Fluid Mask 3

Using masks isn't hard; the trick is creating a good one in the firstplace.Buildingaperfect mask by hand is time consuming and tedious. Third-party tools can do very sophisticated masking with fewer clicks of the mouse and strokes of the stylus, saving hours of work on a single photograph.

Photoshop comes with a handful of masking tools, including lassoes, magic wands, and color selections. I've reviewed Asiva Select and Mask Pro 3 (online at http://photo-repair.com/dr1.htm) that each has its own bags of tricks for helping you create masks. What does Fluid Mask offer that the aforementioned tools don't?

Fluid Mask runs as a standalone program as well as a Photoshop plug-in, making it particularly useful to non-Photoshop folk. It's especially good at dealing with ambiguous and messy boundaries between regions, a common situation in badly faded and damaged photographs. Fluid Mask is a complicated and somewhat novel tool, and you are not going to master it quickly. I recommend watching all the online tutorials Vertus has provided for Fluid Mask Versions 2 and 3. They'll do a really good job of helping you understand this new approach to masking.

Fluid Mask divides a photograph into regions called objects — contiguous areas of the photograph that have similar tone, color, and texture characteristics (Figure 3-6). A photograph parsed by Fluid Mask looks a lot like a paint-by-number picture. Fluid Mask masks a photograph, object by object. You can customize the masking criteria for individual objects or

Fig. 3-6   Fluid Mask dissects a photograph into objects bounded by edges (bright blue). Each object can have its own masking and blending criteria, so you can control the selection process locally as well as for the photograph overall.

groups of them. Part of your photograph might demand a soft, fuzzy mask defi ned by a very low-contrast edge while another part needs to be controlled by contrasty, hard edges. When the same colors or tones appear in both foregrounds and backgrounds, it's hard to use global settings and tools to get the selection right. Fluid Mask lets you localize those choices so that, for example, selecting someone's soft white shirt won't also select white fluffy   clouds.

Basically it's a four-step process:

1. Use the Edge Finding function to divide the photograph into objects.
2. Use the Keep (green) and Delete (red) brushes to assign those objects to the foreground or background masks.
3. Definea   "blending"mask(blueregion)thatseparatestheforegroundand background masks.
4. Use local patch controls to improve the results wherever the global settings don't produce an ideal mask.

There are many adjustments you can make to optimize the results at each

stage, so you'll findyourselftryingoutdifferentsettingsandbacktrackingalot.Fortunately,Fluid Mask has an unlimited number of undo moves, and you can save your " project " at any point and come back to it later.

This sample photograph (the same one I used in my review of Mask Pro 3, now online) is extremely difficulttomask.Thedetailsofthehairareverycomplex,andthere'sagreatdealof" noise"fromthemyriadcracksincreases,dustspecks,andfadedspots.

FirstIusedthedefaultsettingstodivvyupthephotographintoobjects.Thegoalistofi   ndmost of the important edges in the photograph automatically but not create so many objects that they'll be hard to work with. Don't worry about doing a perfect job; you can fi x it up later. Figure3-6showsthe edge-finding results.

Next, I assigned the objects to foreground and background masks by painting over those objects with the local keep and delete brushes. If the areas you're trying to keep and delete are strongly differentiated, a high brush strength setting works well; for a photograph like this, leaving it at zero is better.

The thick blue line between the red and green masks is the all-important blending mask I painted in with the Blend Exact brush to cover all the wispy hair. This is where Fluid Mask will work its magic. The cutout preview shows that the mask isn't perfect, but considering the photo I started with, it's amazing (Figure3-7   ). Now it's time for local fine-tuningviapatches.

I use the Patch tool to create a small region within which I can custom-tune the blending settings. The yellow-bounded area is the patch. To get a better cutout I moved the Intelligent Blending slider toward the Smart setting, which produced a less blurry selection. I used the color workspace palette to assign individual colors and ranges of colors to the keep, delete, and blend masks, giving Fluid Mask even more information about just what parts of the image
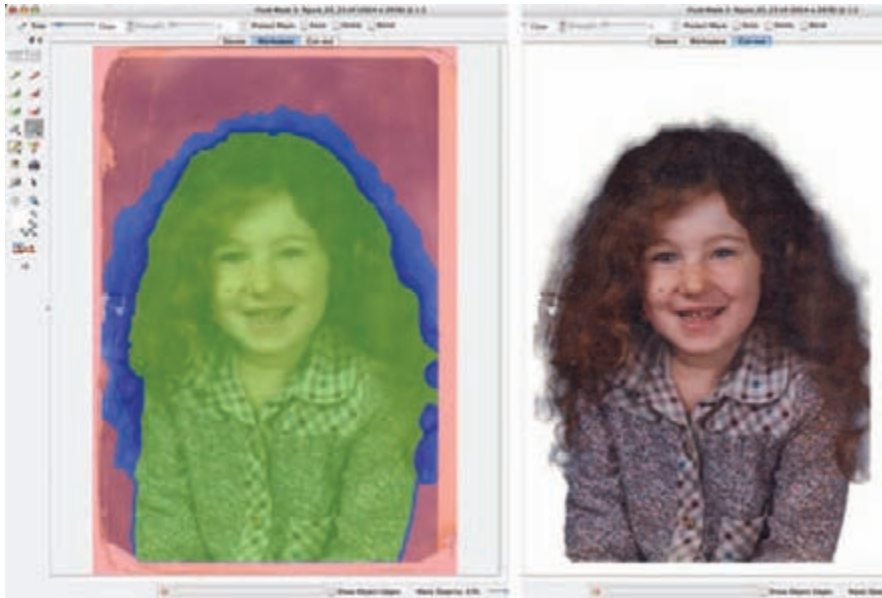
Fig. 3-7 Fluid Mask's "exact" brushes touch up foreground and background selections and define the blending region along the boundaries, where automatic edge detection doesn't do a good job. This makes the automatic cutout much better.

