

Feature

FCP - First to Final!

By Neil Sadwelkar

Apple's **Final Cut Pro** software and systems running it have been around long enough for nearly anyone in the Indian TV, video and film industry to have heard about it. Even if they haven't the faintest idea about FCP, not too many will actually say they haven't. So either way it's rather late in the day to 'introduce' FCP. At the same time, there is still a sizeable number of people who are completely clueless or have some crazy misconceptions about FCP.

"I've heard FCP doesn't work too well. Lots of bugs."

"You can't do film with FCP."

"I read on a forum on the net that FCP doesn't _____."
[Put anything here]

"It takes too long to render, I've heard."

"FCP's EDLs don't open on smoke or Quantel or _____."

"Someone told me FCP's quality is not even as good as _____."
[your favourite NLE here]

" _____ started his feature film on FCP, gave up, and switched to Avid." [This one I heard about a film that I was working on!]

" _____ edited an ad on FCP and the EDL gave solid problems."
[This one about someone for whom I've edited 30 films just in the past year]

"FCP is good... but it's new, can't match professional set-ups, you know."
[Heard from a studio manager - just like that!]

Myths and rumours abound.

If you are familiar with FCP but haven't worked with the upgrade FCP 4.1, you can 'fast-forward' the next section and go straight to the New in FCP 4.1 part. So this really is a multi-purpose article which also introduces what's new in FCP 4.1

So what is FCP?

Final Cut Pro [FCP] is only a software. Let me say that once more. FCP is only a software. It works only on Apple Macintosh computers. It does not have a PC version and probably never will. To rephrase the same sentence - FCP does not work on Windows.

FCP is an editing software which lets you edit movies - video or audio of various formats and sizes into a final movie of various sizes and formats. FCP can work with a variety of hardware, which you can buy easily and fix into a system. These can be capture cards and external interfaces, which allow you to input and output analog or digital video and audio. Simply put, same FCP, any hardware [Conditions apply].

As a software, FCP does not add or take away any quality from the video or audio. The hardware you use, may however employ compression and hence induce loss of quality. And you may choose to work with compressed video to save on disk space or to be able to use low-cost IDE drives instead of costly SCSI drives. Of course, it is possible to add rather inexpensive hardware that make FCP work in loss-less uncompressed 10-bit mode as well.

Meaning, the image quality is exactly the same as the quality you would expect from a discreet smoke, fire, flame, inferno, Quantel Editbox, Henry, HAL, Avid Symphony, DS, Media 100 844/x and any other lossless 10-bit system you can think of. To repeat, FCP's image quality [with appropriate hardware] can be full uncompressed, loss-less 10-bit. Period! And it can even go up to HD and beyond!

Mind you, I'm not saying FCP as a software is as good as smoke, flame, fire etc. No way. There are things these packages do that FCP can't. But if you're using smoke just to upgrade a

TV serial or an ad, only because it's uncompressed, then you can do exactly the same with FCP. The upgrade part, that is.

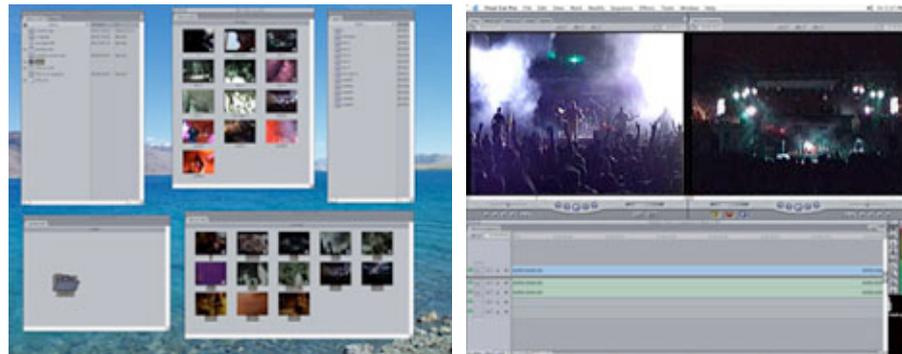
So unlike other NLE software, FCP does not have a 'working resolution'. It scales it's resolution from tiny 192x144 pixel web-movies all the way up to HD, depending on your hardware set-up.

