Animating Photoshop Documents in Final Cut Pro

http://www.cla.purdue.edu/vpa/etb/
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Required software/supplies for this workshop:

| Description	
Apple Final Cut Pro http://www.apple.com/finalcutstudio/finalcutpro/	
Adobe Creative Suite (incl. Photoshop CS3 or later) http://www.adobe.com	

Animating Still Images in Final Cut Pro 6

This experiment is loosely based on Oskar Fischinger's "Kreise" (circles) animations. We will create individual Photoshop documents with one circle per document and then animate them, so that they will appear to originate from the center of the screen growing bigger over time, one after the other:

We start with the preparation of the individual circles in Photoshop, each circle needs to be bigger than the standard frame of 720x480 pixels since it eventually fills the whole screen with its color.

Create a Photoshop document `File > New…`
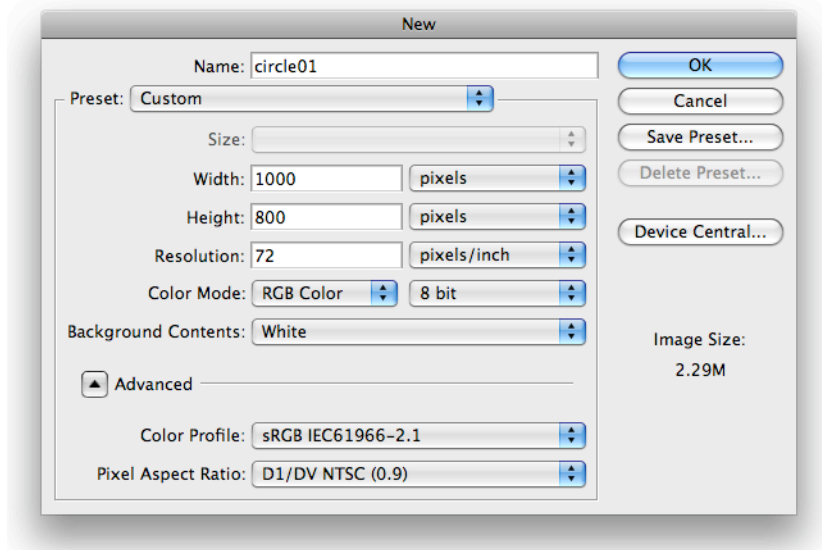
Make sure the "Advanced" option are visible and choose 1000 x 800 pixels in size, 72 dpi and under "Advanced" Pixel Aspect Ratio: D1/DV NTSC (0.9).

Remember that you have to accommodate for the pixel aspect ratio difference between images on the computer (square pixels) and images on video (non-square pixels – taller than wide for NTSC video) – that' why the Pixel Aspect Ratio setting in your document is very important.
For more information see: Final Cut Pro Manual Chapter 18: Working with Freeze Frames and Still Images (`Help > Final Cut Pro User Manual`)

Photoshop warns you that you will get a slightly worse image representation due to the different pixel aspect ratio.
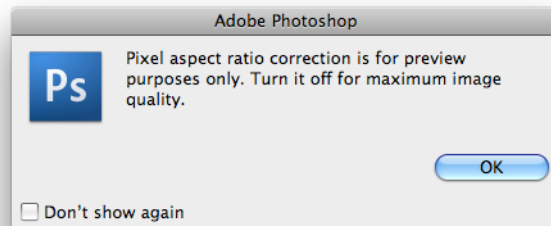

