

How often does a new software feature seem a little overstated, with its dramatic title and wild claims of hyper efficiency dwarfing the actual results it produces? Well some refreshingly well-named features have been added to the Adobe Creative Suite 2—Smart Objects and Smart Sharpen. One gives us greater flexibility to change our minds at the last minute; while the other takes a task that used to require three separate layers and two blending modes and delivers the same results in one simple dialogue. Between the two there should be some significant timesaving. David Harradine explains.



Prior to Smart Objects (left)
This flower has been reduced in size then later re-sized up.



Using Smart Objects (right)
This flower has also been reduced and later re-sized up—but as a Smart Object.

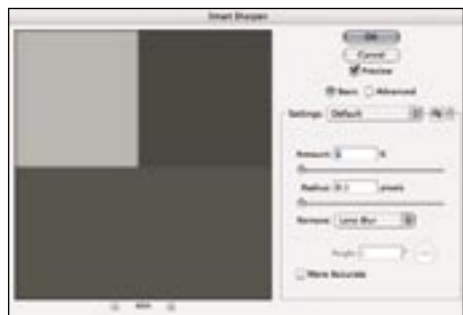
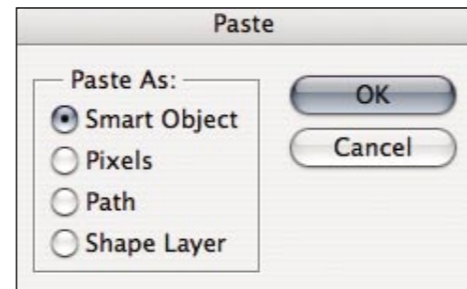


Paste as Smart Object (left)
Here the Illustrator graphic is pasted as a Smart Object.



Paste dialogue box (above)
Your options when pasting vector graphics into Photoshop.

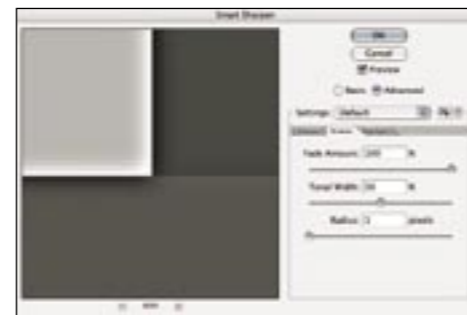
Automatic update (right)
When edited in Illustrator, the Photoshop version automatically updates.



Not sharpened (above)
Here the edges have not been sharpened at all.



Sharpen before the fade (above)
The sharpening halos have been applied, but no fade.



Applying the fade (above)
The fade is applied to the dark side of the halo or the shadows.

Smart Objects raster

Smart Objects allow us to place a piece of raster artwork into a document and then scale it up and down to our heart's content. This, of course, is something we've always been able to do—only in the past, every time we reduced the size of the object we also reduced its resolution. Then every time we subsequently increased its size, the object had to have its resolution artificially increased again, causing a loss of fine detail and sharp edges. Now when we have a separate object on a Photoshop layer and we haven't fully decided what size we want it to be, we can go to the layer flyout menu and select 'Group into Smart Object'. This will essentially make a copy of the layer and embed it in to the document. Now sure, the file size will increase slightly, but now you can reduce the size of the object to 10 percent of its original size and your object resolution will scale down accordingly. But, when you change your mind and decide to scale it back up again, there's no need to go looking for the original file or to rescan it, you simply scale it up and it will reference the embedded copy of the layer to restore the original resolution with out any quality loss.

What else can we do?

So now you have the general idea, lets see what else we can do with Smart Objects. Take a piece of vector artwork from Illustrator and copy and paste it in to Photoshop. (Note the new first option, Paste as Smart Object.) Placing your vector artwork as a Smart Object will bring a whole new level of flexibility to the table. Once the vector artwork is in place, you can double click on its layer any time you like. This will re-load the embedded copy in Illustrator, allowing you to change its size, shape or colour in full Illustrator vector mode. When you return to Photoshop, the placed vector Smart Object in Photoshop will automatically update from the resolution-independent vector original. In fact, if you simply drag and drop the Illustrator object into the Photoshop document, it will automatically become a Smart Object.

