



Creative photo retouching

writer Sean Ashcroft illustration Brand Nu

The camera never lies – but with image manipulation, anything is possible. Where are the limits?

As anyone who has ever met a celebrity in the flesh will know, the physical realities of the famous can be far removed from what you might have been led to expect.

I once saw a world-famous US songwriter and now aspiring actress at close quarters, and was shocked at her pockmarked complexion – not because she was unbelievably pockmarked, but because billboards and magazine covers had led me (and you) to believe her skin is lustrous, silken and perfect.

And there we have it: the pursuit of perfection is image retouching's reason for existence.

"It all comes down to advertising," says Chris Christodoulou, director of leading UK retouching house Saddington & Baynes (www.saddingtonbaynes.com). "Why do people spend so much time retouching images of women to look perfect when everyone knows they're not perfect? It's the same with products."

He continues: "It's because advertising works on a psychological and subliminal level; we're visual creatures, and they want to sell us the most aspirational view of that person or product. If you show someone something that's not very appealing they're not going to buy it, whether it's a car or a carton of juice."

Any discussions of retouching invariably touches on the cases involving celebrities, such as the recent controversy surrounding Kate Winslet and her *Vanity Fair* shoot, where the magazine denied the (almost unrecognizable) actress had been heavily retouched.

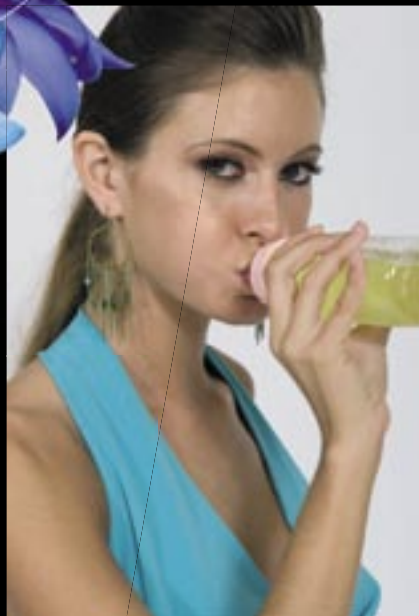
Yet the debate should be far broader than this, insist the experts.

"You can bet that Mona Lisa wasn't quite as attractive in real life," offers Jacob Nelson, of Sweden-based agency Forsman & Bodenfors (www.fb.se), while Christodoulou asks: "When was the last time you saw a pot-bellied Greek statue?"

If the essence of retouching has not moved on in 3,000 years, the tools have, and particularly so since the early 1990s.

Glenn Feron (www.glennferon.com) began retouching at a photo lab in the early 1970s, and still uses the same techniques today, only now his toolkit consists of Photoshop.

"I've had the good fortune to have worked with some veterans who were retouching in the 1930s and 1940s, with airbrushes, pencils, ink and water-colours, and using hand-held plastic masks to protect unwanted areas from being affected – just as selections and masks are now used in Photoshop."



Glenn Feron works on both people (above, right) and products (far right, top and bottom). He says the most common request is "for enhancing and smoothing skin, and removing facial wrinkles, bags under eyes, make-up enhancements, eyes, lashes, eyes shadow, and lip wrinkles". He adds: "I also do a lot of body reshaping, slimming, weight reduction, breast enhancement (women only so far, thankfully), blemishes, scars and marks, and fixing clothing creases."



perfect view of that box. Everything – watches, bottles of perfume, laptops – has imperfections that need to be removed."

In the public's consciousness, retouching of people is where the art form is most conspicuous, with models and celebrities routinely undergoing the airbrush treatment – but not always for the reasons you'd expect.

Model behaviour

"Some models look like they've just got out of bed, because they have," says Feron. "I've had magazines tell me, 'Make her look she came out of the bedroom, or we've no cover this month'."

And with celebrities, the retouching goes beyond vanity, and into branding. "Celebrities control how their appearance is presented to the public as a tool for their branding, as they always have done," says David Klinger (www.davidklinger.com). "We see more with our brains than with our eyes; we filter out details we consider to be unimportant or distractions. The camera, though, records surface appearances very accurately. With celebrities, blemishes and wrinkles distract the eye much more

Computer-based technologies mean that contemporary retouching is far quicker than the old analogue techniques – and it needs to be, because demand for retouching services has never been greater.

