

FILM EDITING AND SPECIAL EFFECTS

First steps with Kino

PART 2 With footage captured in the correct format, Andy Channelle moves on to the editing phase in his quest to create the perfect home video – My First Sports Day meets *The Big Channellski*.



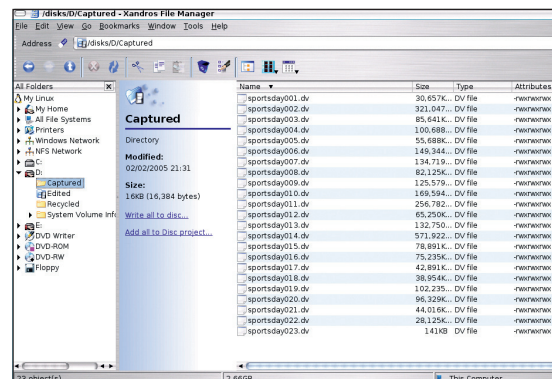
Film-making enthusiasts are being spoiled these days: the advance of digital video editing software makes it easy to craft creative, sophisticated home movies. Last month we used the open source package *Kino* to control a standard consumer grade video camera and to capture raw digital video of a school sports day ready for editing. This time we'll start to move the footage around to create the right effect, trim start and end points, and work with some of the transitions *Kino* provides to avoid the jerky jump cuts that usually characterise home videos.

The captured scenes should be stored at the pre-defined location on a hard disk and named numerically. We could reassemble the contents of our tape simply by playing these files back in the same order, but that would defeat the object of editing; which, according to Dictionary.com, is defined as putting something in "an acceptable form". In other words, while you may be thrilled at watching five minutes of teacherly preamble before the big 3A Infants flat race, your audience will probably just want you to get on with it.

The first part of the editing process is ensuring that the files are in the correct order. Of course, they may have been shot in the intended order, but if not we can move scenes around to create the desired effect. The simplest way to do this is to launch *Kino*, open the previously-saved project – we're treating the project as separate from the raw video – and then use the mouse to order scenes in the left-hand pane of the interface.

This is just a case of dragging scenes and dropping them in the desired slot. Remember that this won't change the content of each scene; we're just messing with the order. It's also possible to completely (and safely) remove a scene by selecting it and doing Edit > Cut.

Should you get completely tangled up in files, just slide the line dividing the scenes from the preview window to the right to see each scene's file name. This will also show their original position in the project. We'll need this extra information shortly, for more advanced editing.



From this directory full of raw footage we'll cut scenes and add effects to create something Oscar-worthy.

Once running order is sorted, it's time to make some changes to individual scenes. The most fundamental thing we can change, the very essence of good editing, is the timing. *Kino* makes it really simple to adjust the start and end points of individual scenes within a sequence without altering the underlying footage.

Going back to our sports day capture, it's noticeable that section 14 is a rather long, static shot and could do with a trim. To do this, select the chosen scene in the left-hand pane to take you to the beginning of the scene, then hit the Trim tab on the right. In the most basic use of this section, there are two ways to define the 'in' and 'out' points for a scene: visually or numerically. To do it visually, simply grab either of the right-angled triangle markers on the blue line immediately beneath the preview. Move the left one to change the in point, and alter the out point by moving the triangle on the right.

Ruthless editing

Beneath the blue line are two text entry boxes and some icons that allow more precise editing of the in and out points. The text boxes allow us to edit points numerically – these values are reset for each individual scene, so they won't correspond to the position of the scene within the whole project. Additionally, each 'in' point will default to 0.0000 min. To change this, just append the figures.

The triangles next to these boxes will set the in or out points to whatever position the playhead is in, which is ideal for watching the preview and using the Stop button in combination with the Step Forward/Back One Frame buttons for more precise control. The next button in the sequence will reset the points to the start and end of the actual file.

In the centre of these two sets of controls is a broken chain icon. Selecting this will link the in and out points, so moving one will also move the other. This is especially useful when you have a long take and a specific space or time in which to insert it. Set the two points at, for example, 0.000min and 1.0000min and you will have a one-minute section set. Hit the chain icon and move the in point marker to select any one-minute section within the scene.