FCP can also output your sequence to tape with frame accurate punch-in. And it can export an EDL which opens in any of the online machines I've mentioned above. In fact let me make it clear that I have personally edited over 70 TV commercials, 6 short films, 1 documentary and 2 features on FCP. All the EDLs I've ever made have opened effortlessly on discreet smoke, Quantel and other systems. And the upgrades were done with no untoward incident. And by the way, these numbers [of films] are tallied from my TDS certificates over the past 3 financial years. So they aren't fibs.

Look and feel

FCP's interface is the standard - Source-record monitor, horizontal timeline, bins, clips, sub-clips, effects etc. When you start FCP, you would see 4 'windows'. They fill up the screen. They're called *viewer*, *canvas*, *browser* and *timeline*. There's also a little toolbar in the corner.

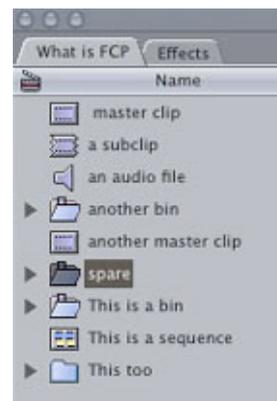
In a two-monitor set-up, it looks like this:



Click on the screenshots to view larger pictures.

In the right side monitor there is a Viewer [source monitor] and a Canvas [record monitor] at the top, and a time line at the bottom. In the left side monitor, you see many windows. At extreme left and top is the browser which shows you all your bins which are like folders that you can expand to see the clips inside. There are also sequences [your edits], and other objects like Photoshop files, tracks from Audio CD and other files that you import. The browser shows each open project in a separate tab. And yes, in FCP you can open more than one project at a time.

The browser also has separate tab called 'Effects'. This contains video effects and filters that you can apply to clips and sequences.



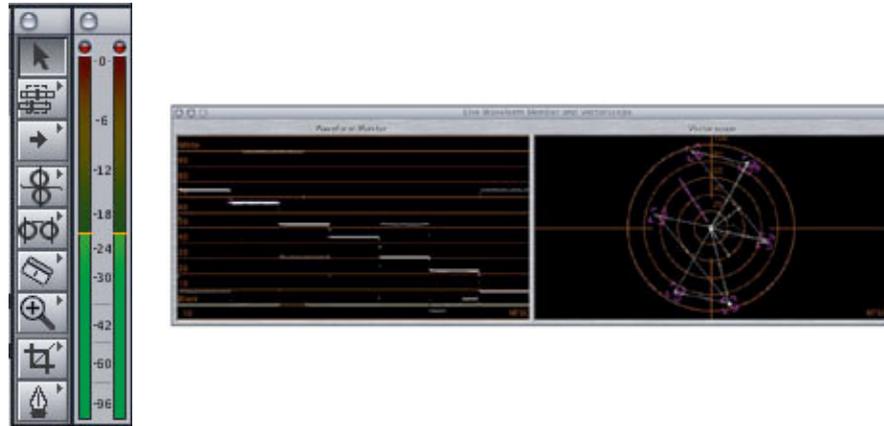
The viewer and canvas have tabs - Video, Audio, Filters & Motion. Video shows you the picture. And your mark In and Out and any markers you might have added to the clip. Audio shows you the audio waveforms for the audio track of the clip. You can adjust the levels and pan for that clip here. The Motion tab has settings that let you control basic parameters like size, rotation, opacity, crop, border etc. The filters tab shows you the filters [effects] you've applied to the clip and adjust their various parameters. In FCP you can add filters directly to a

source clip as well as a clip in the timeline. And basic parameters like, size, rotation, perspective, can be adjusted for any clip. Sort of like After Effects.

The timeline is a graphical representation of your edit. Tracks run horizontally and 'play' from left to right. There is a vertical blue line that shows where you are in the timeline. Wherever the blue line is 'parked', that frame plays in the Canvas. You can drag and drop from any bin to the timeline and even select clips in the timeline and drag and drop them around. You can also copy and paste clips in the timeline without going into 'segment mode'. FCP is in a sort of a permanent segment mode.

