Topic 93

5C's of Cinematography- Cutting

A **non-linear editing** system (NLE) is a video (NLVE) or audio editing (NLAE) digital audio workstation (DAW) system that performs non-destructive editing on source material. The name is in contrast to 20th century methods of linear video editing and film editing.

In digital video editing, non-linear editing is a method that allows you to access any frame in a digital video clip regardless of sequence in the clip. The freedom to access any frame, and use a cut-and-paste method, similar to the ease of cutting and pasting text in a word processor, and allows you to easily include fades, transitions, and other effects that cannot be achieved with linear editing.

Linear and non-linear editing.

Non-linear editing is the most natural approach when all assets are available as files on video servers or hard disks, rather than recordings on reels or tapes—while linear editing is tied to the need to sequentially view film or hear tape.

Metadat

When ingesting audio or video feeds, metadata are attached to the clip. Those metadata can be attached automatically (timecode, localization, take number, name of the clip) or manually (players names, characters, in sports: red card, goal...).

Direct access

Non-linear editing enables direct access to any video frame in a digital video clip, without needing to play or scrub/shuttle through adjacent footage to reach it, as was necessary with historical video tape linear editing systems. It is now possible to access any frame by entering directly the time

code or the descriptive metadata. An editor can, for example at the end of the day in the Olympic Games, ask to retrieve all the clips related to the players who received a gold medal.

Basic techniques

The NLE method is similar in concept to the "cut and paste" techniques used in film editing or in IT. However, with the use of non-linear editing systems, the destructive act of cutting of film negatives is eliminated. It can also be viewed as the audio/video equivalent of word processing, which is why it is called desktop video editing in the consumer space.

Accessing the material

The non-linear editing retrieves video media for editing. Because these media exist on the video server or other mass storage that stores the video feeds in a given codec, the editing system can use several methods to access the material:

- *Direct access*: the video server records feeds with a codec readable by the editing system, has an Ethernet connection and allows direct editing. The editor previews material directly on the server (which it sees as remote storage) and edits directly on the server without transcoding or transfer. This method is new.

- *Shared storage*: the video server transfers feeds to and from shared storage that is accessible by all editors. Media in the appropriate codec on the server need only transferred. If recorded with a different codec, media must be transcoded during transfer. In some cases (depending on material), files on shared storage can be edited even before the transfer is finished.

- Importing: the editor downloads the material and edits it locally. This method can be used with the previous methods