ron Carran (Feb. 29, 2008)

An Introduction to Smart Objects and Filters

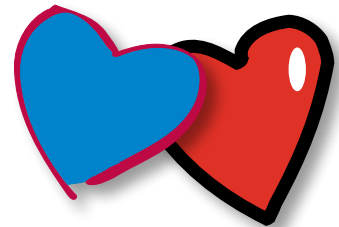
in Photoshop CS2, Adobe implemented a very powerful new feature called Smart Objects. Now, in CS3, they have augmented that with the addition of Smart Filters. The aim in both of these features is to allow you to edit and change content without modifying any pixels in the actual image. Smart Objects and Filters are referred to as non-destructive. They produce *instructions* that modify the image, but do not change the pixels, that is, until you flatten and save the image in some fixed image format, like JPG or TIFF.

One benefit of using Smart Objects is that they can be scaled as often as needed, up or down, without losing any resolution. Another is that they enable the use of Smart Filters.

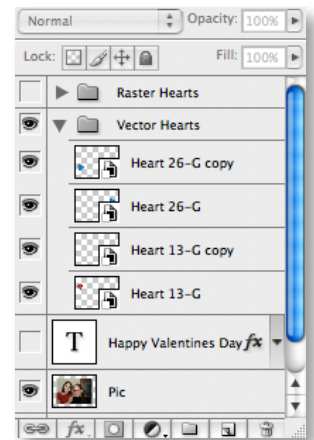
This paper is a brief introduction to Smart Objects. Their usage can get somewhat complicated, and a more in-depth explanation can be found in a number of publications, some of which I will enumerate at the end of the article.

Building a Composite Image Valentines Card with Smart Objects

Start by looking at this image, which was opened in Photoshop as a regular layer. We are going to add some Smart Objects to it, while keeping the back-



ground layer (the original picture), as a regular layer. We do that by placing other objects into this picture, using the **Place** command. Any time you *place* another picture (or vector drawing) into a Photoshop image, that object is brought in as a Smart Object. Once they are added to the picture as Smart Objects, they can be manipulated unlimited number of times and still look like they did when they were placed.



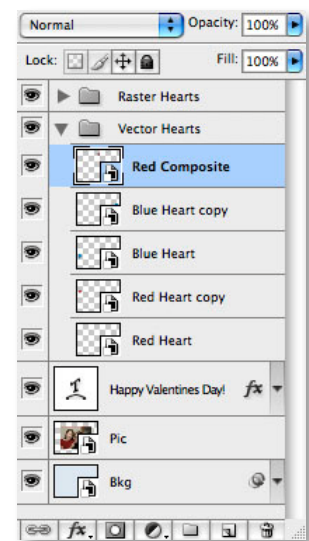
Try selecting one of these objects, by clicking on the gray part of the layer in the Layers Palette, then press Ctl-t/Cmd-t to select Free Transform on the object. Scale it to any size you want, then resize it. In fact, you can do this as often as you wish, and the object will remain at high resolution.

Now, select one of the heart object's layer and drag it down to the New Layer icon at the bottom of the layers palette. This will create a new smart object that is linked to the original. Scale and rotate it as you like (press Ctl-t /Cmd-t), and place it on the image. Do the same with the other color heart. If you change either of these objects (by double-clicking on the thumbnail and opening the original program, in this case, Illustrator), the change will be made to both of the objects.

You can change these vector layers into raster ones (pixel-based) objects by selecting the layer, right-clicking (Ctl-click) on it, and selecting **Rasterize Layer**. The reason you might want to do this is because you may want to use a filter on the layer that is not available on a vector object. We'll look at filters later. In any event, the rasterized smart objects behave similarly to the vector ones. You can duplicate them and they remain linked, and you can double-click on their thumbnails, and Photoshop will open up the object as a new image.

Regarding the editing of the Smart Object, it is important that you **Save** the object when you are done with the edit, and *do not* use **Save As**. This will break the link of the Smart Object to Photoshop. Also, if you open the original image in Photoshop (or Illustrator) and edit it outside of the image you are creating with Smart Objects, these changes will *not* be reflected in that image.

After a bit of fiddling with the heart objects, you may end up with something like this. This is not a finished product, but can illustrate some uses for Smart Objects.



Smart Filters

Smart Filters are filters that are applied to Smart Objects. Not all of Photoshop's filters are available for this use, but many are, and, when possible, using them can open up new creative possibilities.

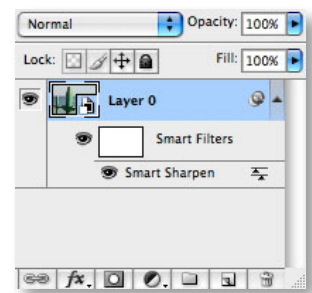
We can start with this next image (Playland.jpg) to illustrate some Smart Filter basics. It was converted from a raw file and brought into Photoshop. The first



thing we need to do is convert it to a Smart Object. This is easily done by right-clicking (Ctl-click) on the background layer and selecting Convert to Smart Object. Once the layer is a Smart Object, any filter we apply will be a Smart Filter.