Now, create a new layer and mark the center of the canvas by dragging guides from the top and the left of the document until they snap to the appropriate center locations (horizontal and vertical) – this is only insofar important that you start drawing the circle in the center of the document.
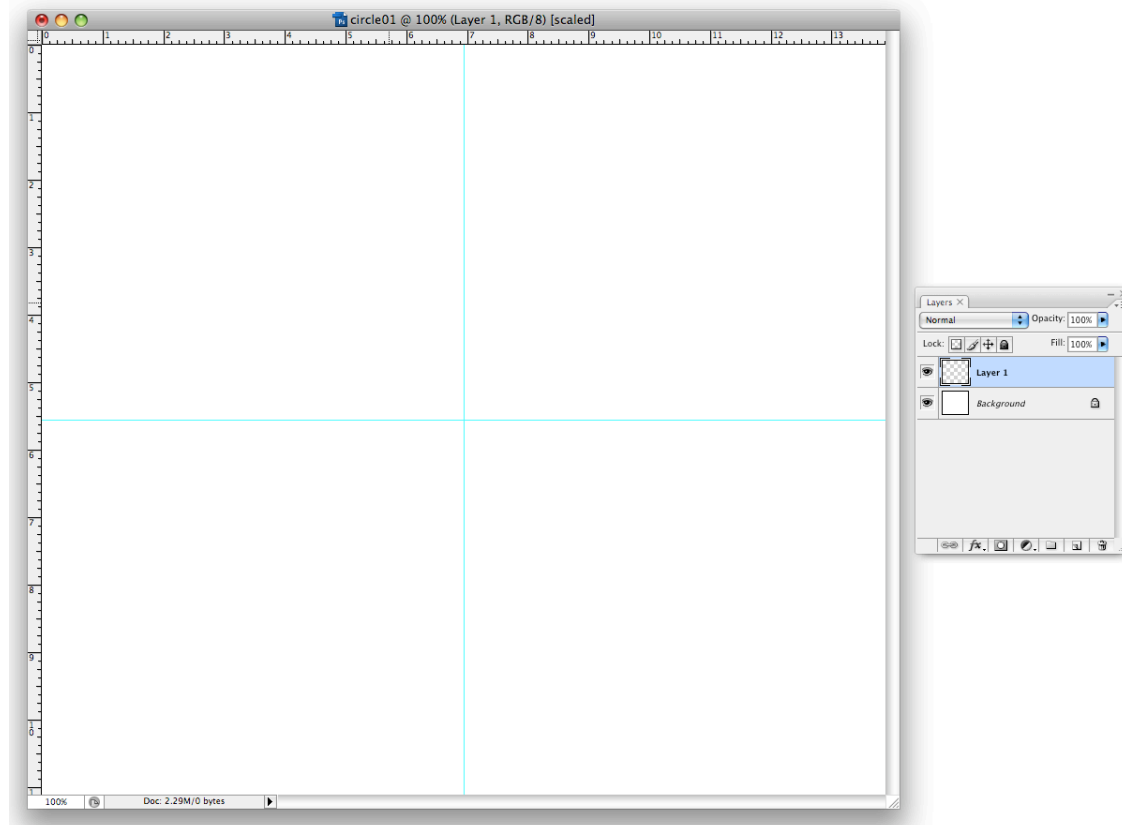
Now you can draw the circle from the center (use the circular marquee tool and hold down "Option" – to start drawing from the center and "Shift" – to draw a circle, not an oval).
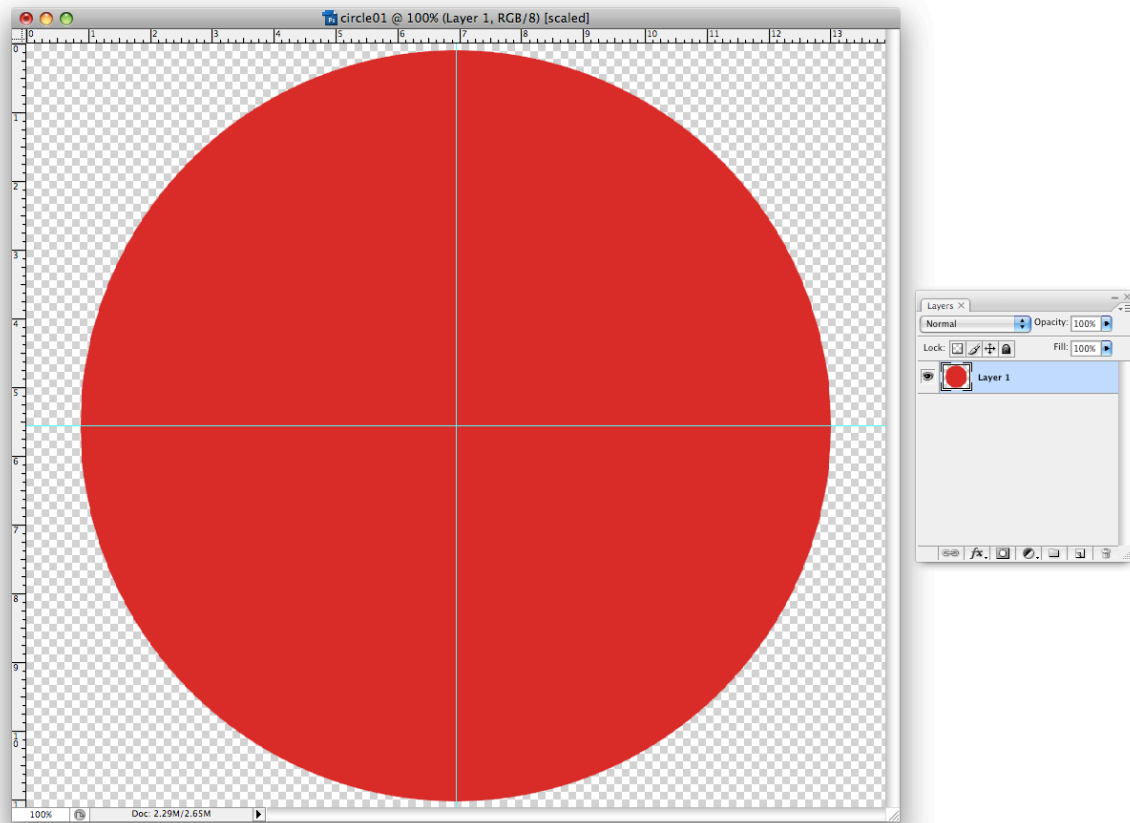

