

## Editing Sound in Final Cut Pro

<http://www.cla.purdue.edu/vpa/etb/>

Fabian Winkler

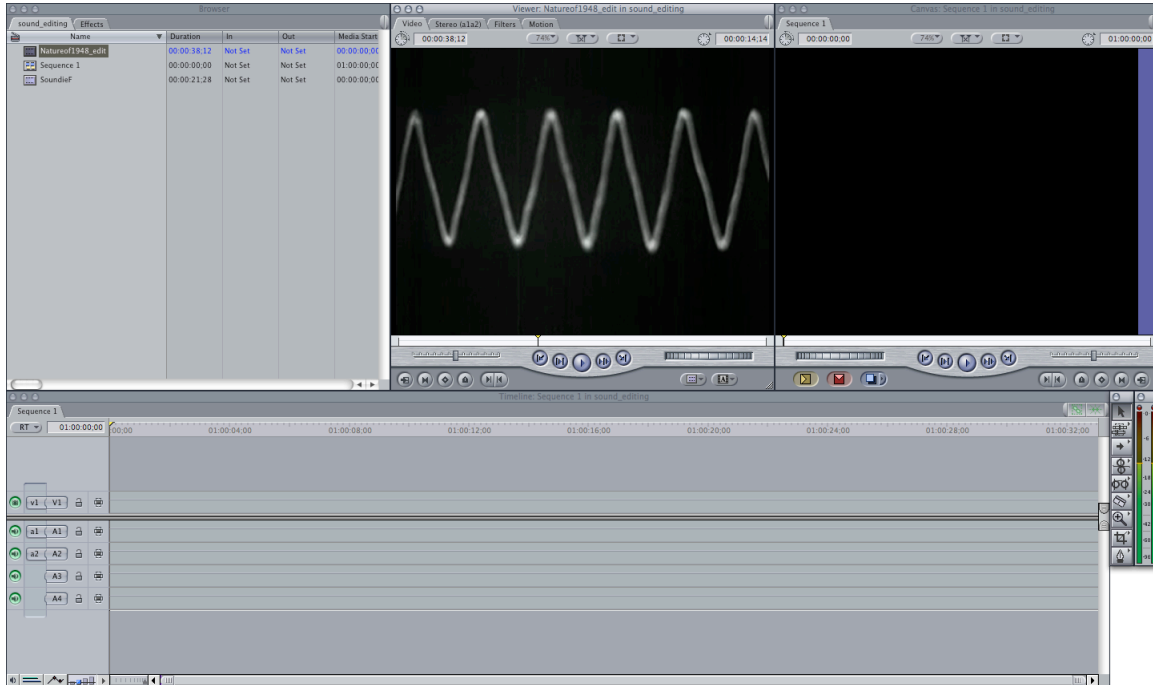
Required software for this workshop:

Description	
Apple Final Cut Pro <a href="http://www.apple.com/finalcutstudio/finalcutpro/">http://www.apple.com/finalcutstudio/finalcutpro/</a>	

## Editing Sound

For more information on audio editing that this workshop cannot cover see chapter 17 (p. 618) in the Final Cut Pro User Manual.

