

Avid and /i dataLink

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A new feature in Avid editing systems is the ability to track lens metadata during production and be able to pass that through the creative editorial process into visual effects editing (VFX).

Lens metadata captured by Cooke's /i dataLink system can include:

- time stamp (LTC-TC)
- lens serial number
- camera serial number
- reel number
- continuous readings of focus, iris, and zoom values
- close focus and far focus
- horizontal field of view
- entrance pupil position
- normalize zoom value
- camera status

All of this metadata can all be used to facilitate the VFX process creating more realistic shots faster than ever before.

Cooke's /i dataLink joins Avid's long list of metadata support. Avid editing systems can manage and pass along frame-based metadata for all film gauges, with support for multiple rate timecode, feet+frames, and total frames.

What is frame based metadata?

If we follow the metadata from a single frame of a 35mm production through post, you will see how quickly metadata is amassed and the richness of what can be tracked during the editorial process:

- Camera
- Camera roll
- KeyKode™
- Scene
- Take
- Slate
- Shoot Date
- Time of day production timecode
- Playback timecode (as in a music video for example)
- HD Daily Master (24fps TC)
- NTSC down convert (30fps TC)
- DPX (from the scan)
- Color information (ASC-CDL)

All of the above are examples of source metadata. During the editorial process, each frame gains more metadata with rela-

tional metadata such as record-side timecode in all flavors: 24, 25, 30, as well as feet + frames and total frames.

What becomes interesting is the relational metadata that can now be associated with each of the frames. The /i dataLink support now allows visual effects artists to know what the lens was doing for each frame that was captured. Avid editing systems support the /i dataLink lens information by tracking the data packet itself—which is simply the Shoot Date and the timecode of the first frame as exposed, based on time of day. This makes it a unique identifier. When combined with the other source based metadata such as Camera, Camera Roll, Transfer and KeyKode.

The metadata as shown in the Avid bin (above) displays the sync point metadata for all takes. Since each take consists of many frames, those are counted as offsets from the sync point.

- KN Start: KeyKode which in this case is 35mm 4 perf. It will count in base 16.
- TC 24: 24 frame timecode – 1:1 relationship to the film frames and HD masters. Roll over at :23
- DPX: File name of the 2K/4K scan if done – this is a frame count from 000000 – 999999
- /i dataLink: Sync point of the data packet based on Time-Of-Day Timecode
- Transfer: This is a frame-based count (000000-999999) from punch frame at head of camera roll and counted in frame offset. Header is name of camera roll, lab roll, or source film reel as transferred.

Avid editing systems can export any of the timeline via Avid FilmScribe with any or all of the metadata mentioned (and all of the metadata not mentioned). Avid FilmScribe will export this information as HTML for posting to an Intranet in a workgroup environment (see: <http://tinyurl.com/3x7jfs> for an example of a traditional film list output) or as a print-out, or as a TAB delimited file to be parsed by any downstream process.

For VFX work, the artists will receive the frames used in the effect for all layers. For example, in a composite shot, all the metadata needed for all elements and tracking is included. When combined with /i dataLink data packet and the data packet reference ID from Avid with any of the source frame information supported by the application (at the very least; frame count), visual effects applications will be able to define what the lens was doing on that frame at that time to integrate effects more seamlessly. The result is better effects, done faster.