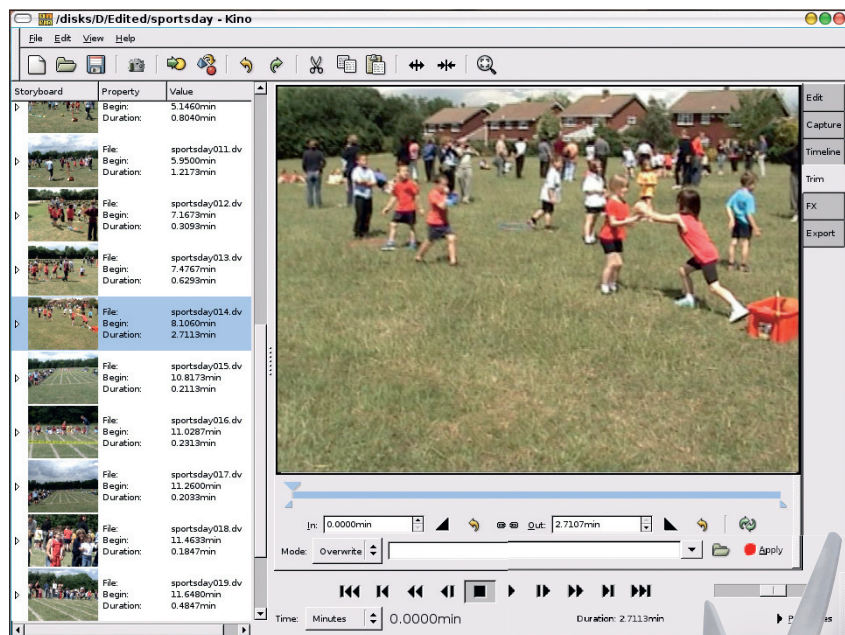
Finally, at the far right of the icon set is the Looping option. By default the selected clip will loop around the entire length – when it comes to the end it will immediately begin to play back from the beginning. However, by selecting this option we can loop only between the in and out points. This can be useful to getting the timing of a cut just right. The only problem with it is that it's not possible to alter the entry or exit points while the clip is playing, so as soon as you grab one of the handles, playback ceases.

Director's cut

The next section in the Trim tool is Mode. Trim is capable of working in two modes: Insert and Overwrite. *Kino* chooses the latter by default – as its name suggests, this mode will overwrite the selected clip with the changes that you make using the Trim tool. Be aware of the fact that the file will remain unchanged even after you've made changes and hit the Apply button.

As well as trimming existing clips, we can also import a clip to this section and use it to overwrite whatever we have selected. To do this you can either click on the Browse For A File button (which is displayed as a folder), and manually find the file you want to import; or drag and drop a file from either *Nautilus* in Gnome or *Konqueror* in KDE.

This is useful if you have two takes of a scene and, after setting up the running order, decide the second take is better than the first. In this case, drag the new file into the Trim



Cut a long story short with the Trim tool.

window, set the in and out points and then hit Apply. The original scene will be overwritten with the new one.

Conversely, Insert just adds the clip within the Trim window to the timeline either before or after the currently selected clip. This will be useful in the sports day film we're assembling for this issue's tutorial.

In one section of our production, the main subject of the film is triumphant in her running race – and we want to make the most of that moment. First we take the scene, in this case called **sportsday016.dv**, and trim it to the required length, removing some of the race preamble. Once this is done, making sure the mode is set to Overwrite, hit Apply to have the trimmed section updated on the timeline. Remember that editing so far is non-destructive, so check the in and out points in terms of the sequence you're building and then, once you're satisfied, go back into the Trim window with the same clip loaded.

The next job is to trim this; once again, highlight just the few seconds at the end of the race. Once this is done, change the mode to Insert, and then select After to put the new clip into the timeline after the clip you have selected. The point about adding a second clip that shows the same event is that we can slow it down for a real *Chariots Of Fire* effect, and that is what we'll do now.

Slow motion

Digital technology makes it possible to add special effects to a piece of video relatively easily. And while the effects tools in *Kino* are branded 'experimental', they seem perfectly capable of basic jobs for home productions.

To complete this part of the tutorial you will need to ensure you have the Kino-timfx, kinoplus and kino-dvttitler packages installed, and these should be available for most distributions.

The first task for this production is to take our duplicated moments from the flat race and slow the film down. With the right clip selected, hit the FX tab on the right of the preview window to get into the Effects toolbox. The section of interest is at the top of the window. By default the Overwrite tab should be highlighted and the From and To boxes should show the start and end time of the clip. By adjusting these it's possible to apply an effect to just a section of a clip, but we're doing the whole thing so we don't need to change them.



« The bit we're interested in is Advanced Options, entitled Speed. By selecting this radio button and dragging the slider to the left we can add a slow-motion effect to the footage. Normal speed has the value 1.00, so changing it to 0.50 will effectively slow it down to half speed.