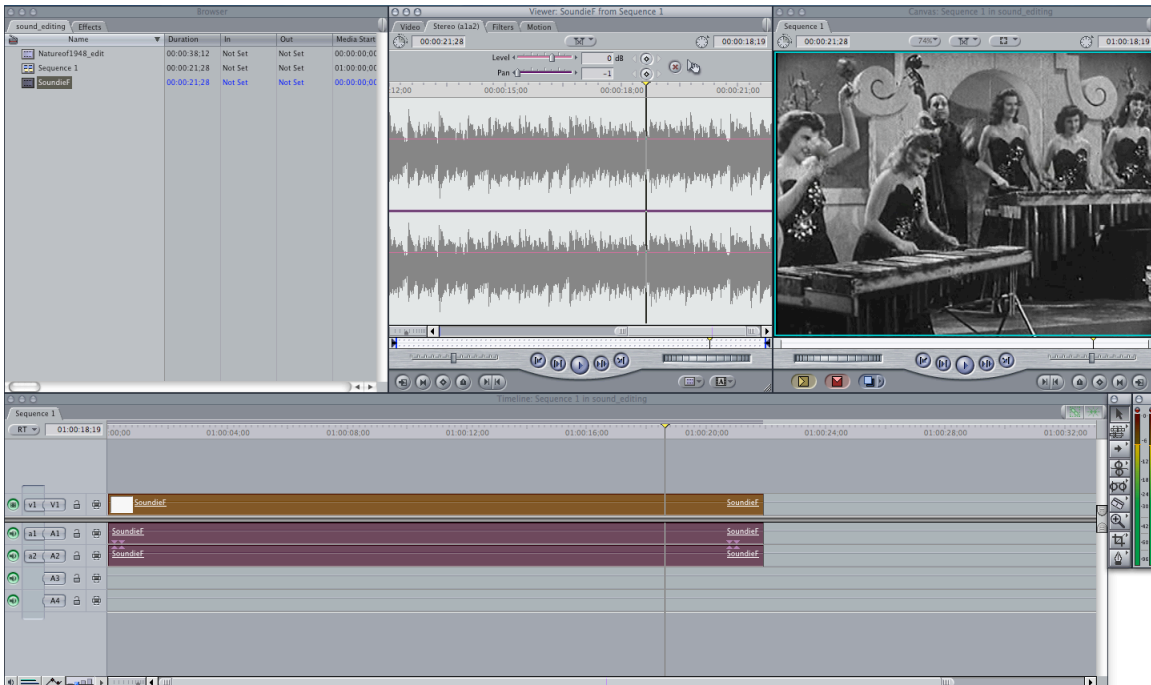
For this workshop we start again with an empty folder in which all your files will go. I will use two videos from the Prelinger Archives, *The Nature of Sound* (ca. 1948) and *Soundie – Reg Kehoe and his Marimba Queens*. I download and convert them to NTSC DV footage them as described in one of the previous workshops and then import them into a new Final Cut Pro project.



Make sure to save your project already at this point to start to auto-save feature.

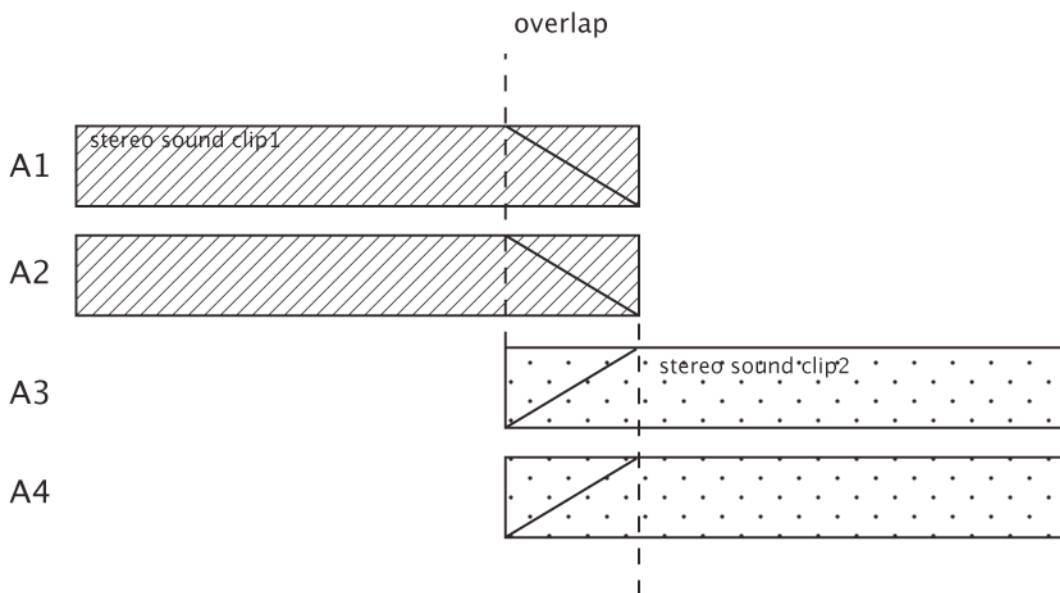
In the next steps we would like to create a simple hard cut starting with the “SoundieF” clip and ending with the “Natureof1948” clip. However, while we already see the first images of the “Natureof1948” clip the marimba sound of the “SoundieF” should slowly fade out, transitioning into the sine wave sound from the “Natureof1948” clip.

