Hands-on Multimedia: Editing Movies on the Desktop

In the first part of a new short series on Multimedia, Lee Calcraft puts Uniqueway s powerful Empire package through its paces.

Uniqueway, based in Cardiff, have long been associated with Acorn s efforts on the desktop movie front, and as well as writing the most recent version of ARPlayer, found in Acorn s Replay suite, have also been responsible for creating the vast majority of professional Replay movie clips currently available within the Acorn world.

Figure 1. Empire s three main windows: the Timeline, the Clip Bank and the Preview.

Their Replay editing package, Empire, grew naturally out of this involvement, and is about to be re-released with a number of enhancements. Essentially, Empire emulates a professional video editing suite, providing three main windows on the desktop: the Clip Bank, where resources can be held, the Preview window for viewing movie segments, and the Timeline window, on which actual editing takes place. Exactly which windows appear when you install Empire, can be set up by the user, but by default all three appear in a cluster.

THE CLIP BANK

In a typical editing session, you might begin by dragging one or more resources to the Clip Bank. Although these could well be ARmovie files or ViA files from Irlam Instruments Replay DIY, they might equally well be individual sprite files, Draw files, or a whole variety of different sound file types, all of which can be edited into your movie in one way or another.

One of the menu options on the Clip Bank window offers a full info display with each icon. This is extremely useful, and in the case of movie clips it gives essential information such as the length of the clip, the pixel size and the type of soundtrack. Another handy option lets you save a list of the Clip Bank items, which can be dropped on the Clip Bank window for instant loading at future sessions.

To use a movie file stored on the Clip Bank, you simply drag it to the Timeline window, whereupon it is exploded into its component frames, and displayed together with the accompanying sound waveform(s). The individual timecode of each frame appears immediately above it, and you can scroll

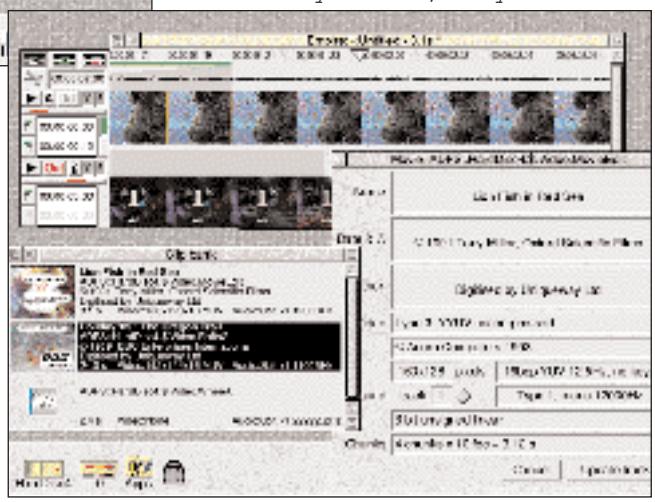


Figure 2. Extended information options

through the sequence by dragging the film with a hand-shaped pointer. If you hold down the Ctrl key, the rate at which the movie shuttles past speeds up by a factor of five.

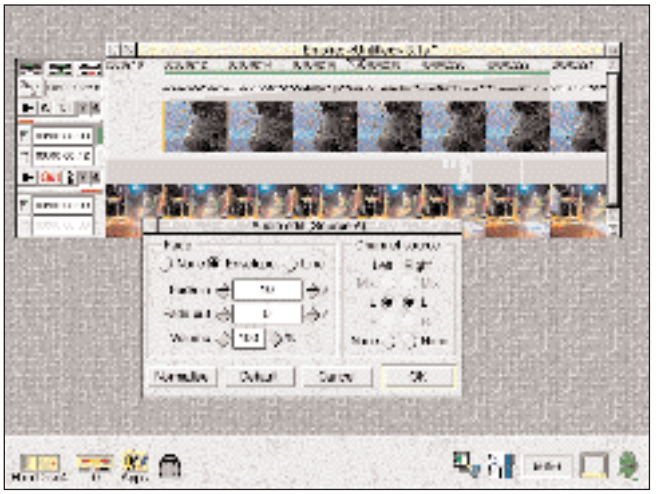


Figure 3.

A set of controls on the Timeline s tool bar allows you to apply edit-start and end markers to a movie sequence, alter the playback speed, and select the type of edit required (insert, overwrite or delete). A Play button allows you to selectively play the marked section.

EDITING IN EARNEST

To show how all this works in practice, I constructed a short movie sequence using small sections of two other Replay movies. I began by dragging the two source movies to the Clip Bank, and from there I dragged them to input channels A and B of the Timeline window. I then marked a section of the first movie which would be used for the first part of the output movie. There are two ways to do this. You can either simply use the hand icon to drag the sequence of frames until the required frame coincides with the editing mark on the window, or you can use the Preview window to do the job for you.

By Clicking on the Play button in the Preview window you start playing the selected clip. Pressing the Stop button halts the movie with the current frame automatically lined up against the editing marker in the Timeline window. All you need to do then is to press the Start or End marker buttons, to mark the segment. This method is very accurate, allowing you to make cuts with single-frame precision; and the scrolling audio display makes it very easy to coincide an edit with changes in the soundtrack, such as the end of a musical note or whatever. Once you have marked the start and end of an edit, you simply click on the scissors icon, and the edit takes place. If you are in Insert mode, the marked sequence is inserted into the output movie, which automatically appears in the bottom part of the Timeline window, all ready for checking in the Preview window, or saving to disc.

