
BONES DAILIES

Open Post Production Framework

White Paper

NOTES V1.2

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The customer shall contractually bind third parties, to whom he commits the product, to correctly dispose of the product at the end of its usage period at their own expense in fulfillment of the statutory provisions and to impose a corresponding duty if the product is recommitted to other parties.

Bones Dailies White Paper

1.1 Introduction

In the real world there are rarely any two productions which have the exact same requirements for dailies. The post production facility doing the dailies has to make a variety of alterations, large and small, to the way they operate for each production they work on.

Large budget feature films may ask for fully graded selects transferred in HD 444, sound synchronized and logged, with multiple versions of video tape and files as deliverables. Smaller independent features may ask for a best light grade of each entire lab roll, with only one video tape copy as a deliverable. Some will shoot on film, others electronically. Some will record sound on DAT, others will use DVD media. US series will shoot at 24 frames per second and off-line in NTSC, while many European series will shoot 25 frames per second and off-line in PAL.

There is no single way to do dailies that suits everyone. This fact alone makes for interesting times at best, stressful and sleepless nights at worst. No matter how big or how small the client is, they don't like their dailies deliverables late and they don't like them being done wrong.

Bones Dailies – scalability (1)

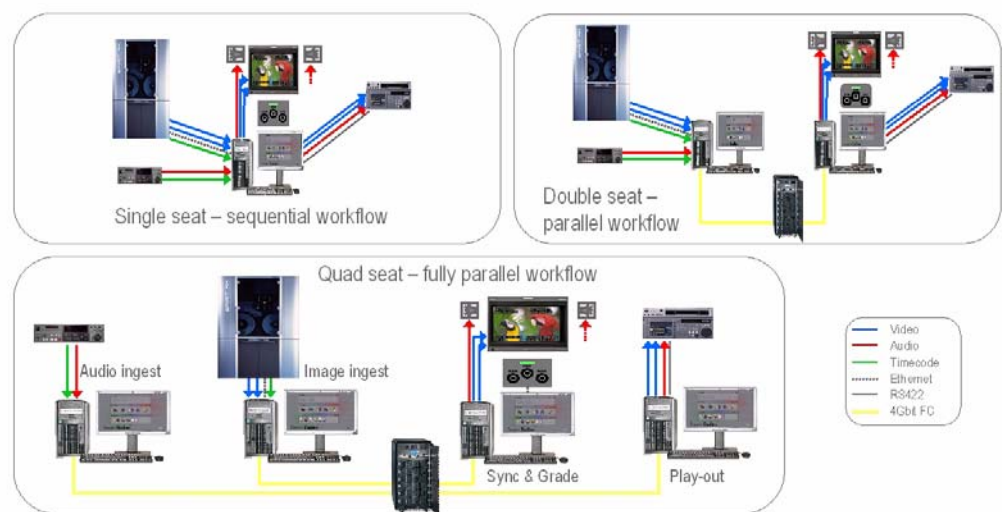


Figure 1 Bones Dailies - Scalability (Single Seat to 4 Seat)

1.2 Flexible Workflow Approaches

As a facility owner you want to maximize the return on your investment in equipment, staff and infrastructure. Owning expensive pieces of equipment, which by design can only be used in a certain way by a specialist operator, may mean there are times when they are both standing idle because your client wants you to work in a very specific way. Having the freedom to re-configure your equipment and therefore your workflow, to match the needs of your clients on a job-by-job basis, is therefore a very attractive situation.

Bones Dailies is designed for one thing and one thing only, to do dailies as fast, efficiently and as effortlessly as possible. Because of the unique approach that's been taken in its design, it gives customers complete flexibility in how the dailies workflow is put together. Having the ability to use its own internal ASC CDL based real-time color corrector, or an externally connected traditional hardware based color corrector is the key to its flexibility.