Let’s start by dragging the first clip “Soundie” into the timeline, by double clicking on its two sound tracks in A1 and A2 we are able to open the sound track in the viewer, seeing a waveform representation of the sound.



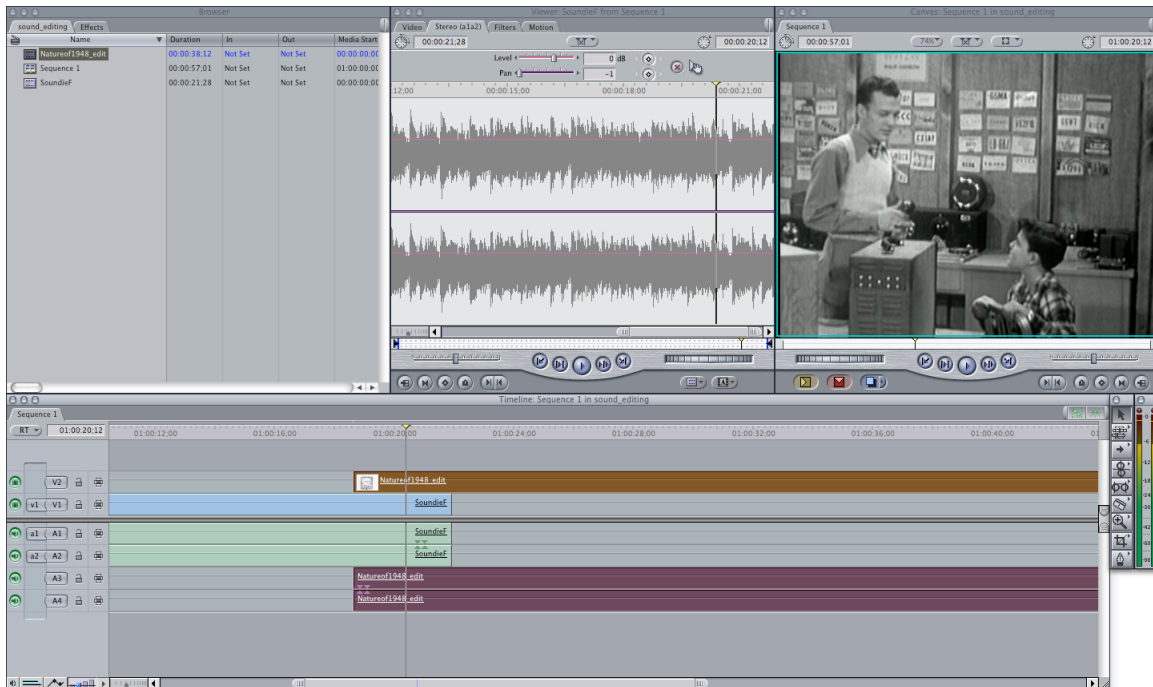
The pink line in the viewer superimposed on the sound wave is the volume (change it by dragging the volume slider on top of the window and if you were to see a purple line – in case of 2 separate mono tracks only – it would be the panning information, i.e. how far “left” or “right” a sound would be for stereo representation).

In order to achieve the crossfade of the sound we need to first understand how Final Cut Pro creates such an effect. The following image illustrates the process in detail. Clip 1 and clip 2 need to overlap for as long as the transition needs to go in order to have enough material for the crossfade:



Let's try to create the above diagram in Final Cut Pro. Stereo sound clip 1 is already there, we now need to drag the clip “Natureof1948” into the timeline: video into track V2

(is created automatically above V1) and the audio track will automatically go in tracks A3 and A4.

