

Best Practices Outline for Deep Dish Television

Tape management

Recommendations

- 1) Click “Save” tabs and rewind completely after capture.
- 2) Label tapes with “Deep Dish”; videographer’s name; content description; date of creation; “camera original” or “dub”; if camera original, the name of camera used; project name (series name, episode name and number, etc.); a unique identifier; number, if part of a series (e.g. 1 of 3). The unique identifier for the tape should be the same identifier used to name the “reel” in Final Cut Pro. The unique identifier should therefore not include any file separation characters, special characters, punctuation, and white spaces.¹ To ensure compatibility with different Edit Decision List formats, reel names should be fewer than 6 characters long. A set of unique identifiers/ Reel names for Deep Dish can be simply three-digit numbers ranging from 001 to 999.²
- 3) Timecode is a signal that uniquely identifies each frame on a tape. In Final Cut Pro, it is used for synchronization between video and audio clip items, project interchange (such as Edit Decision Lists), and to ensure that one always gets the same frames when recapturing footage. These allow for automatic capturing, easy navigation through clips, and the ability to easily go back to the original tapes if scratch disks are lost. Final Cut Pro captures the timecode when it captures the video or audio signal. Without timecode, one cannot automatically batch capture your clips, or recapture clips with the same In and Out points.³ In order to create a continuous timecode with no breaks or duplication of timecode numbers within the tape, Deep Dish should stripe, or record without stopping, every raw DV tape with a black signal or color bars from the beginning to end. Videographers should be asked to do the same with their own raw tapes.
- 4) For non-timecoded footage or tapes with broken timecode, transfer to another striped DV tape or timecoded format and capture from the timecoded tape.⁴ Leave 15-30 seconds at “head” and “tail” to reduce potential complications in the capture process. These timecoded tapes (the dubs) will be kept for the Deep Dish archive. Non-timecoded camera originals may be returned to the videographers (if that is the policy—otherwise keep the camera originals).

¹ Final Cut Pro 6 User Manual, Volume I. p. 38.

² Final Cut Pro 6 User Manual, Volume I. p. 250.

³ Final Cut Pro 6 User Manual, Volume I. p. 25, 286.

⁴ Final Cut Pro 6 User Manual, Volume I. p. 286.

Capturing Footage to Disk and Logging

Capturing is the process of transferring footage from the original tapes to the computer hard disk. Final Cut Pro allows one to capture multiple pre-logged clips at once, one clip at a time while logging, or an entire tape or parts of a tape that can be later broken up into clips and logged.⁵ Regardless of which workflow Deep Dish chooses to log and capture, it is important to maintain the relationship between source tapes and FCP media files and clips.

Recommendations

- 5) Establish a standard filenaming scheme before starting to log clips. This will help avoid duplicating clip names.⁶ Filenames should be human readable and brief, with no white spaces, special characters, or punctuation.
- 6) Capture from timecoded tapes.
- 7) As discussed in the Tape Management section, ensure that Reel names in FCP correspond with the unique identifier on the tapes.

Documentation + Metadata

Even with proper digital asset management, the loss of files or their relational structure is an inherent risk in the medium. Maintaining reference documentation separate from the video and production files can be a useful means of preservation or restoration of the final project. There are several tools one can use within or separate from Final Cut Pro that can assist in such efforts.

Edit Decision List:

The Edit Decision List (EDL) is created as a means of saving and restoring the timecode data related to edits so that a project can go between different editing systems and between online and offline editing. An EDL can be used to save and restore project edits for preservation/restoration needs.

Every EDL begins with the title of the sequence and whether the sequence is drop frame or non-drop frame. Each edit point recorded on an EDL is assigned an event number, the information on which is recorded on separate lines of the EDL. The other default fields included in each line are: Reel/Tape name; Track type (video or audio); Transition type; Source tape In and Out Timecode; Edited clip In and Out Timecode Notes pertaining to each edit point can also be stored in an EDL. These notes can be used to describe the clip or document effects that are not controlled by the EDL, such as settings for filters, audio levels, and transitions.⁷

⁵ Final Cut Pro 6 User Manual, Volume I, p. 271-272.

⁶ Final Cut Pro 6 User Manual, Volume I, p. 251.

⁷ Final Cut Pro 6 User Manual, Volume IV, Chapter 10.

XML:

eXtensible Markup Language (XML) is a markup language like HTML. It encapsulates (“tags”) the different elements of a document for purposes of display or organization and clarity of content. XML is open standard, human-readable, viewable and editable in any text editing program, non-software specific, and extensible.