"The way images are perceived has evolved in recent decades," offers Sophie Caperan, project manager at US-based Sous Les Etoiles Studio (www.souslesetoiles.net). "Everything nowadays has to be – or seem – flawless. Thus, retouching in order to beautify and enhance a given image has become an essential part of most photo production. Models look amazing, but like anyone else they have facial hair, pimples and natural wrinkles."

But it's not just imperfections that fuel the market for retouching: changing style has a hand, too. A Saddington & Baynes speciality is vehicle retouching, which is a big growth area, says Christodoulou.

"The style of car photography means that most photographers no longer describe a car with natural light any more. They use a lot of flash, fill and reflector boards, so you get jobs comprising six or seven parts, with different lighting for the alloy wheels, sides, front, roof and so on. Because these components are digital they all register, and so you can blend them pretty quickly."

Technology has democratized



Sophie Caperan, project manager of Sous Les Etoiles Studio, says the most important thing to keep in mind when retouching is for things "to stay natural". She adds: "What we want people to feel when looking at one of our images is to think the picture has been taken when the model was looking at their best. That is what we see our role in retouching as being."

retouching too, believes Glenn Feron, making it both more accessible and more widespread.

"Digital retouching let the cat out of the bag," he says. "When I started, it was a closed industry and few knew about it. Now, anyone can take out red-eye and undesirable imperfections, and colour-correct images pretty simply. And with websites displaying so many 'before and afters', it's become an area of major interest, both for fun and profit."

The broad areas of demand for retouching are people and product shots.

"On products – a carton, say – we'll tidy up the edges and get rid of creases, bar-codes and product information you don't necessarily want," says Christodoulou. "You work toward a

> PRETTY AS A PICTURE?

When national governments become concerned at the effect digital retouching might be having on its young people, there can be little doubt that the issue has entered the public arena.

In Sweden, the Ministry of Health and Social Affairs was concerned that young Swedish men and women were perceiving heavily edited magazine cover models as a vision of physical perfection.

It commissioned Gothenburg-based agency Forsman & Bodenfors (www.fb.se) to show young people how images of models and celebrities are altered.

Jacob Nelson, who worked on the campaign – called Girlpower – explains: "The objective was to give young people the information they need to navigate a world increasingly fixated on appearance. The number of tricks used to achieve increasingly exaggerated ideals is growing. Many models have plastic surgery, and most are retouched, so they appear to have bigger breasts, smaller stomachs or fuller lips.

"In this campaign, we wanted to show how easy it is to change someone's appearance, and by doing so, make people realize that comparing their looks to those of people in magazines is meaningless."

The campaign was launched through the Girlpower website (tinyurl.com/9nu7o), and marketed through what was then Sweden's largest social networking community for young people, Lunarstorm.

The Girlpower campaign garnered widespread media attention in Sweden, says Nelson. "There was extensive coverage in newspapers and on TV and radio, and the campaign also became a chapter in a book used in Swedish schools."



"Blemishes and wrinkles distract the eye more in a photo than in real life"

in a photograph than in real life, and the removal of these distractions reveals the person behind the distractions."

There is an ethical element to retouching, as the case study on the Swedish government illustrates (see Girl Power box, above). Retouching is a form of misrepresentation, after all, however innocent it may be in most instances. There are inevitably grey areas, which can leave the retoucher questioning whether what they're being asked to do is morally right.

Sandra Fretelliere is retouching manager at Sous Les Etoiles Studio, and she describes an incident where she was left feeling "uncomfortable" while

working on an ad campaign for a health insurance company.

"The subject was a baby," she says, "and the art director asked us to remove a little puffiness under its eyes. This sounded wrong, and we suggested it was not natural to remove them.

"We firmly believe that retouchers are not only there to follow a brief, but also there to advise when something gives the image a wrong feeling."