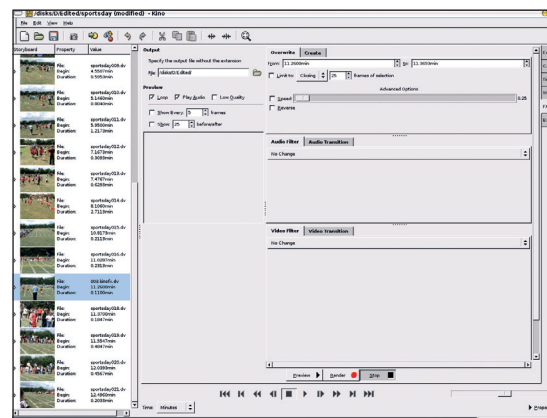
Once we've set the slider (and prayed for the next version of *Kino* to have a numerical input device for this tool), we can view our slowed clip with the Preview button at the bottom.

There are a few Preview options in the right of the window, so experiment with these to make the most of your hardware. On our test machine we got a pretty good look at the effects of our creations without changing any of these options.

Once you're happy with the effect, hit the Render button and wait for the clip to be 'effected', which will depend on the size of the clip and speed of your hardware. One thing to note is that adding effects this way is 'destructive'. That means that the file will be completely overwritten with the affected shot, which will also physically remove any footage outside the trims we made earlier.

Once we finish rendering, the timeline will have a new file in place of the original, with a name something like **001.kinofx.dv**.

You can also go the other way and speed things up by anything up to a factor of 25. Using only small adjustments to a clip's speed it is possible (for example) to make a piece of footage fit a gap that it might otherwise have been too long or short for. Exercise restraint with this, as changes above a few points on the slider will look obvious.



Adding a slow motion effect with the speed slider is easy but it lacks the accuracy of numerical input.

Now that's finished, go back to the main sequence and look at the results. The original file plays, followed by the last few seconds in slow mo. But what's that noise? When *Kino* slows something down it also slows down the audio, so if you have half-speed video, you will also have similarly-affected sound. Not a treat for the ears.

To change this we can highlight the affected section and go back into the FX tab. The section we want this time is Audio Filter. Click on the drop-down list, select Silence, make sure the Speed button is *not* selected, then hit Render. As before, the

KINO FOR SLIDESHOWS

So far we have been concerned with using *Kino* to present moving images, but it's quite possible to use the application to build up slideshows of still photos, or even to add visual polish to a presentation. In this short tutorial we'll pull in a few digital photos, set the time for them to remain on screen and add effects and transitions just as we did with videos.

1/ Start a new project by going through File > New.

2/ Go into the FX tab and, in the top section, make sure the Create option is selected. In here you can add colour frames, random noise, gradients and images to frames. From the drop-down list we need to select Multiple Image Import and then browse to the folder containing the images to display. JPEG and GIF format both appear to work well, but we've not had much success with PNG files – though *Kino* claims to support them, so this may be a bug in the version of the software we're using.

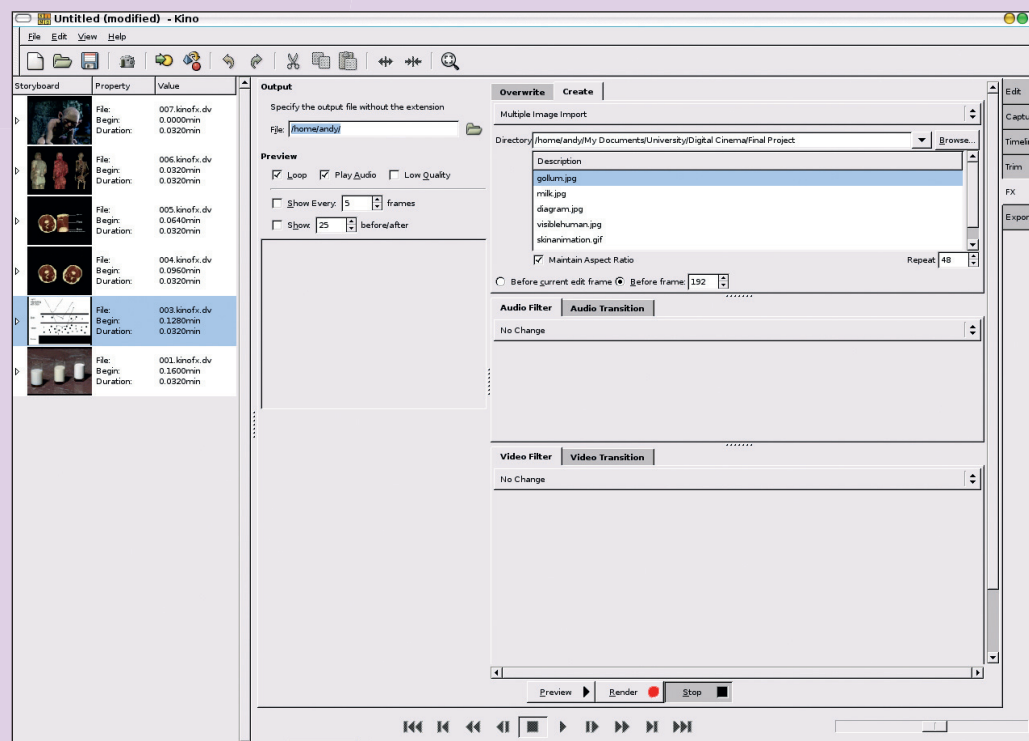
3/ Once the images are imported they need to be added to the timeline. This can be done by selecting each image in turn and clicking the Render button. If you jumped straight into this, you would notice the pictures spin by in a blur. This is because we haven't set a repeat argument yet. Just below the file selection dialog (near the ever useful Maintain Aspect Ratio radio button) is