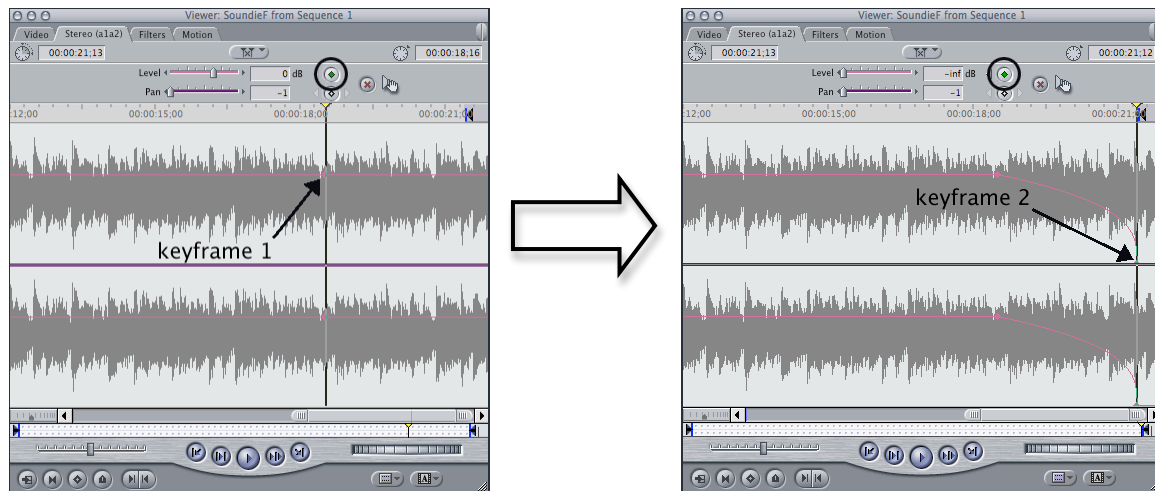


Now we need to set the IN point for the clip “Natureof1948” in V2 to where we would like the clip to begin – I chose the start of the oscillator waveform. Drag the clip with this new IN point to where you would like to have the OUT point of the clip “SoundieF” – think about leaving enough space on each side (i.e. before the IN point of the clip in V2 and after the OUT point of the clip in V1).

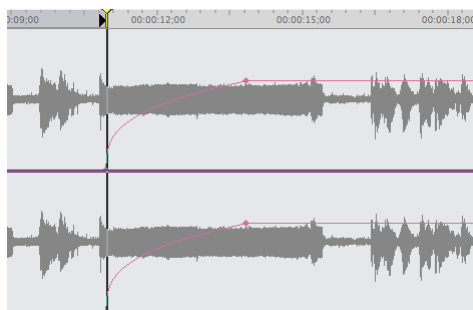


If you align the playback head with the IN point in V2 and double click on V1, then the Viewer should show you the last picture frame of V1 and the Canvas should show you the first picture frame of V2. Now double click on the sound in either track A1 or track A2. The viewer shows the waveform of the sound at exactly the frame where the playback head rests. Since we would like to change the volume of this sound track over time (creating a fade out, i.e. from 100% to 0% volume) we need to use **keyframes** to achieve this. Keyframes allow us to have the computer interpolate specific settings of a clip (such as volume, playback speed, brightness, etc...) over time between two given points, an IN point with a specific setting and an OUT point with another specific setting.

We set an in point in the viewer for “SoundieF” clip’s volume by clicking the Ins/Del Keyframe button next to the volume slider. A pink diamond should appear in the timeline right underneath the playback head. Now we move the playback head in the timeline to the OUT point of the “SoundieF” clip in V1 and then double click the clip’s sound track in A1 and A2 again. In the viewer click the Ins/Del Keyframe button again but this time move the volume slider all the way down after you clicked the button. See the two screenshots below for how your window should look like:



Next, do the same thing with the sound track in A3 and A4 only in the reverse order: leave the playback head where it is (the end of V1) and double click either A3 or A4. Then set the keyframe OUT point with a volume value of 100. Move the playback head in the timeline to the IN point of V2, double click either A3 or A4 again and set the keyframe IN point then drag the volume slider down to  $-\infty$ .



Now playback the new sequence and see how the audio crossfade transition influences the hard edit in the video track. Finally, click on your Sequence/timeline window and then go to: **Sequence > Settings...** in the Timeline tab you can find a checkbox for “Show Keyframe Overlays”. Checking this box will allow you to see the crossfade

visually in your timeline. This workshop was the hard way to show you a simple audio crossfade that can be easily achieved with one of FCP's filters, too. However, I hope the little detour will help you in creating your own custom audio fades and sound adjustments in a very precise way, more controlled than any of the predefined filter effects can ever be.