Christodoulou once found himself at the centre of a media storm, after a retouching job for Ford.

"It was an ad showing loads of people lined up next to this new van, and [Ford] wanted to show the cultural

diversity of the company, so we comped in Sikhs, Caribbeans, Chinese and all sorts. It got a lot of media attention.

"When they ran the ad in Poland they took all of the ethnic people out, and dropped in Polish-looking people, because they're aren't that many ethnic minorities in Poland. You could say this is wrong, but you could also say that they're just correcting that image to match their markets."

He concludes: "The ethical aspects of retouching are always there, whether it's a shot of a woman or a car or a pack. Everyone is creating the perfect picture in order to sell things. What you have to ask is whether advertising is ethical." ✦



This image of children playing in a plaza was a campaign by Saddington Baynes for French children's clothing company Petit-Bateau, and most of the children were composited into the final version individually.

"Our techniques are very much about how you combine multiple elements and how you balance them out tonally and colour-wise so they all blend together," says director Chris Christodoulou. "We do most of our work now in Photoshop, but we still use Fusion, which is primarily used for 3D, and we still use one of our old Barco systems, because it's got a very intricate and controllable warping tool, which is not as destructive to the pixels as Photoshop's Warp."

> CAREER PROSPECTS

If there's one boom area in digital design, it's image retouching - partly because digital imaging technology is now the industry standard.

"Photographers shoot more than they used to with film," says Chris Christodoulou, director of UK retouching agency Saddington & Baynes (www.saddingtonbaynes.com). "Since digital photography took hold a few years ago, we get hard disks laden with images, and the number of images per composition is far higher than it used to be. We're getting more work to do as a result."

Christodoulou says that most of those interested in a career in retouching come from a photographic background, and that there are all kinds of openings for them.

"You've got companies like ours who look to train new people, you've got retouching facilities embedded in agencies, and you've got individual retouchers who work for a photographer or for a photo library."

He says that photographers are well placed to retouch, because "they have the ability to look at a two-dimensional photo and see it three dimensionally".

He adds: "They can look into a picture and understand exactly how light and shadows should fall, and what the perspective should be. These are the day-to-day things you need for retouching. It doesn't matter how much of a whizz you are on Photoshop's tools - if you haven't got a photographic eye then your retouching will never look photographically good."

Sophie Caperan, project manager at US agency Sous Les Etoiles Studio (www.souslestoiles.net) is

also upbeat about career prospects in retouching.

"The opportunities are endless, because postproduction keeps expanding, and when you add CG to the mix - which there is more and more need for - it broadens the spectrum of opportunities even further."

Caperan adds that retouchers are also increasingly involved in projects from their earlier stages, rather than being drafted in at the end. "There is a whole part of retouching that now blurs the line with art direction, via composition of an original image.

"Since the digital era began, more and more photographers are experimenting with creating images based not only on what they caught in the camera, but also on what original treatment will be given to the image in postproduction."

> RETOUCHING TECHNIQUES

The basic techniques involved in top-end retouching can sound straightforward. The reality, however, is that at the top end it takes years to hone one's craft to the standards expected. Here, two masters of retouching - Glenn Feron and David Kliger - discuss their approach to some common scenarios.

PRODUCTS

In product retouching, says Glenn Feron, the jobs tend to have "hard or sharp edges, corners, or precise ovals and ellipses that require the retoucher to be exact."

He adds: "You need to have a good working knowledge of specific tools in Photoshop, such as the Marquee Selection tools, but the most important are the Pen tools, which give you precise edges and corners.

"Direct selection and path selection to adjust selections is essential for isolating the product."

"The Quick Selection tool [introduced in Photoshop CS3] is great, and can be refined with the Refine Edge (Select > Refine Edge) feature. It's a really great tool."

MULTIPLE EXPOSURES

Cameras can't capture multiple exposures in a single shot, so retouchers are often asked to composite multiple shots so that all image elements are perfectly exposed.