the Repeat option with a numerical value displayed. DVD displays at 25 frames per second, so for every second that you want the image to appear on the screen, a value of 25 needs to be added to the number in this box. In this example we've set images to display for two seconds, or 50 frames. Once this is set,

select each image in turn, make sure you've selected Before Current Edit Frame, and then hit Render.

4/ Add filters (the ever-useful Pan and Zoom are always good value for family snapshot slideshows) and transitions as you did for video.

5/ If you want titles to appear in the style of PowerPoint or Keynote, add multiple versions of the same image, giving them titles using the DVtitle filter. Use the x and y offsets to position the text in well-defined lines – then set up the Fade transition: your titles should now be floating in space.



Kino supports rare file types including BMG, SVG and XPM for still-frame import and export.

original file will be overwritten – it should now be called **002.kinofx.dv** and will be blissfully silent

This is perhaps the simplest effect *Kino* is capable of. We'll now look at a few of the more advanced options for changing not just the look of the clips but the way in which one clip gives way to another. The former is called a filter while the latter is known as a transition.

Filters in Kino

In video, filter takes its name from the physical filters such as coloured gels that a photographer might place over the lens of their camera, and this is a pretty good metaphor for the way in which they work. In *Kino*, you select a filter and it's added globally to a clip. To do this, select a clip, go into the FX tab and, in the third section, ensure Video Filter is selected.

Kino offers some interesting filters (available from the drop-down list) including tools for isolating individual colours in a clip, adding titles or a sepia tint, reverse video (for that *Ashes To Ashes* look) and a pan and zoom option (otherwise known as the Ken Burns effect), which is useful for still images and is much beloved of documentary film makers

We're going to add a title to the first clip in our sequence, so we select the DVtitler option from the drop-down. The options in here should be instantly familiar as they deal with font selection, text and background colour. It's also possible to set the X and Y offset to position the text absolutely accurately within the frame.

A tip to remember is that video uses projected light, so white text will be more readable than black text, even on quite pale images. Once these elements are set, simply type the required text in the box provided and hit the Preview button. When you're satisfied with the look and content of the title, just click Render and let the computer do its work.

It's very instructional to play around with these effects to understand what digital video is capable of. For example, using the Colour Hold filter in conjunction with a standard colour selector, it's possible to isolate individual elements of an image to retain their hue while the rest of the frame becomes black and white (instant *Pleasantville*!) while the Soft Focus filter adds a dreamlike quality to film that lends itself to flashback sequences à la Deckard's unicorn dreams.