Start by going to the filter menu and selecting Sharpen/Smart Sharpen. Set the values to *200%* for the **Amount**, *2* pixels for the **Radius** and *Lens Blur* for the **Remove** type. Then click **OK**. Notice that the filter now appears under the layer giving the impression that we can click on it and change it. Well, we can. Not only can we change the actual filter parameters, but we can also change the blending options of how the filter interacts with the layer.

Double-click on the name Smart Sharpen, and notice how the filter dialog comes back up, just like when you applied the filter at first. If you double-click on the little sliders icon next to the words Smart Sharpen, the Blending Option diaog comes up. Change the **Mode** to *Luminosity* to lessen the color shift side effect of the sharpening. We can also lower the opacity of the filters to lessen the effect.

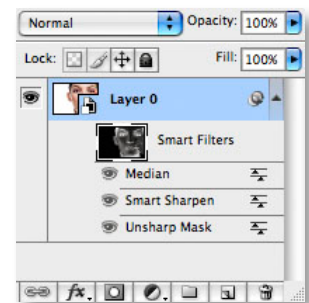


Selective Filtering

Now we are going to look at some selective filtering on another image. We'll use this stock portrait image (model.jpg). Although this picture is fairly sharp, we can do a little more to make it pop off the screen and demonstrate a masking technique that you can use with Smart Filters at the same time.



- We are going to apply three different filters to the image. We'll start with the Smart Sharpen filter with these settings: **Amount 250%**, **Radius 2 pixels**, **Remove Lens Blur**, **Blending Mode Luminosity** and **Opacity 40%**.
- Next we will add the Noise/Median filter to add a lot of blur to the face. Use these settings: **Radius 13 pixels**, **Blending Mode Normal** and **Opacity 34%**.
- Finally, add an Unsharp Mask filter with these settings: **Amount 50%**, **Radius 24 pixels**, **Threshold 0**, **Blending Mode Luminosity** and **Opacity 34%**.
- Notice that the filters are stacked in the order you added them, with the Unsharp Mask on top (applied last), then the Median, and lowest, the Smart Sharpen (applied first). We want to rearrange the order to change the effect. Drag the Unsharp Mask to the bottom of the list to cause it to be applied first.
- To finish the effect, we need to mask the filtering effect to only the darkest parts of the image. We can do that by applying a Luminance Mask. This mask is derived from the brightest parts of the image. First, shut off the Smart Filters by clicking on the eye by the name Smart Filters, then go to the Channels palette and Alt-click/Opt-click on the red channel thumbnail. This isolates the channel. The red channel has the most information for most light skin tones. Now Ctl-click/Cmd-click on the red channel's thumbnail, which will load the luminosity mask.



- Now, click on the RGB channel to return the image to color. Click on the mask thumbnail in the layers palette to make it active.
- Make black the background color (press D, then X), and click Ctl-back-space/cmd-del to fill the mask with black. If you now Alt-click/Cmd-click on the mask itself, you will see that it looks like a negative of the red channel. It will hold back the Smart Filter effects from the lightest parts of the image, and concentrate them to the darker parts.
- Click Ctl-D/Cmd-D to remove the selection. If you Shift-click on the mask, you can turn it off to see the difference.
- Of course, you can vary the settings and blending modes of each filter at any time you want, never touching any of the original pixels.



The last problem we have to deal with is the luminosity mask. Right now, we have set it to mask out everything that is light in the picture, so it is effectively masking out the median filter on those areas where we want to use it, on the light skin. So we need a separate mask to deal with that. Unfortunately, when we stack up more than one smart filter, they all must use one mask. We can work around that by using nested smart objects.

Nested Smart Objects

The concept is to embed one smart object in another, each one having its own mask. Here's how we'll do it.

- Rename Layer 0 to **Smart Object**, so we can identify it later.
- Click on the eye of the Median filter to turn it off. We will re-apply it soon.
- Select that layer and from the Layer menu and select **Smart Objects/Convert to Smart Object**. The new layer is labeled Smart Object. It is made up of the layer and filters from the image.
- Now, apply the Median filter to the new (nested) Smart Object. The filter will now affect the entire object. You can mask it's effect wherever you want using the new mask available to this layer.
- You can still change the other filters you applied by double-clicking the thumbnail of the new Smart Object, which will open the other Smart Object with the two sharpening filters.

This completes the work on this image.

References

To find out more, check these out.

Deke McClelland

Adobe Photoshop CS3 One-On-One

Publisher: O'Reilly
ISBN-10: 0596529759
ISBN-13: 978-0596529758

Ben Willmore

Adobe Photoshop CS3 Studio Techniques

Publisher: Adobe Press
ISBN-10: 0321510461
ISBN-13: 978-0321510464

Adobe Photoshop CS3: Up to Speed

Publisher: Peachpit Press
ISBN-10: 0321514297
ISBN-13: 978-0321514295

National Association of Photoshop Professionals (NAPP)

www.photoshopuser.com