"Each exposure of the product will be on a separate layer," says Kliger. "I align these new

layers perfectly by setting the blend mode of the new exposure layer to Difference. This layer will now have a solid black background, with dramatic areas of white and other bright colours that show where the layer is out of alignment.

"Next, select Transform [Edit > Transform] and proportionally scale the layer as needed until it becomes pure black, indicating it is in perfect alignment."

SILK PURSES FROM SOW'S EARS

In most instances, images received by retouchers are of the highest quality, but this is not always the case. This doesn't stop them producing arresting images, though.

"When I'm not happy with results from using Unsharp Mask, I often use the High Pass [Filter > Other > High Pass] to enhance image texture and edges," says Kliger. "You select the area that needs sharpening, place it in a separate layer, select High Pass, and use a radius of around ten pixels. You can then give the layer a blend mode of either Overlay, Soft Light or Hard Light, depending upon how much contrast is needed."

Feron says that his first step is usually to try Reduce Noise or Despeckle [Filters > Noise]. "They usually give a good start, but if there are still grain or pixel problems, I clone areas and airbrush them to catch all the imperfections. That's where being an artist comes in handy, because you know how to render what's not

there and how to make it look as realistic as possible."

SKIN

"Smoothing skin involves a combination of Filters if the entire face is grainy or spotted or, if not, then cloning, airbrushing or using the Healing or Patch tools to hit specific areas and blend them with the rest of the face or other skin areas," explains Feron. "The Dodge and Burn tools can be used on highlights and shadows, to help counter the effect of shiny, smooth skin."

He adds: "Using a Wacom pen and tablet is the fastest way to get the best results with those tools. No one should be without, as the fluid nature of its lines can't be achieved with a mouse. Using a mouse is like drawing with a brick on a string."

This composite image of a lacrosse player (below, centre) was a Saddington & Baynes ad for Nike, comprising a stylistically coloured final image crafted from four parent images.



> PHOTO RETOUCHING STEP BY STEP

Softmask Fundamentals

By David Kliger, www.davidkliger.com

A softmask is exactly what its name would suggest: a mask with a soft edge. Its softness is what makes it unique compared to clipping paths. Softmasks and clipping paths each have their own unique world of techniques. When used together, we can create masks for any picture element we desire.

With these instructions, I will present a set of steps for creating a softmask for a figure with a soft edge whose character must be retained when separated from its background and placed on a new background.

Before we begin: How to hold our digital brush

I find the secret to seamless skin retouching is the ability to hold the Wacom pen with as light a touch as possible. Here, I use a grip barely light enough to hold the pen; any lighter and it would fall out of my hands. I push my hand around the tablet with my arm so I can access the light touch when I need it.

We'll be using this touch throughout this exercise. I find it gives me the maximum range of control and expression from the tools I can control with the Wacom pen – without bothering to change brush settings, we can go from the faintest to the most dense mark.

A simple layer mask: black conceals, white reveals

To get us started with the basic concepts of softmasks, we'll start with the most basic layer mask.

1. With our example file, double-click on the Background layer. Hit return so it becomes 'Layer 0'.

2. Choose **Layer > Layer Mask > Reveal All**. You have now created your first Layer Mask. Congratulations!

Repeat after me: Black Conceals, White Reveals. In the world of softmasks, anywhere in the mask that is white will allow the image to show. Anywhere that is black will hide the image. Shades of grey will ghost the image.

3. To test this out, let's choose a soft brush tool that will allow us to control its opacity with our pen pressure. Make sure black is our foreground colour.

In our Layers palette, click once on the icon for the layer mask so it becomes highlighted with a thicker edge.

Now, wherever we paint with black, the image will disappear.

4. **Alt/Opt + click** on our layer mask so we can look at it directly (instead of just

its results). Notice the black areas that made the mask invisible and its varying soft edge. We control the character of this soft edge with our world of image editing tools and techniques. Here are the steps I use to create my softmasks.

Our first hair mask

Here, we'll use our channels to help us create a mask for our model's hair that builds contrast while retaining its dynamic lost-and-found edge.