Save this document as a Photoshop file and continue with 5 more documents in the same style but with different colors:
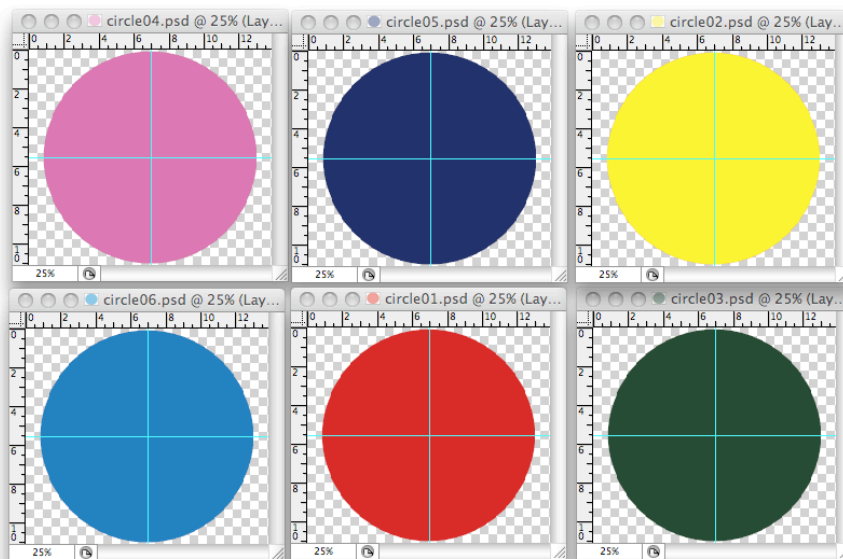
Import all six still images into Final Cut Pro, you can set the default still image duration for the imported images previously:

`Final Cut Pro > User Preferences…` (go to the "Editing" tab)

I set my images to be 7 seconds long by default in the "Still/Freeze Duration" setting.
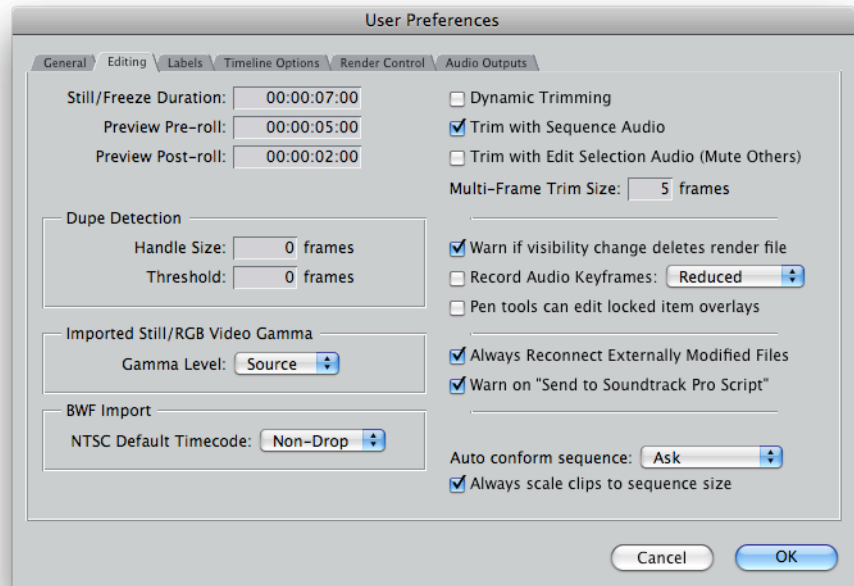
Then `File > Import Files…`