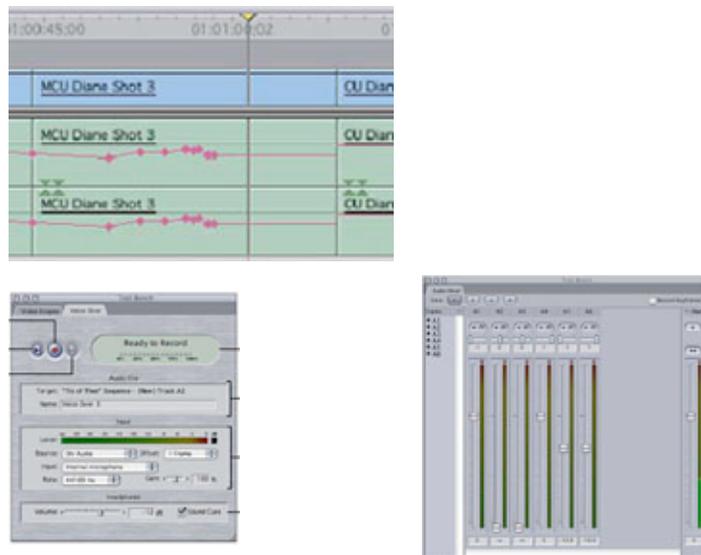
There can be one or more video tracks and one or more audio tracks in a sequence. I'm not sure what the upper limit is, but a pile of hundred tracks is possible. You can increase and decrease track height with a button, and see audio waveforms and level 'rubber bands'.

To the right of the timeline there's also a small toolbar showing various editing tools. These tools let you move shots around, trim, slip and slid them and do other editing functions.



Click on the 'waveform' screenshot to see a larger picture

There is also a waveform monitor and a vectorscope, which lets you adjust levels and still stay 'legal' with luma & chroma. And a tiny VU meter to judge audio levels. And an audio mixer which lets you adjust audio levels for any number of tracks, and these are instantly stored with key-frames, so you can 'operate' a mix and it is learned. Cool! There is also a 'Voice-over' tool that lets you play picture while recording sound - for dubbing or background music scoring.



Click on the screenshots to view larger pictures

So that's a basic run-down on FCP's interface. How one goes about editing, is a rather hands-on topic, for a later date maybe. But how film editing and effects are done on FCP will be covered in future parts of this article.

What's new in FCP 4.1 ?

For those who are familiar with FCP 1, 2, and 3, here's an intro to new features in FCP 4.1 For those who haven't used FCP yet, if you were to buy it today, 4.1 is the version you'll get. So it will have all these features. And some of these features were added in FCP 4.1 so someone who uses FCP 3 may tell you that some of this isn't possible. Don't believe them.

In the timeline, there's a track selector which lets you cut or lift only selected tracks. There is also a patch panel, so you can decide where your overwrites or inserts go. There is gang so you can do what-if measurements. And with multi-monitor clip windows you can gang several clips and achieve a 'poor man's' multi-cam. Effect key-frames can now be adjusted in the

timeline as well. There is dupe detection exactly like Avid.

FCP 4 lets you customize your keyboard, add buttons for common functions, to button bars in the browser, viewer, canvas, and timeline. You can increase heights of individual tracks and save these settings as well. All these settings can be saved to a floppy or CD or even e-mailed, so you can recreate your favourite workspace anywhere.

There is a new audio mixer which has faders that 'learn'. Meaning, you play the timeline and operate the mix and key-frames are automatically added to the timeline clips.

RT Extreme is the term for CPU-based real-time effects. So the CPU and graphics card combine to give you real-time on the Mac monitor and on an external monitor. Your mileage will vary depending on your processor. On the latest greatest G5 Dual 2 GHz and with real fast disk arrays, expect to see 5 layers of uncompressed play out in real time with effects on all 5 layers. And as CPUs get faster you'll get more real time.