My technique has four overall steps:

- **Image > Calculations**
- **Image > Adjustments > Levels**
- **Burn & Dodge**
- **Test and Tweak**

1. Image > Calculations...

Review each channel in the Channels palette. Click once on the Red channel. Notice it looks like a black-and-white negative.

As this image is saved in RGB colour mode, all colours are created by mixing shades of red, green and blue. Here in the Red channel, wherever there is white, the primary colour red is allowed to show through. Wherever there is black, no red is allowed in the image. Lighter shades of grey allow relatively more red through than darker shades of grey.

As an experiment, paint with black somewhere in the Red channel then click on the RGB channel to notice the results. We created a cyan brush mark, red's complement. Press **Cmd/Ctrl + Z** to undo our little test.

What we're learning is that each channel is actually a softmask controlling the mixture of red, green and blue for each pixel in our image.

As we want to make a softmask for her hair, a great place to begin is by viewing the three softmasks we already have and evaluating which one is closest to what we want to create.

We're looking for a white background and black hair, or vice-versa. Looking



Our initial image.



The Red channel gives us the most contrast between her hair and the background.



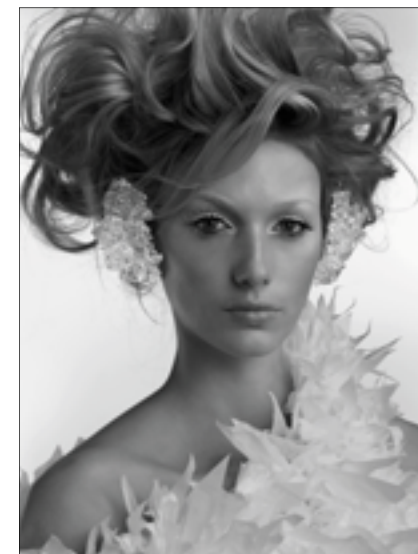
Choose **Image > Calculations**. We will use Calculations to create a new softmask by combining two channel sources with a blend mode. Select Red as our channel for both

at each channel individually, we notice the Red channel comes closest as she has blonde hair.

Source 1 and Source 2, as we just learned this is our best starting point.

Select **Multiply** as our blend mode. Next, toggle the preview check box off and then on so we don't have to help Photoshop give us our image preview instantly.

Feel free to experiment by choosing Red and then Green for Source 2 to notice the different results. Then make it Red again and hit return to create a new alpha channel with greatly increased contrast between her hair and the background.



Using **Calculations**, we use the Red Channel and **Multiply** to make an Alpha Channel with greatly increased contrast between her hair and the background.

2. Image > Adjustments > Levels...

Go to the Channels palette and click on our new alpha channel. Zoom-in on a detail of her hair edge that gives us an enlarged representative sample.

Choose **Image > Adjustments > Levels**.

We'll use this dialog box to make her hair more black and the background more white. The trick is darkening the faint hairs while making the background white at the same time.

Slowly move the grey triangle to the right toward the white triangle while paying close attention to her hair and the background.

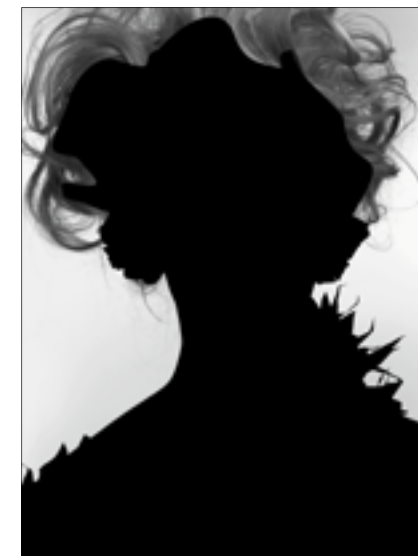
We want her hairs to get darker. Also, we want the background to remain near white and not fill with black, as this will force us to re-create our mask.

We quickly notice that moving the grey slider too far plugs the background. Pull back toward the left until the results are enhanced as much as this tool will allow.

Move the white slider to the right to make the background close to white without letting your hairs break up and fade to white.

