Travel Mattes:
Blurring a Face to Protect the Innocent

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[This article was first published in the July, 2004, edition of "Larry's FCP Newsletter."]

I was doing some editing last week for a client that needed to cover a person's face for the camera.... Well, actually, since he was running around with a few too few clothes on, it wasn't his face we were covering, but you get the idea.

True, we could have just put a black box over the unmentionables. But, the producer didn't like black. Instead, he wanted to use a floating blurred image of what we were concealing.

This situation proved to be a perfect opportunity to use a key-framed, traveling matte, and I thought you'd be interested in how this technique works.

A traveling matte is the only effect in FCP that requires three layers of video -- all the rest can be done using two layers. You set a traveling matte up this way:

v1: the image that goes on the background
v2: the image that cuts the hole into the background
v3: the image that goes into the hole

To help us in this exercise, we have obtained the services of a particularly dangerous felon -- a two-month old Golden Retriever puppy named Ginger.
1) Let's say you want to mask her eyes, so that no one will recognize her. To do that, take the puppy's video and put on it v1.

2) Go to the Generator menu (the letter "A" in the lower right corner of the Viewer) and select Shapes > Oval.
3) Put your Playhead in the middle of the clip you want to mask, in our case, it's called, "Puppy 3," then drag the oval mask from the Viewer to the Superimpose overlay in the Canvas.

4) The advantage of using the superimpose overlay is that the Oval will be automatically timed to match the length of the clip below it and dropped into the Timeline on v2. This is much faster than dragging it down from the Viewer to the Canvas. The location of the Playhead determines which clip the oval will be superimposed over.

5) Next, put the video that goes into the oval on v3. I'll give you two examples: 1) Black, 2) a blurred version of the dog's eyes. You can easily invent other ideas to use for your videos.

6) Go to the Generator menu, again, and select Matte > Color. By default it shows up as a 50% gray.

7) Click the Controls tab at the top of the Viewer, then click the gray color chip, and set the color to black.

8) Change the patch panel so that V1 from the Viewer (the left patch) connects to V2 of the Timeline (the right patch) by dragging the left V1 up.
9) Click the Video tab at the top of the Viewer, and drag the color clip onto the Superimpose overlay in the Canvas. Again, as long has you haven't moved the Playhead, the color clip will be trimmed to match the other two clips and loaded into v3. The Patch Panel determines which track the clip is supered above. For instance, here the Patch was set to v2, so the clip is moved to v3.

10) Control-click the color clip on v3 and set the composite mode to Travel Matte - Luma.
11) Poof! Instant black oval over our felon's face -- or, well, at least over the center of the screen. Why use Travel Matte - Luma? Because, while Final Cut text has alpha channels built into it, the generated shapes do not. So, in this case, we are telling Final Cut to drop out the black and replace the white of the oval with whatever is on v3.

12) Also note that you can put anything on v3 -- not just black -- as you'll see next.
13) For instance, say you simply want to blur a portion of the image, her eyes, for example. In this case, **copy** the video on v1 to v3 and select it. (Notice, you are copying the clip, not moving it. The puppy video is now on tracks v1 and v3.)

14) Apply an Effects > Video effects > Blur > Gaussian blur to the clip on v3, then double-click it to load it into the Viewer.

15) Click the Filters tab and change the blur setting from 2 to 100 (this is the maximum blur, you can use whatever setting you like).

16) Now, the last step is to change the location of the video on v3 so that it follows the eyes. (To make this easier to see, I'm going to switch back to the black oval.)
17) Go to the Canvas and set the third pop-up menu (the View menu) to Image/Wireframe.

17) Double click the clip on v2 (the oval) to load it into the Viewer and click the Motion tab. Be SURE to leave the oval on v2 selected.

18) Type, "Shift - i" to go to the In of the clip and set a keyframe for Center.
19) Go to the Canvas and, drag the image so that the black oval covers the dog's eyes. You are moving the oval, rather than the clip on v3, because the position of the oval that determines where the black color appears -- the oval cuts the hole in the background on v1 which is then filled by the image on v3.

20) Go back to the Control tab for the oval if you need to adjust the size and drag the Size slider until the oval looks right for your video.

21) Now, slowly drag through the clip on v1 and whenever the puppy (or your subject) moves, drag the oval to the new position. This will automatically set a new Center keyframe. What you are doing is manually tracking the oval using keyframes to match the movement of the subject.

In my editing last week, we opted to go with a bright orange color and made it look like a bad (a REALLY bad) swimsuit. This travel matte technique has a variety of uses -- feel free to experiment with other shapes, even text, to cut the hole in the background.

This article is from the July, 2004, issue of "Larry's FCP Newsletter," a very cool FREE monthly Final Cut Pro newsletter -- subscribe at Larry's web site: www.larryjordan.biz.

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