We need to make sure that Final Cut Pro applies the correct Sequence settings to the still images we just imported (and not change the settings of the current Sequence to those of the images). Double click on an image in the browser and then set the correct Sequence settings: `Sequence > Settings…`
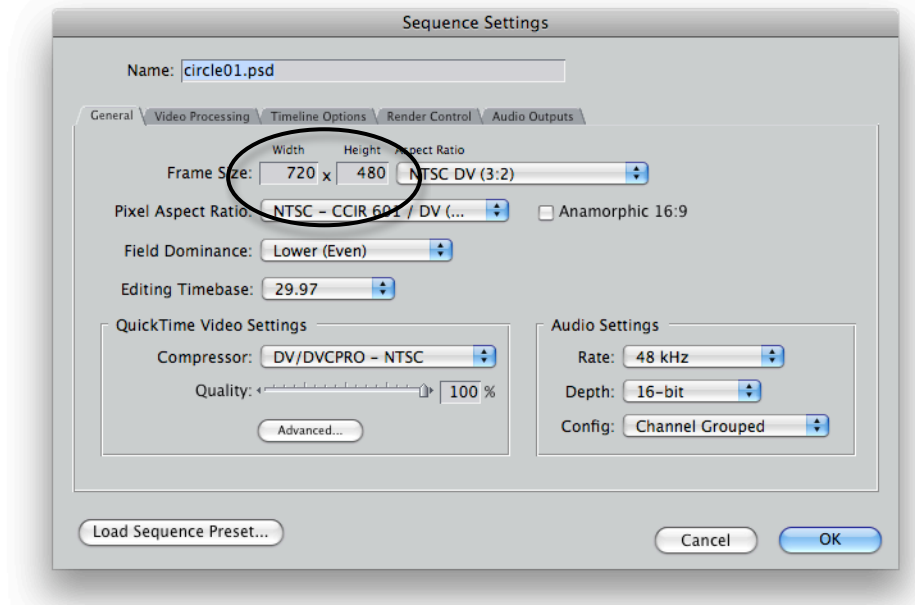The settings probably will look like this first:
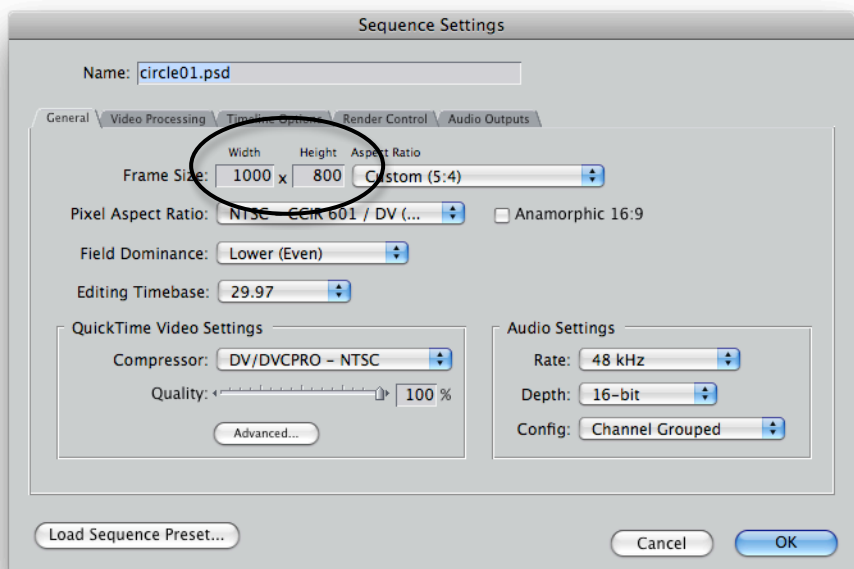
Click on the Load Sequence Preset… button and choose "DV NTSC 48kHz".
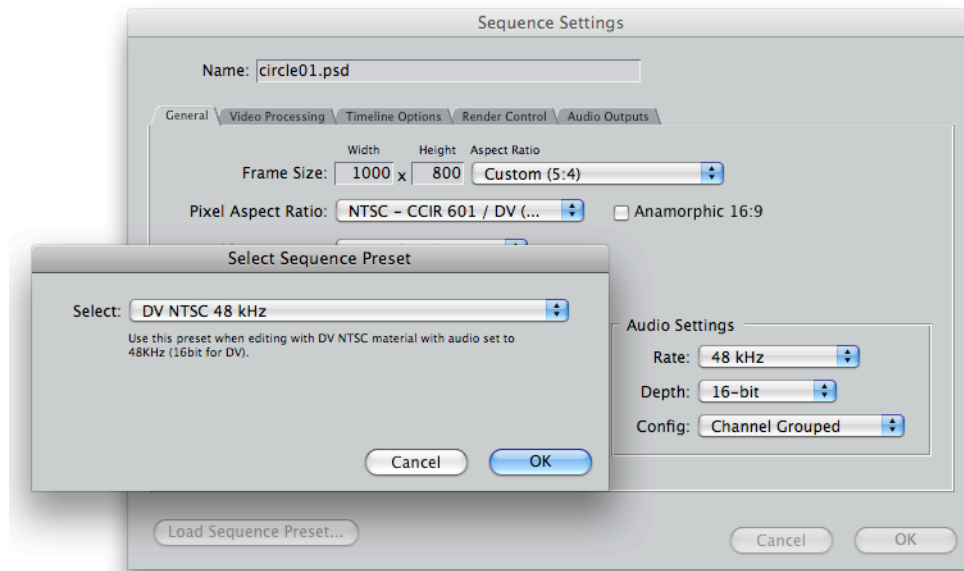
After clicking OK your Sequence setting for the still image file should look like this:

Repeat this step for each still image file you have imported.

In the next step I drag the first Photoshop image into the timeline and double-check that its size is 100% (sometimes Final Cut Pro automatically adjusts the image size so that it fully fits into the 720x480 frame, disregarding the image's original size). Double click on the new layer/track for the still image in the timeline and then click on the "Motion" tab in the "Viewer:Slug" window. Set the Scale Property to 100.

set to 100

Double click to access the properties
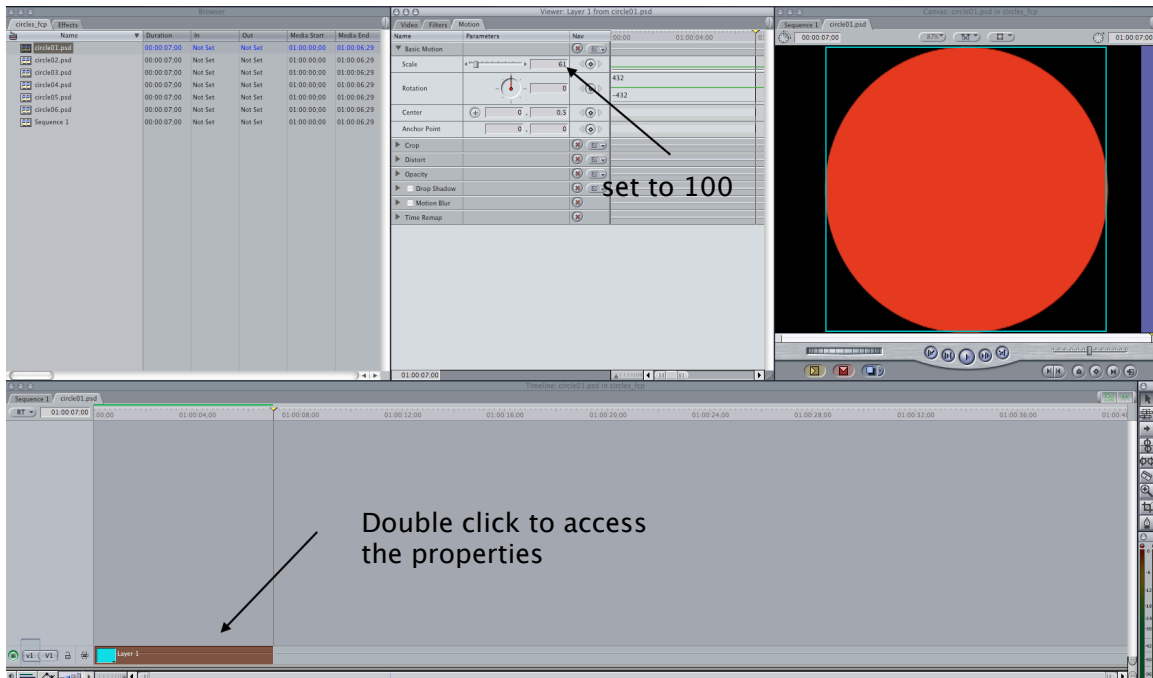
The image in the Canvas: Sequence window changes after you corrected the scale:
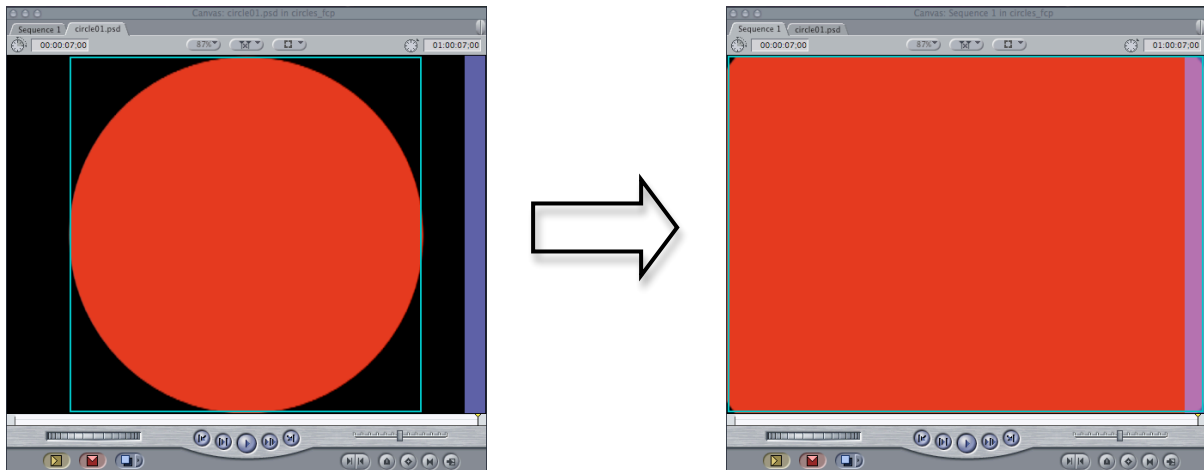
The first circle is now at 100% of it size. However we would like it to change its size over time, starting as a little dot and then growing to 100% of its size until it fills the frame. We can do this by working with keyframes. Keyframes are a helpful concept in animation that allows you to set start conditions for the behavior of a graphic element (or sound or video) and end conditions. Final Cut Pro will then automatically interpolate all the frames in between from the start condition to the end condition. In this specific case, we would like to start with a size of 3% for the circle and then end – after 7 seconds, the length of the circle in the timeline – with a size of 100%.

Navigate the playback head to the in point of the circle01 layer/track in the timeline and doubleclick the track, the scale property becomes available again in the Viewer: Slug window with the playback head at the beginning of the track. Set the scale to 3% and click the diamond shape next to box in which you change the scale:

Set first keyframe
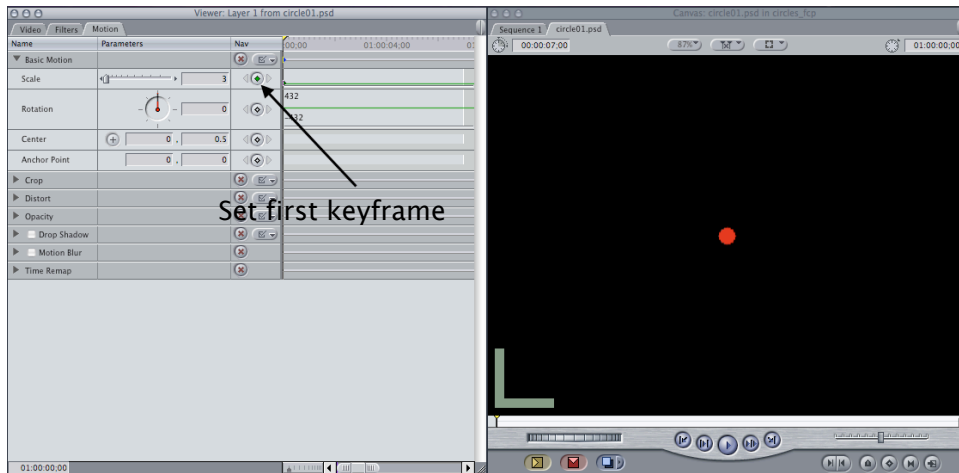
Now navigate to the out point of the circle01 track in to timeline and double click the track to update the view in the Viewer: Slug window. The playback head should be also at the end/out point of the track there.
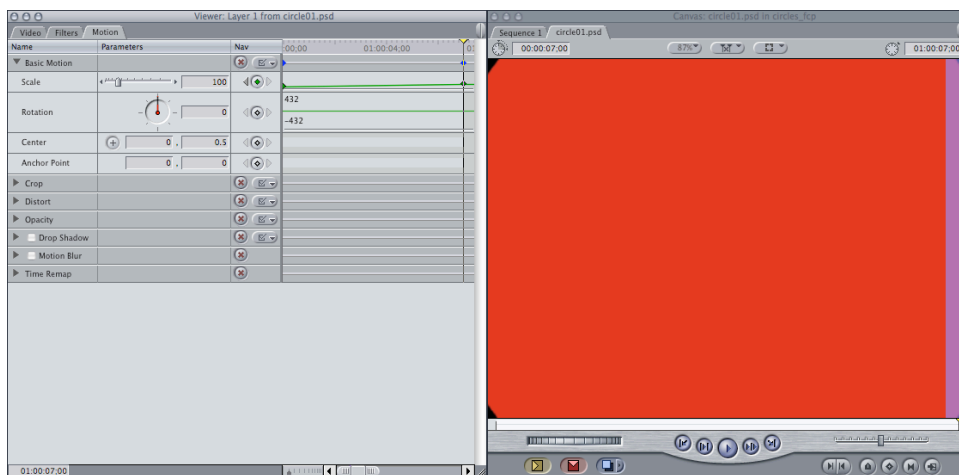

Change the scale to 100% and preview the result by scrubbing through the timeline.

The principle of keyframes is easy but you need to follow a specific pattern when you set them. In general this is:
   (1) Navigate to the in point for the first keyframe
   (2) Set the values for the properties you would like to change and press the keyframe button for each of them (you can keyframe/animate many different properties at the same time)
   (3) Navigate to the out point for the second keyframe
   (4) Change the settings accordingly, since you pressed the keyframe button for the first keyframe(s), the second keyframe(s) is being set as soon as you change any of the keyframed properties.