An XML document track every element of a Final Cut project, so that the data can be exported for use in another program that does not recognize the native Final Cut project. An XML document can also be imported into Final Cut Pro to create an edited project or recreate one that may have been lost or corrupted.

Each eXtensible Markup Language document uses its own set of fields and rules known as the DTD or Document Type Definition. Final Cut Pro uses a custom-made DTD known as *xmeml*. Several versions of *xmeml* have been produced. XML version information is always located in the second and third tag of each XML document. Apple has made a reference guide titled "Final Cut Pro XML Interchange Format" that contains description of *xmeml*, of the potential uses of XML by FCP, and a list of tags and their meanings. The guide can be downloaded at:

http://developer.apple.com/appleapplications/download/FinalCutPro_XML.pdf.

To export a clip in FCP, open the desired project and choose File/Export/XML.

To edit or applying desired changes to an XML document, one can use a simple "Find and Replace" command. To makes things easier, however, a number of graphical and wysiwyg XML editors are available for purchase or even free download. Some of these editors were created specifically for use with FCP's *xmeml* DTD, and were designed to perform certain popular types of changes. For example, one editor extracts metadata from BWAV files and adds it to the metadata for FCP audio clips. Several editors have been developed that add titles, subtitles, and other text into a sequence.

Recommendations

EDL

- 8) Ensure that all clips have reel names, and that reel names are in form compliant with EDL format (e.g. in length and character types), before exporting EDL⁸
- 9) Avoid making changes to the contents of an EDL file, as any changes in formatting (e.g. white space characters) can prevent the EDL from being interpreted properly.⁹
- 10) The Final Cut Pro 6 User Manual suggests that users follow the following guidelines during editing to ensure a successful EDL export:
 - Limit the number of edits in your sequence.
 - Only use transitions in track V1.
 - Join through edits wherever they appear.
 - Limit the number of audio tracks you use.

⁸ Final Cut Pro 6 User Manual, Volume IV. p. 145.

⁹ Final Cut Pro 6 User Manual, Volume IV. p. 140.

- Don't rely on audio mix levels.
- Avoid nested sequences and nonstandard video transitions.
- Be careful when using still frames and speed settings.¹⁰

11) Use the Notes feature in the EDL to keep track of other relevant details about the project

XML

- 12) While the XML file serves as back-up documentation should anything happen to the Final Cut media and files, a print-out may simply be a waste of paper. For example, the XML file we outputted for a single program amounted to more than 275 pages of metadata. The XML file be therefore be exported and saved for preservation purposes, but it may not always be practical or necessary to create a print copy.
- 13) Final Cut Pro is able to generate or export XML files not only for entire projects, but also for specific sequences, bins, and clips as well. See Chapter 5 of the Final Cut Pro XML Interchange Format manual for a complete list of xml tags associated with clips, media files, and source reels.
- 14) Our sample XML file lacked some source reel names. In this scenario, reconstructing a show with only the XML file is not possible. Even attempting to perform a global change to conform reel names to tape names and numbers would be extremely challenging. Only by naming the source materials consistently during shooting, and then referencing the same names as reels in Final Cut Pro during editing would a future attempt at reconstruction be possible.

Source Tape List

- 15) A separate database or spreadsheet with basic metadata related to the source tapes should be created. Tracking basic information would allow for an improved “paper trail” that could to assist in preserving/recreating a program. This database would ideally trace the life of the source tapes on a manageable level – where it came from, how it was used, what programs/segments it was used for, and what happened to it when the project was completed.

Suggested Metadata Fields:

- i. Program/Project Name
- ii. Segment/Episode Name
- iii. Running Time
- iv. Producer Name
- v. Videographer
- vi. Source Tape Number
- vii. Source Tape Title
- viii. Source Tape Format
- ix. Date Filmed

¹⁰ Final Cut Pro 6 User Manual, Volume IV. p. 148.

- x. Date Captured
- xi. Capture Settings
- xii. Output Settings
- xiii. Date of Last Edit
- xiv. Tape Returned to Videographer?
- xv. Rights
- xvi. Tape Location
- xvii. Captured Video Location
- xviii. Notes

Checksum

- 16) Checksums are programs that compare transferred/copied files to their source to look for transmission errors, or that check the integrity of stored data. Corrupted data may suggest that migration or other actions are in order. Video and documentation files that are stored long term should have regular checksums applied and recorded to help preserve the reliability of those files.