You might need to readjust the relationship between the grey and white

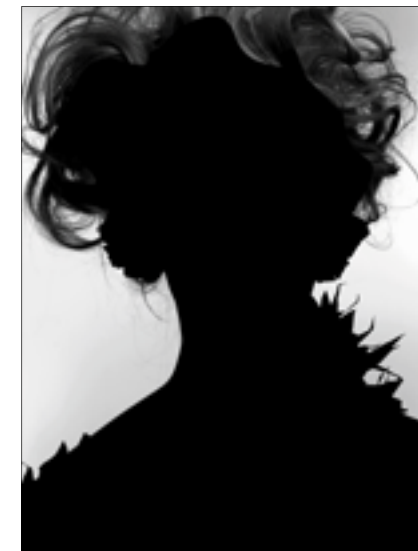
sliders until you have a near-white background while retaining crisp hairs. Finally, move the black slider slightly toward the right to make the dark-grey hairs black. Don't overdo it or our mask will plug the background.



We select **Levels** and move the grey slider to the right and the white slider to the left to darken the flyaway's and make the background near-white. Finally, we nudge the black slider to the right slightly.

Click on RGB to view the whole image. Stay zoomed-in on her hair. Notice we can see the background through her hair around the edge.

Using the Pen tool, make a simple outline within her head being careful not to include any of these background areas.



We make a quick Bézier curve with the Pen Tool define areas of pure black within our mask.



We use the **Burn Tool** to further darken her hair without letting the background plug.

Then select our alpha channel again, turn our path into a selection and fill it with black. Next, we'll use the Burn and Dodge tools to finish off our mask. With crisp hairs and a near-white background, we use Burn and Dodge to make the background pure white while retaining crisp flyaways.

3: Burn & Dodge

Choose the Burn tool. Set Range to Shadows, Exposure to 100%. We'll give ourselves a nice, big, soft brush. Go to the Brushes palette and ensure Exposure is controlled by pen pressure.

Using a very light touch, drag the Burn Tool over her hair being very careful to darken her hair without plugging the background. We work our way around her head. Drag over the same area several times as needed. As with the levels tool, be careful not to overdo it. Use **Edit > Undo** or the History palette to step back if you go too far.

Still using the Burn tool, we make our brush size smaller and continue

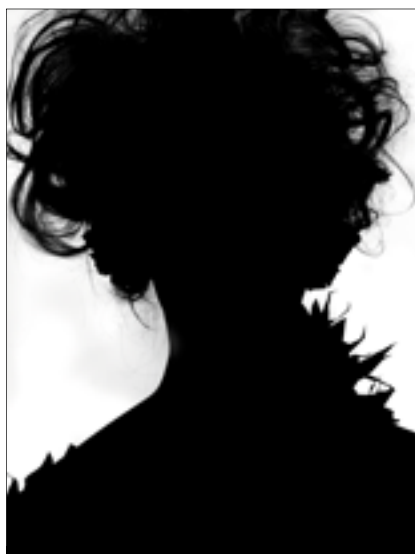
lightly dragging over the hairs that need more separation. Again, be careful not to plug the background.

We continue with this process until we reach a point of diminishing returns.

We then repeat the same process with the Dodge tool with Range set to Highlights, Exposure set to 100%, a big, soft brush with Exposure controlled by pen pressure.

Lightly drag over her hair. This time, we are making the background lighter while being careful not to lose our hair definition.

After our large brush gives us diminishing returns, make the brush size smaller and continue.



We use to Dodge Tool to make the background white while retaining her hair's edge.

Once we have a white halo around a dark head, we again use the Pen tool to make a simple outline within our white halo and around the figure as a whole, turn it into a selection, Select Inverse for the background and fill our selection with white.

The rest of the figure has a hard edge, so we complete our mask with the Pen tool. Outline the figure and save it with the name 'Silo'.

Turn our new Silo path into a selection and use it to fill the interior of the figure within our alpha channel with black and the background with white.

At this point, the quality level of our mask is about 95%. We need to test it before a new background finishes it.

With our new mask highlighted, we click on the dotted circle at the bottom of the Channels palette to turn it into a selection.