I wanted preserved (Figure 3-8). The strands of hair are now more clearly delineated within the patch, but the selection outside the patch hasn't changed. It's this combination of global controls and local correction that makes Fluid Mask so flexible.

By the way, avoid the Complex Hair Blending Patch Property. This will be an amazing tool when the programmers get the bugs worked out of it, but for me, more often than not, the cutout operation hung, sometimes forcing me to shut down Fluid Mask and losing any unsaved work.

Fluid Mask's impressive capabilities come at a price (and I don't just mean dollars). Fluid Mask is a phenomenal resource hog when you're working on large files. Merely finding the object edges of a 10-megapixel, 16-bit color image at 1:1 resolution took over a minute and consumed a gigabyte of RAM. The brush tool used to select a representative sample of "keep" and "delete" objects was noticeably sluggish on my fairly powerful MacBook Pro, and rendering a sample mask from that took another few minutes. But—and this is what's important—the program makes masks that are nearly perfect, even without any local refinements or patch controls. Although I spent most of my time waiting for Fluid Mask to catch up, it produced a serviceable mask in a small fraction of the time it would have taken me using the Photoshop tools.
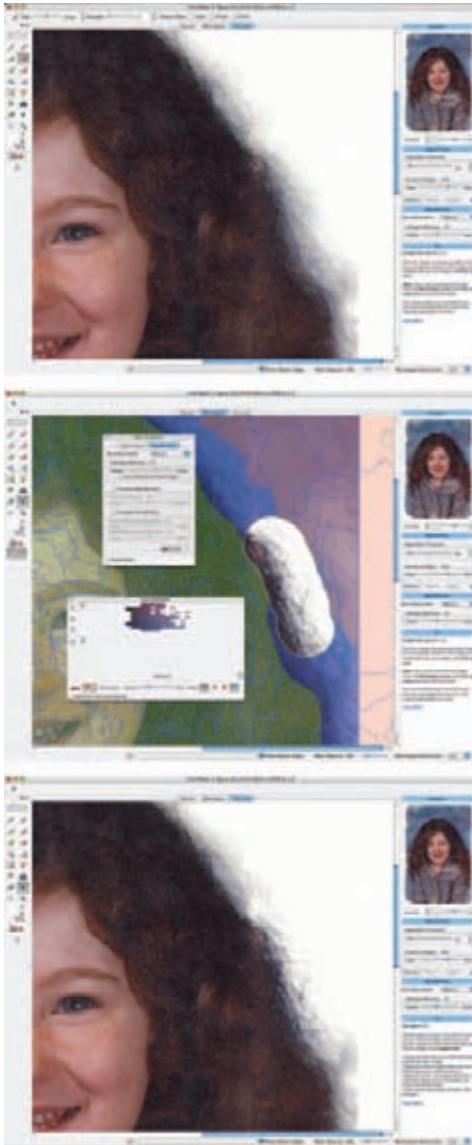
Fig. 3-8 Patches fine-tune Fluid Mask's selections. The upper figure shows a portion of the hair where the background is bleeding through. In the middle figure I've applied a patch to that area and used the patch properties and color selection tools to discriminate the hair from the background. The bottom figure shows Fluid Mask applying those adjustments to the region within the patch and nowhere else.

Noise Reduction

I find myself making increasing use of noise reduction tools in my restoration work. They are valuable in several ways. The first and most obvious way is that restoring faded photographs involves substantial increases in contrast, and that also brings out grain, dust and dirt, paper texture, and any other nonuniformities. That visual noise has to be suppressed in the finished restoration to produce acceptable results.

A second, less obvious reason is that a little bit of noise reduction in combination with sharpening does a lot to bring out the detail in a photograph without also emphasizing its flaws. See Chapter 10, "Beautification," for more on that subject.

The third and most nonobvious reason is that clever use of noise reduction tools, especially if they are over-applied, will strongly suppress both noise and fine image detail but leave visible the gross damage like cracks and crazing. That real detail suppression makes it much easier to use filters and other selection tools to construct masks for use in damage correction, as described in Chapter 7.

In restoration work, the noise you're trying to suppress can be comparable in strength to the image detail you're trying to restore. For that reason sophisticated tools work best. Not only should the software have very smart noise suppression algorithms, it should give you plenty of control over how they get applied.

For this type of work, there doesn't seem to be one ideal program out there. In fact, I find myself using several in different situations (Figure 3-9). They all seem to have their merits, so rather than recommend just one I've provided brief summaries of my favorites and told you what I especially like about each one. They all have trial versions, so you can play with them a bit yourself and decide which ones are worth investing in.

Fig. 3-9 The most important difference between noise reduction programs is in the "knobs" they give you for controlling the way the noise is reduced. Noiseware and Noise Ninja present very different answers to that question. Noiseware (upper) has so many controls that even this expanded view of the left-hand panels shows only half of them. Noise Ninja's simple set (lower) all fit in under the preview window on the right.

All these programs work considerably better than the Reduce Noise filter in Photoshop. I don't find that filter satisfactory for the uses to which I put noise reduction in this book, because it lacks sufficient degrees of control and it isn't nearly aggressive enough about attacking noise while preserving detail.