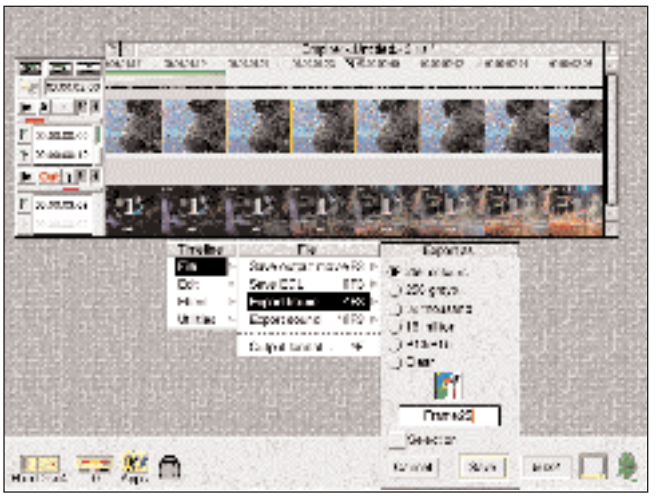


Figure 4. Frame export modes

EDIT DECISION LISTS

Another cunning thing about Empire is that it keeps track of all editing, and as well as providing a useful Undo option which lets you progressively undo a whole sequence of edits by repeated pressing on F8, it even lets you save a so-called Edit Decision List (or EDL for short). This is saved as a text file, and can be

dropped on the Timeline window at any point to completely reproduce a whole series of edits. This same file can also be used by professional video editing equipment to repeat exactly the same set of edits on video master tapes - though before the Archimedes or Risc PC can be used for professional editing in this way, Acorn will need to incorporate a means of automatically recording timecodes from master tapes into Replay sequences, as Apple have done with their QuickTime movie format.

EDITING THE SOUNDTRACK

Empire s Timeline window simultaneously displays sequences of individual frames and their accompanying soundtrack, and for editing purposes it allows you to work with a combined movie and sound sequence, or with either video or sound alone. This is achieved simply by selecting the appropriate icons on the Timeline toolbox.

External sound sources in raw data, Armadaeus, Wave or AIFF formats can also be incorporated into any soundtrack. To do this, you simply drag your sound file to the Clip Bank, then place it on the Timeline window. Double-clicking on it will play it in a manner analagous to playing a movie sequence; and to edit it into your movie, you just mark the sound frames that you want to use, and click on the Edit button, with Audio only selected on the Output channel.

Another useful feature lets you control the sound envelope to effect fade-ins and fade-outs. If you double-click over the sound waveform display on the Timeline window, the Audio edit dialogue box appears, allowing you to select parameters for the envelope, including the duration of the fade. You cannot test the effect of this proposed edit until you have actioned it by clicking on the Edit button, but if you don t like what you have done, you can just hit F8 (Undo) and try again.

DISSOLVES AND CROSS FADES

When you edit a movie sequence in any way, whether by adding or removing frames, the join will inevitably be abrupt, both from a sound and visual point of view. And while Empire can fade the soundtrack in or out at will, there is no similar facility for a visual dissolve.

However, you can do this manually. First shuttle the movie in the Timeline window until the join is at the edit point, and save the frame either side of the join as a sprite (ideally a 16-bit sprite if you have the hardware, but 8-bit if not). You now need to create a sequence of sprites which take you smoothly between the two. One easy way to do this is to drop them into Rephorm, and allow this package to morph between the two images, so creating a sequence of sprites which can be dropped back onto the Clip Bank window, and inserted into the movie at the join.

Unfortunately, Empire only allows you to insert sprites one at a time from the Clip Bank, so a lengthy dissolve can be a bit fiddly to achieve. But this is where Uniqueway s EMConvert utility (which is sold separately) comes into its own. This automates the process of converting a sequence of sprites or other image files into an ARMovie file. The complete dissolve can then be edited in from Empire s Clip Bank as a single object.

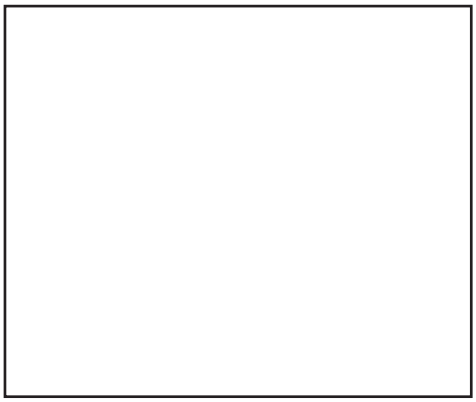
TITLING

One of the new features of Empire is its ability to use Draw files for captioning. To put up a caption on a particular movie sequence, you first create the caption in the required colour using Draw. You then shuttle the output movie in the Preview window until the first frame to be captioned is on view, and select the Annotate option from the Preview window menu. The Draw file may then be dragged from the Filer to the Preview window. The caption is automatically scaled, and can be moved to the required position by dragging.

PRODUCT INFO

Empire costs £99 ex. VAT, and EMConvert is £25 ex. VAT. Uniqueway can be contacted on 0222 644611.

When you are happy with the effect, you select the Use option and the captioned frame is copied to the Timeline input window A, from where the caption can be applied to the required sequence of frames. On the beta test version which I am using, this feature was not working properly so I was unable to test it fully. But this should be fixed in time for the release, and Uniqueway intend to further enhance this feature so that in future releases it may be possible to animate the caption by using Draw interactively to effectively apply a sequence of Draw images. It would be nice too if some simple dissolves could be included from within the package. But this is some way down the wish list, I believe. In the meantime, this is already an extremely powerful package, and ideal for experimenting with video editing on the desktop, or if you are lucky enough to have a Replay-compatible video grabbing board such as Irlam s Replay DIY or CC s Eagle M2, you can really put it to work in earnest.



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Next month in this slot we will take a look at using the Eagle M2 multimedia package and Uniqueway s EMConvert.