Drag the second image file into the timeline, starting a second after the first one, and set keyframes like you did for the first image file. Continue with the rest of the image files resulting in a staggered order of tracks in the timeline:
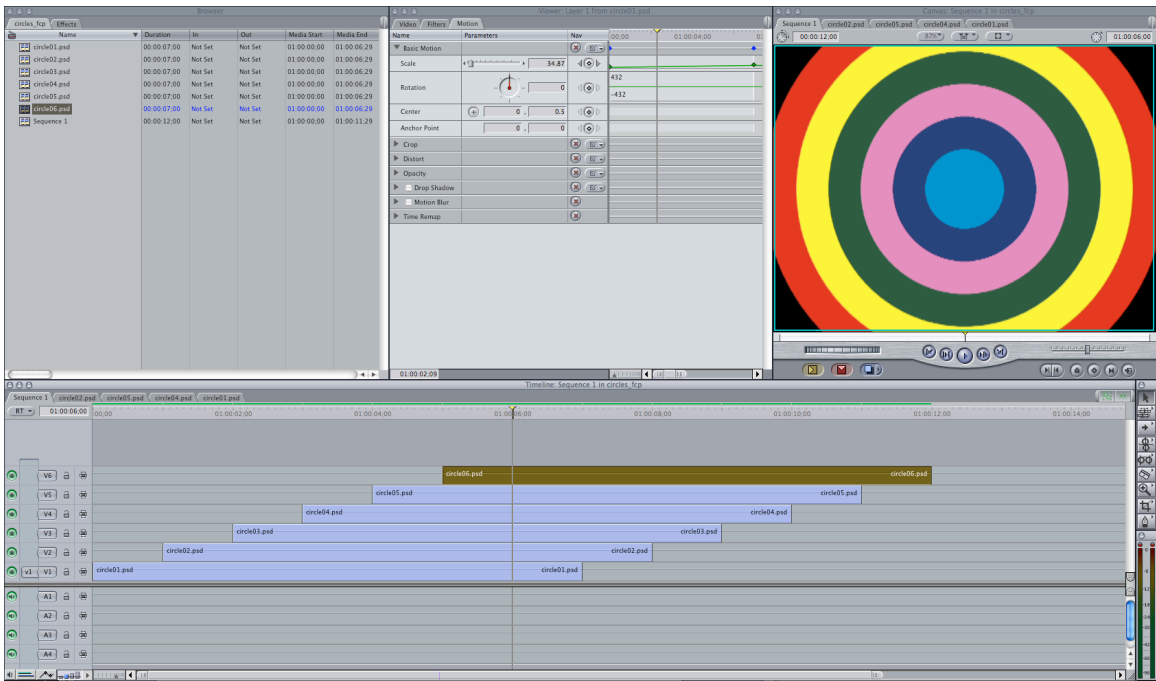
If you would like to have this effect be able to loop continuously, you can duplicate the layers/tracks, starting with track circle01 and continue to stagger them 1 second apart. Drag circle01 from the browser on top of track circle06 in the timeline, then drag circle02 from the browser on top of track circle01 in the timeline and so on…
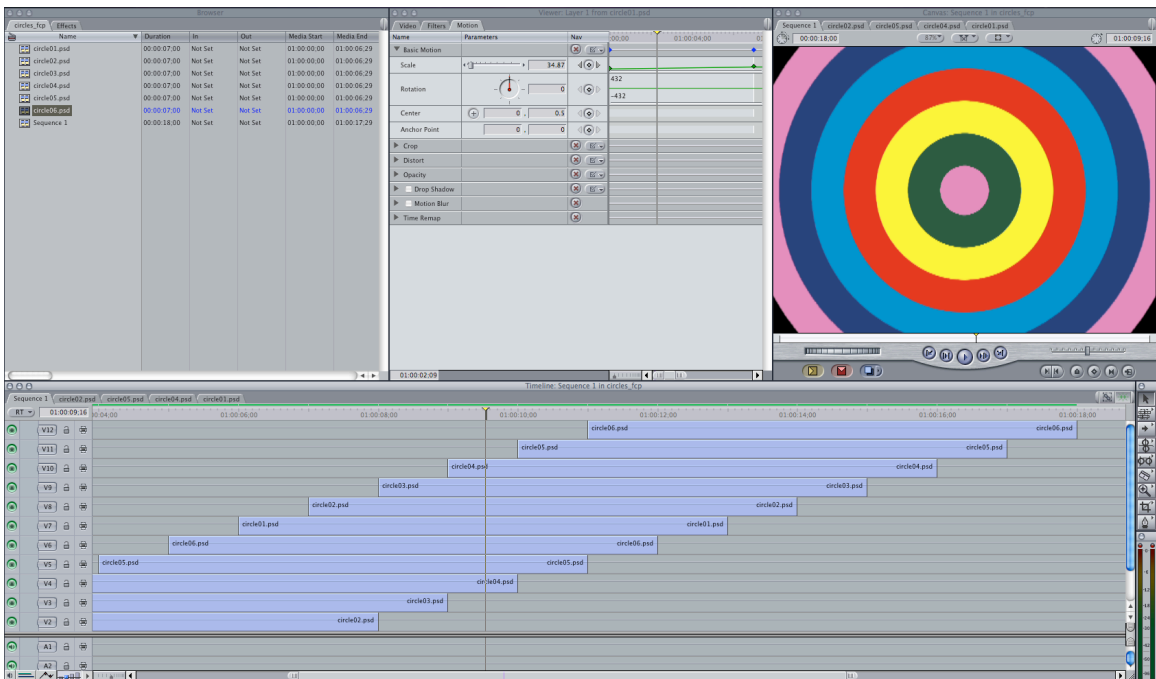
For more interesting effects and further experimentation you can have each track/circle start at a different point on the canvas slightly off centered, or you can change the scale keyframes for each circle individually resulting in slightly larger/smaller circles, etc.

Winkler, Animation Workshop, p.9