'Merge clip' works like 'auto-sync' in Avid; so you can do film editing with audio from DAT or Nagra synced to tele-cine rushes. More on that in the FCP film piece to follow.

And finally. FCP comes bundled with 4 applications - *LiveType*, *Compressor*, *Soundtrack* and *Cinema Tools*. Detailed descriptions of these would be articles by themselves. But briefly...

LiveType is a titler that lets you go to town with supers. Twist and turn them in any which way, add smoke, fire or animate them with scores of presets. LiveType is fully 'key-frame'able and lets you export with Alpha.

SoundTrack is a music composer application that works like Acid on a PC. It comes with 2 GB of ready-to use loops and sounds which you can loop in tempo to create your own music. And do all this with a picture playing in a window.

Compressor lets you take your finished work in FCP and compress it in the background in hundreds of different presets, from web movie to DVD.

And **CinemaTools** is a standalone application that takes in tele-cine logs and links them with film rushes. When the feature film is edited, it lets FCP makes a frame accurate cut list. In India, so far about dozen feature films have been completely edited on FCP. Two recent Hindi films, done on FCP, are *Supari* and *Kuch naa Kaho*. Now *Khakhee* and *Lakshya* are among the forthcoming releases that are being cut on FCP. And yes, I've heard rumours about one or more of these being started on FCP and 'switched' over to Avid. Completely untrue.

FCP set-ups

So I have succeeded in converting you to FCP, have I ? So you want to buy, right? Here are some 'example set-ups'. But with all the set-ups and prices I've mentioned there, is a small asterisk and a fine-print, which says the usual 'Conditions apply', 'Local Taxes extra', 'Offer valid in select cities only', and 'No BVO added'...

The cheapest set-up you can get is for Rs 70,000.00. An eMac with a 40 GB hard drive and a CD-writer cum DVD-reader drive and Final Cut Pro Express software. This FCE software is a watered-down version of the flagship FCP software. So the same set-up with FCP would be about Rs 1,10,000.00.

Then, a basic DV editing set-up based on an iMac or a G5 Mac would range Rs 2.3 to Rs 3 lakhs. With an analog to DV converter like the Canopus ADVC-100 and a RS-422 controller, this set-up can do offline edits out of Betacam or DigiBeta and output EDLs for upgrade elsewhere.

You can also have an analog compressed set-up from 1:50 all the way up to 1:2 using Aurora Igniter PCI cards. Or a DigiBeta uncompressed set-up using a Decklink PCI card. This would go from Rs. 6 Lakhs upwards. Recently at Broadcast India 2003, Apple was offering an FCP set-up with 2500 GB disk space with HD ready disks all for Rs 19 lakhs.

So as you can see, there's an FCP for everyone. You need to work out in your mind what exactly you want to achieve with it. Then meet up with an Apple dealer, get a fix on costs and take the plunge. If you aren't sure, you or your editor will manage to learn it, you can do a few days' course at an Apple Authorised Training Centre. There is one opening in Mumbai soon.

So it all works. Really. Take my word for it! And no, I don't work for Apple, nor have they paid me to write this piece... wish they had though!

About Neil Sadwelkar



Neil Sadwelkar has little formal training, so he just about makes a living in the film & TV industry in India. His profession is a higher form of meditation through which one can deny hunger and sleep - it's called editing. In his spare time thinks hard and writes stuff like this piece above. And in whatever time is left over, he does his own accounts and chases clients for money. As you must have noticed by now, he is also shamelessly besotted with Macintosh machines and considers them as God-sent gifts to man kind!

He builds and tinkers with computers, so some people get conned into believing that he knows a lot about computers and editing software, so they even pay him as a consultant. Really! If

you love what he's written you can drop him a line at neil@misenscene.net and tell him he's the greatest. He even has a web site dedicated to Final Cut Pro where you can take in more of his writings.

If you're a budding editor you can make him feel good by asking for advice. But if you're looking for work, don't bother because he doesn't have contacts. And if you really hate his writings, write to him and give him some work, so he has no time to write stuff like this. But don't make him chase you for money; else he'll go back to writing.

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