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## Non-Linear Project Management: Masters and Versions

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### Principles of Non-Linear Editing

Non-Linear Editing is a term generally applied to Video and Audio editing, and it refers to the idea that you have a source, "master" file which remains in one place, intact and unaltered. You then access this file to render it into a document of one kind or another. In Final Cut you "capture" the media. That reads it into your library directory and allows you to access it to build your project. You build your video by placing clips, which do not imbed actual clips, but just markers back to the source- the captured media. This may sound familiar if you work with page layout programs. The components of the final piece are not imbedded in the file, they're collected and marked back from their location, even right down to the font.

Non-Linear Project Management, (ok, I made up the term, as far as I know. Always did like to make up words... an old Philosophy prof of mine used to say, "Why make up new words when you can butcher perfectly good words that already exist?). Sorry. Once again. Non-Linear Project Management is based on the idea that you have a source file, a master file, which remains intact. You create versions that point back to that source file, which are small text files, or "delta" files, and they essentially explain what we want to do to the original file to make that version.

### The Master File

The master file is brought into your main library through a true Import. The Import process makes a copy of the original file, whether a RAW digital camera file or a TIFF or other type, and spins off a few files for reference. In Aperture, for example, each master file is placed in its own folder with its spin-off files. These small files give Aperture information about various versions and metadata, among other things. This file does not change. Whether a TIFF or RAW, the file is used as a source only to provide data for the final edit.

In Aperture the master file lives inside a container which is accessible, although not easily, without using Aperture. It's designed, however, to be driven through the Aperture interface. The master file can be exported out of that library to be read by any other program.

### The Version File

Like the catalog model, this model generates a small thumbnail of the master file, but in this case now generates a preview based on whatever changes you've made to it. The reference file it makes not only tells you where the original is, but how you've changed the color, crop, sizing and whatever else for that version. If you want to make another use of the file, you're simply going to generate another version, which only generates another little reference file.

You see where I'm going with this? This model is not based on propagation, it's based on non-linear editing. We have multiple targets for one source, so we make little notes referencing that master file and we're not making duplicate versions all over the place.

One of the really interesting things about this is your ability to propagate edits throughout different projects. Unless you make a new version, you're referencing the current version. Let's say I have a project like a portfolio, and I have my version file placed in the project somewhere. After working on this image on my website, for the client and now for my book, I've finally decided that I think it's too dark, and needs to go warmer. If I fix it now, it will be fixed in every project it sits in. (This is my pattern constantly... I'm working on an exhibit print and I finally decide that I know how I want to print it. I've used it previously for a flip-book and a greeting card for promoting the show... and now I have to go back and change it in all the previous iterations. It drives me crazy).

You don't have to change it everywhere, though. If, for example, you like the image throughout all its previous incarnations, you just want to make it a little lighter for, say, a newspaper story, you simply save it as a new version, keeping the original edit intact. What's another 240k file, anyway?

### Importing Files

When you Import the master files, in Aperture, you're using an interface that prompts you to create a Project. Right off the bat, it's bringing you into the project management dialog, and during your import you can alter the information associated with those files. You are not viewing the master files, you're viewing the first generation version files, automatically created on Import. Generating different versions is as simple as a "New Version" command.

### Sorting and Rating, Purposing Files

Versions can have the same ratings and sorting criteria that Browsers and Catalogs have. You can assign hierarchical numbers, colors, keywords and various levels of metadata. You can then sort using these ratings. Honestly, this is where the marketing people get all excited, showing off these remarkably photographic-looking interfaces in all of these products... browsers, catalogs and Aperture alike. It's really the least important feature. My humble opinion of, for example, the Light Table in Aperture, is that it's exactly the stuff that I was hoping to leave behind in my film-based studio. (...just too many hours peering over a real light table, I guess!)

### Backup and Archive

Here's what is really exciting. The non-linear editing model allows you to backup data a fraction of the size of a propagation model. First, I'm backing up a library with the smaller RAW camera files, (if that's what I'm working from). Second, for each version I'm using a tiny text reference file instead of TIFF after TIFF. Finally, I can overwrite backups since I'm generating unique versions and saving those, since they're small and fast. I can backup the entire library, and I can also just backup (or Export) projects. I can also export the master files into an archive in their original state.

I'm trying hard, as I said, to be objective here, but this is a solution I've been looking for since I started taking pictures. We're using tools well known in other disciplines and solving a serious problem in managing photography projects... how to organize individual images on a project-by-project basis.

-Ted Dillard

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(Excerpted from the draft "Photographic Project Management:  
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