

## Digital Rotoscoping using Photoshop and Final Cut Pro

Rotoscoping is an animation technique in which animators trace the outline of an object or character's movements through previously recorded motion picture film. This is a fun way to learn the natural timing and sense of movement in animation. It also provides a great opportunity to experiment with many collage methods of animation, leaving behind any preconceived notions that animation requires drawing skills.

The steps below outline a digital application of rotoscoping using Photoshop and Final Cut Pro.

### Step 1—Exporting the original footage

Create 2 folders: "image sequence files" and "rotoscope files"

In Final Cut Pro, open the sequence you want to animate. Place it in your timeline.

Convert the footage to a jpeg image stream:  
File→Export→Using Quicktime Conversion

A window called, SAVE, will open. Name your image sequence and save it to your "image sequence files" folder. Under FORMAT, select "image sequence." Under USE, select "jpeg 29.97 fps." Click on the OPTIONS button.

You'll get a window called: EXPORT IMAGE SEQUENCE SETTINGS. The FORMAT should be set at "jpeg." You can also change the frames per second here. I leave it set at 29.27 because I like to have choice of images to use, but you can experiment because you don't need to draw every image in order to animate your sequence. Click on the OPTIONS button.

You'll get a window called JPEG OPTIONS. Select GRAYSCALE and BEST QUALITY. Click OK.

Your footage should have exported in sequence into hundreds of jpeg files and be located in the "image sequence files" folder.

### Step 2—Working with the images in Photoshop

Open the first jpeg of the image sequence in Photoshop. Open the ACTIONS Palette:  
Window→Actions

In the Actions palette select NEW SET, then NEW ACTION. A window will come up, NEW ACTION asking you to name the action. Name it, then press the record button at the bottom of the palette. From now on until you press the stop button, Photoshop will record whatever you do to the file.

I suggest recording these actions:

Adjust the image size:

Image→Image size. A window, IMAGE SIZE will open. Change the resolution to 200dpi and reduce the size of the file by half, using the inches. This should bring the width to about 5". Photoshop will reduce the height proportionally. Click OK.

Open up the curves window:

Image→Adjustments→Curves

Adjust the Curves so that the image has enough contrast for you to trace over. You can also try other filters and adjustments. I've had good luck with, "Posterize", (Image→Adjustment→Posterize, and then set the values.)

Save your image to the "rotoscope files" folder.  
File→Save As

Close the file.

Stop recording.

### **Step 3—Automating, batch processing**

Automating and batch processing tells Photoshop to perform the same actions you did to the first image to all the other images.

File→automate→batch

A window called, BATCH, will open.

under play, select the set and action name your recorded

Under PLAY, select the SET and ACTION that you worked on in step 2. Under SOURCE, select your "image sequence folder". Under DESTINATION, select your "rotoscope file" folder. Press OK. Photoshop should apply everything to all the files in your source folder and place them in your destination folder. Get a coffee. When you come back this work is done for you.

### **Step 4—Tracing your images**

If you are going to trace over your images by hand, then print out all your files, or have them output. Then trace over them. If you are planning to shoot on film on an animation stand, I would suggest buying paper with pre-punched holes for securing your drawings to the pegs on the stand. This paper is available at Curry's. LIFT also has a hole punch for that purpose.

### **Step 5—Scan your images**

Make sure the resolution is set high, to AT LEAST 200 dpi so that you can zoom in on the image in FCP and so that it looks great when you project your animation. Place all your scans in a new folder. When you are scanning, you'll want to make sure that you pay attention to your image registration so that your images don't bounce all over the place when they are animated. I did this by opening up all my scans in Photoshop and aligning them there. It takes a long time, but it is worth it.

### **Step 6—Animating in FCP**

Open a new project in FCP. Set your preferences so that imported still images are 2 frames long (or whatever your desired frame rate is) FCP→User preferences. Import the "Rotoscope images" folder, or "scanned images" folder (File→Import→Folder). In the Browser window, select all the images. Drag them into the time line. They should be ordered sequentially. Render and play.