We then go to our Layers palette. Duplicate the background layer by dragging it on the page icon at the bottom of the Layers palette.

Click on the Add Layer Mask icon at the bottom of the Layers palette.

4: Test and tweak.

The extent of adjustments we need to perform to our mask depends upon the background colour and texture we place behind the figure.

To demonstrate, we create a Solid Color adjustment layer filled with light grey below our figure layer, and then try different colours and tones to see the difference.

Here are some typical adjustments we can perform to perfect our mask in relation to our chosen background.

Zoom in on our hair mask. Invariably, there will be specks of the old background showing through and bumpy hair edges that should be straight.

Use the Burn tool to remove background specks and tighten our mask. Here, use a low exposure setting of around 30% for greater control and delicacy. Be careful not to over-tighten.

After cleaning up the specks, toggle between your hair mask and the original image. Notice the difference between the original's hair edge and the mask's hair edge. Most likely, the mask will be a little soft. Make it crisp with our one-pixel brush by brushing in-and-



Our mask test shows us we're close. We just need to complete some broken hairs and tighten our mask in certain areas.



out along the edge.

Complete broken hairs with the brush tool. Use a size of one pixel, a fairly hard edge, and Flow Jitter controlled by pen pressure.

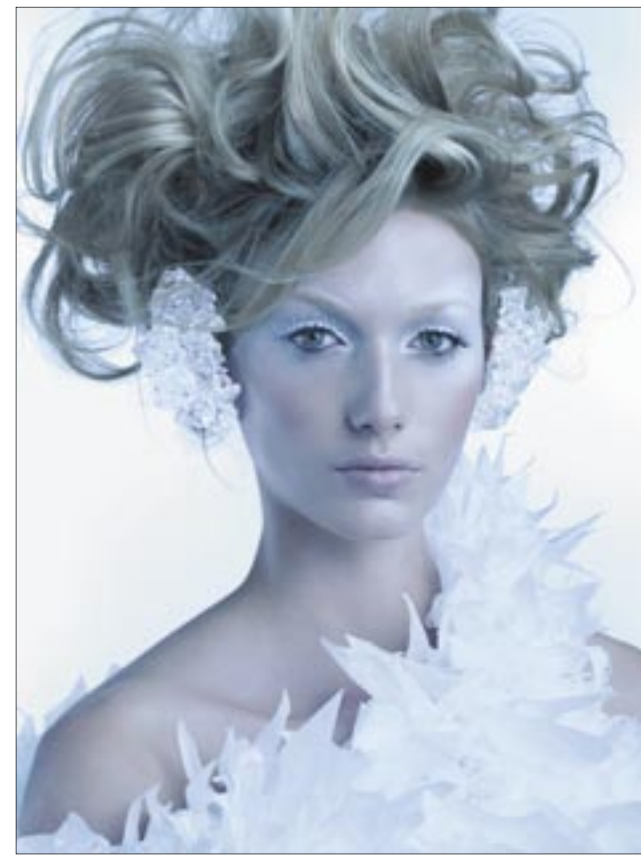
Use the Blur tool delicately with a small brush to create smooth transitions between light and dark along the edge if needed. Be careful not to allow your mask to turn to mush.

Fade the flyaways with a big, soft brush using the colour black and an opacity of about 30%.



Our image, hair mask applied with no background.

Text used by permission of David Kliger. Images courtesy of Gioia Magazine.



Our initial image

The extent of mask tweaking we need to perform depends upon the background we choose.



Text used by permission of David Kliger. Images courtesy of Gioia Magazine.



Our final image

I choose to integrate her with an icy background and place an icy texture behind her. Next, I integrate the image by adding blue and green to icy ear coverings, correcting her hair toward blue, placing an icy texture layer above her hair with an opacity of 4% and the Overlay blend mode, and finally remove blue tone along the hair's edge by creating a Selective Color adjustment layer, choosing Blues and adding 39% yellow.

With this technique we can select any soft-edge shape from any background, and integrate it with any new environment of our choosing.

Welcome to your new world of softmasking.