Smart Objects RAW

Now for my personal favourite—placing camera Raw files as Smart Objects. Firstly, you need to have a Photoshop document open—either a new blank one or one with content—to place the raw file into. Provided you process your camera Raw file at the same resolution as your waiting document, the placed camera Raw file will be scaled to fit the closest height or width. If you simply wanted to place a Raw file into Photoshop to work on alone, you would first prepare a blank document exactly the same size as your Raw file, then from Bridge select File > Place > In Photoshop. This will reveal the Camera Raw dialogue box where you can make tonal and colour adjustments to the pre-RGB Raw file. Once you are happy with it's appearance, select Open, and the processed RGB version of the Raw file will be placed into the waiting Photoshop document. Now the fun begins. In Photoshop, you are free to start making tonal and colour adjustments to the placed Raw file—ideally using adjustment layers and masks to localise your adjustments and keep them editable further down the track. Now lets pretend you reach a point where you wish you could go back to camera Raw and make a particular adjustment that you just can't achieve in Photoshop—such as some highlight recovery. Well, no problem. Just double click on your Smart Object layer and there you are—back in Camera Raw working on the original pre-RGB Raw file. When done, simply select Open again and your currently placed Raw file will be updated by the new version. At first, the benefits of this technique may not be so obvious—why go back to Camera Raw when you can make tonal and colour adjustments in Photoshop? Well, remember when you're working on the Raw file, you are working on the Raw sensor data from your digital camera, so your edits are the first edits the data has ever received. This ensures the highest quality data ends up in Photoshop and subsequently in your final output.

Smart Sharpening

The other feature of CS2 to earn the title of "Smart" is Smart Sharpening. Smart sharpening takes a time-honoured technique (involving multiple steps) and simplifies it into one dialogue box. The way sharpening works is to basically isolate any edges of contrast within a digital file and exaggerate that contrast; the net result being the illusion of a sharper image. Using Photoshop's Un-Sharp Mask filter (found under Filter > Sharpen > Un-Sharp Mask), you can regulate exactly how this increased edge contrast takes hold of your image. The Amount slider will increase the contrast; the Radius slider will increase the width of the edge effect—often referred to as the halo. And the Threshold slider will regulate how high the edge contrast must be before it becomes a candidate for any sharpening. With a lower threshold, many edges get sharpened, and with a higher threshold only the highest contrast edges get sharpened.

Smart sharpen:

Lighten & darken halos

Capitalising on the fact that your sharpening halos have both a light side and a dark side, a technique has developed over time where each of these sides can be independently faded up or down using blending modes Lighten and Darken. What you do is duplicate your background layer and apply your sharpening, then duplicate your sharpened layer, giving you two identical sharpened layers. Now change the blending modes to Lighten on one sharpened layer and Darken on the other. This will separate the light side of the halo to the lighten layer and the dark side to the darken layer. And finally, to refine your sharpening, you regulate the opacity of each sharpened layer accordingly.

Well if that was all a bit much for a final fine tune, you can now get the same results with Smart Sharpen in the one pass on the one layer. However, there are still benefits to keeping your sharpening on a separate layer until you have made your final decision. Smart Sharpen still has the amount and radius

sliders in the first tab and they still do the same as what they did in Un-Sharp Mask. Looking further down the list you will notice a drop down menu entitled Remove, which gives you the option to target a range of different styles of blur. The blur you choose determines the algorithm or mathematical formula Photoshop uses when applying the sharpening and addressing the edges. Unsharp Mask used the Gaussian Blur method, which is still available from this menu. However, the newer, more camera lens-like 'Lens Blur' is now also available, as is 'Motion Blur', which attempts to resolve camera shake by being dialled in at a certain angle. Lens Blur is often a good setting for photographic imagery. The last option on the front tab is More Accurate—an option you might think would be odd not to leave on, but often you don't want it checked, as it acts like a super low threshold, causing the subtlest detail to be more aggressively sharpened. This may be fine for a coastline or rock face, but not for a portrait or fashion shot, where you don't want to exaggerate fine detail in a subjects skin.

Smart sharpen:

Highlights & shadows

Okay, so back to the lighten and darken halo options. When you click Advanced, two new tabs appear—Highlights and Shadows. Under these tabs you can choose to fade dark side or fade light side of the halo technique. Simply increase the fade of the shadow tab to reduce the impact of the dark halo, or increase the fade of the highlight tab to reduce the impact of the light halo. Tonal width and radius attempt to further refine the sharpening in the light and dark sides of the halo, but these tend to be very subtle in their effect.

David Harradine is a photographer and trainer who regularly present training seminars on Photoshop, digital photography and colour management, throughout Australia and New Zealand. To check his latest event please see www.whack.com.au