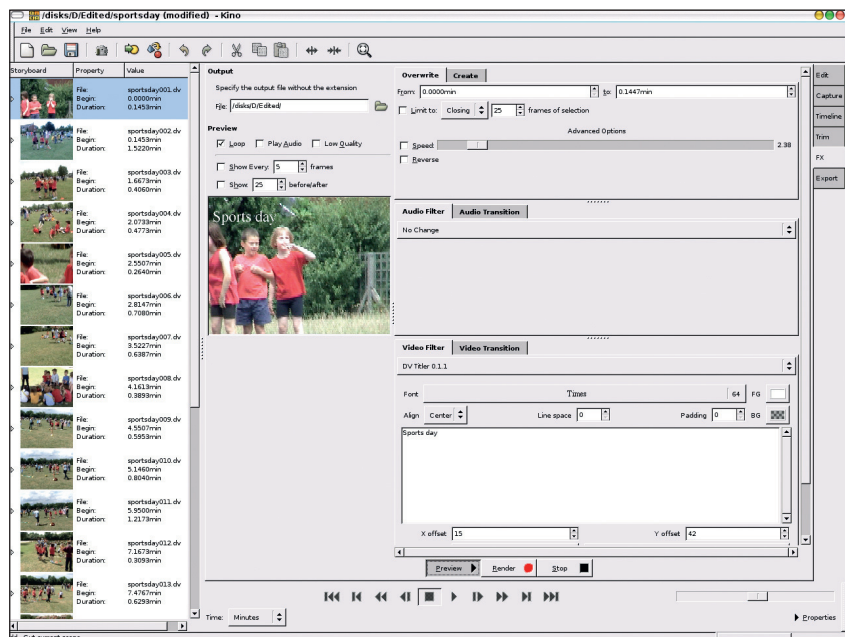
Smooth transition

Transitions change the way in which frame 1 changes to frame 2. Back in the days of manual home video editing this involved clean cuts – or jump cuts – from one scene to the next, but applications such as *Kino* provide a far wider range of options.

The standard effect, one so common in film that you'd hardly even notice it, is where one image is faded on the top of another over a series of frames. Technically this is called a dissolve. To achieve this effect in *Kino*, select the start clip – the scene that will be fading away – and hit the FX tab.

Now select the Video Transition option and choose Fade from the drop-down list. If you were to now click the Preview button you would see the first clip fade out over its complete length into the next scene in the time line; this is because the From and To buttons at the top of the screen automatically follow the start and end points of the clip. To begin the transition later, adjust the From figure so that it's closer to the To number (the closer these two numbers are, the faster the transition will be).

On the typical home video where the state of the audio is often forgotten about it's worth also defining the Audio Transition here, too. In the relevant section, select Cross-Fade from the drop-down list to create the aural equivalent of the video dissolve.

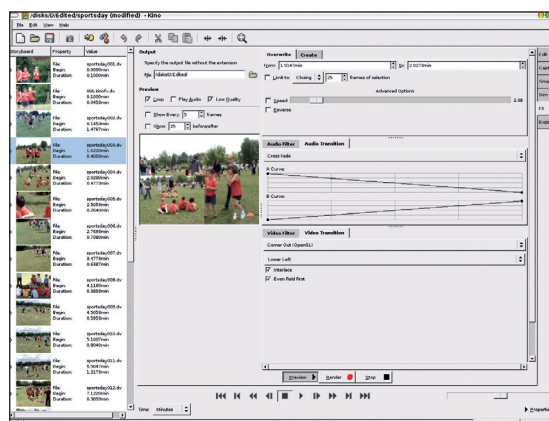


Install the dvititler package to add titles to your video.

Again, you can preview the effect painlessly and when you're happy, render it. Once rendered, a new clip will be added to the timeline following the **00x.kino.dv** convention; this will contain the small section that has the transition. The really lovely thing about this transition tool is that the application creates a new file for the actual transition and then sets automatic trim points in the original pair of files (the 'before' will have a section trimmed at the end, the 'after' will have a section trimmed at the beginning) so that if you decide to abandon an effect after living with it for a while, the original files will be untouched.

As with the filters, it's worth taking some time to experiment with transitions. Nice ones to try include Tweenies, which does a 'picture in picture'-style transition or, for a smoother version of this, the OpenGL-powered Corner Out effect. One particularly nice effect is the Image Luma tool, which takes the luma (light) values from a third image and uses them to set the transitions. This might be useful if you were adding video to a corporate presentation and wanted to use the company logo to transition from one image to the next.

Another clever touch is that when you exit *Kino* after a session, the application will sort through the various effects you've rendered and discarded, note the ones that are no longer needed and offer to delete them. It's a typically thoughtful touch from *Kino*, and a reminder of how much you can get out of the program and improve your video skills. **LXF**



Transitions can be used to alter video and audio simultaneously with *Kino*.

NEXT MONTH

Now we have our footage captured, trimmed, filtered and transitioned, in our next tutorial we will come to what can be the hardest part of the distribution process: creating a DVD. We'll cover the whole job from ensuring everything is in the right format to burning the finished product for playback on a household DVD player.