Editing

All editing works on the premise of taking sections of raw footage and putting them together to obtain a finished programme. This is done by stating the start and point of the raw footage you require and start or end point for where it should be placed in the final programme. The alternate to this is stating the start and end points in the programme and the start or end point of the raw footage.

Linear and Non-linear definition

The definition of linear is in a line. With linear editing everything is done consecutively, you start at the beginning and work to the end. Non-linear editing removes those constraints and allows the editor the ability to move from back to front at any point during production.

Linear editing

Two machine

Linear editing in its most basic form consists of two machines, a player and a recorder. The raw footage of a production is played on the player and recorded on to the recorder. By selecting specific section of the raw footage to be recorded the programme is built up using either assemble or insert edits. This restricts the changes open to the editor due to the finality of laying the footage direct to tape.

You start a programme on a new tape – you record 30 seconds of black you then proceed to lay down the necessary parts of your programme till you have built up a ten minute programme. At the end of the day the director arrives with a tape asking to have a 55 second shot put at the start of the programme. In order to do this the whole programme must be started again as you cannot physically move the programme along the tape.

Assemble and Insert edits

There are only two types of edits in linear editing, assemble or insert. Assemble edits are the simplest form where everything is recorded from one machine to another. This method is very quick and requires no preparation.

Recording a TV programme at home on a VCR is a basic assemble edit.

Assemble edits record everything together Video, audio and control track which causes problems when editing into the front of a programme.

You record Neighbours then the Simpson's on a tape the next night you record over Neighbours with another episode of the Simpson's – what happens at the point where the first episode of the Simpson's ends and the second starts?

The break up you see is caused by a break in the control track. As the new programme is recorded it replaces the video and audio but also the control track which is an electronic version of sprocket holes, keeping the picture and sound running together in sync. Because assemble edits lay down new control tracks each time they can glitch.

Insert edits do not use control tracks and only record the selected channels i.e. Video Audio 1, Audio 2.

You cut together an interview of a Sean Pertwee removing the questions to leave a long speech from Sean. Aurally the edit is fine but visually we see the cuts so using insert edits we overlay shots of the interviewer nodding over the cuts.

<table>
<tr><td colspan="2">Interviewer Nodding</td></tr>
<tr><td>Sean Pertwee</td><td>Sean Pertwee</td></tr>
</table>

To the viewer Sean continues to speak unaware of the cut point.

Because there is no control track being transferred during an insert edit the record tape must be "blacked" which is simply an assemble edit of a black video signal with control track onto a blank tape. Although insert edits reduce the chance of glitches the need for tape blacking and increases edit time.

Three Machine

Three machine editing increases the transition options from just cut and fade to black on a two machine suite to enable you to create wipes, dissolves and page turns.
The suite consists of two playback machines and one record machine and a vision mixer to enable transitions. The two playback machines send a signal to the vision mixer which will decide which signal is to be sent to the record deck. This technique also allows for chroma keying and picture in picture effects, among others.

Non-linear Editing

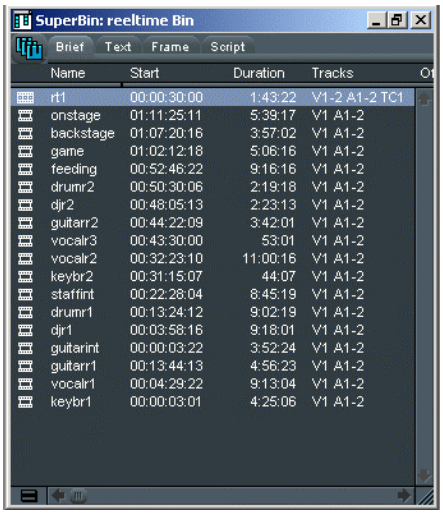
Computer technology has enabled the development of non-linear editing which has revolutionised the industry as it removes all the constraints associated with linear editing. By capturing or digitising footage into computer we take it into the digital domain and then able to manipulate in any order we wish. This technique can greatly increase edit speed as an editor can start a project without having all the footage.

A non-linear editing suite requires a computer with a video capture device and software installed and one VCR which can be used as both the record and playback deck.
An editor will sit down and capture the sections of raw footage he/she requires for the finished programme into the computers hard drive. The next step is to start editing the footage.
In figure 1 we see the basic layout of standard editing software.

Fig.1

Footage is stored as individual clips in bins (fig.2) this footage is then loaded into a window known as the playback window. In and out points for the footage can be selected here- by leaving these blank the whole clip will be used.
The record window is blank, here you can also choose in/out points – by leaving these blank footage will be cut in at the cursor point.

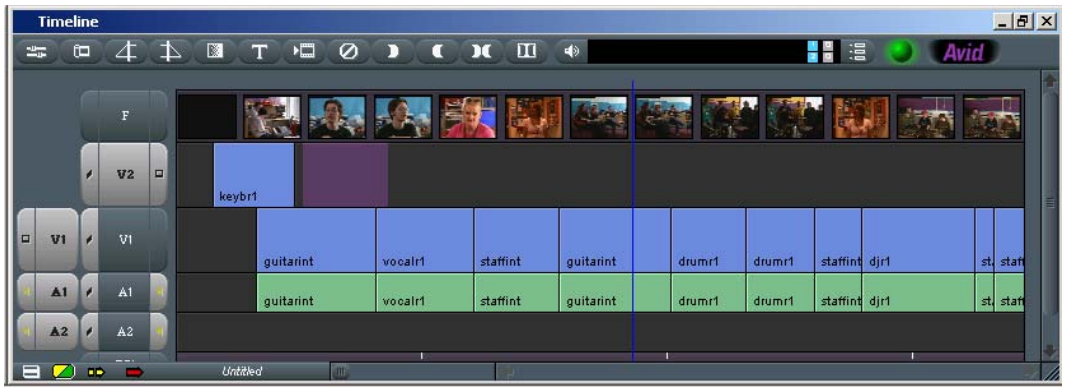
Fig.2



The final programme can be viewed in the record, right hand, monitor (fig.3) but if you look to the bottom of the screen (fig.4) we see a timeline which gives a graphical representation of the finished programme.

Fig.3

Fig.4



This is where the majority of editing takes place clips can be moved at will, layered effects added and most importantly you can undo anything you do.
The effects available in non-linear editing enable the editor to tweak effects preview in real time and again go back and change effects at any time.

Fig.5