The following are examples of how different workflows can be pieced together using Bones Dailies:

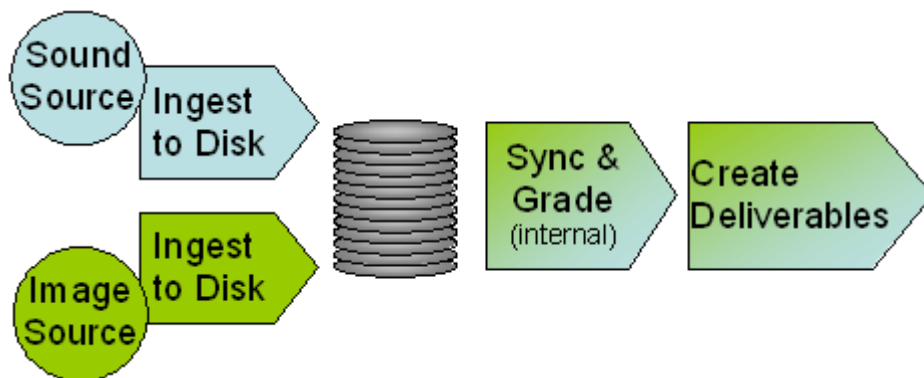


Figure 2 Un-graded files are stored on disk. Bones Dailies applies ASC CDL color correction in real-time during creation of deliverables.

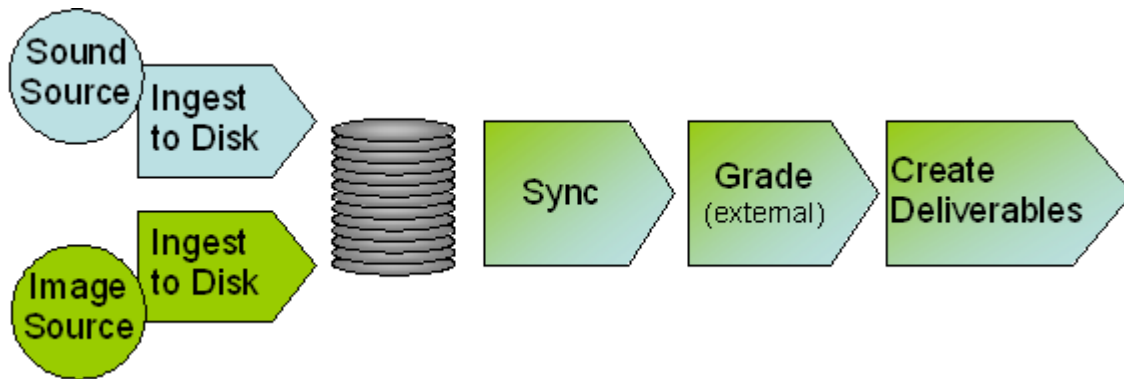


Figure 3 Un-graded files are stored on disk. External color corrector controls Bones Dailies timeline like a virtual telecine and applies full color correction in real-time during creation of deliverables.

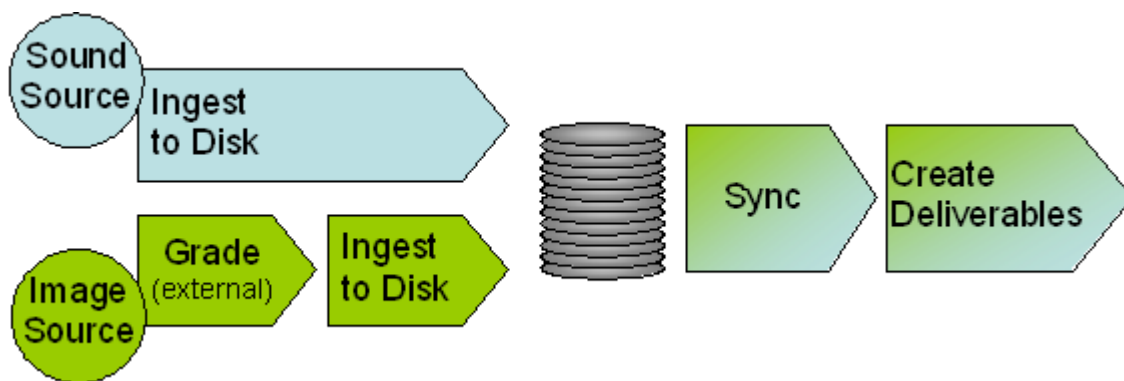


Figure 4 Film is graded on telecine in traditional manner. Already graded files are captured to disk in one film pass, faster than real-time. Bones Dailies manages sound sync, logging and take selection. Play timeline to create deliverables.

1.3 Efficient use of Time, Staff & Equipment

The introduction of hard disks revolutionized the editing process in the early 1990's. For some reason it has taken until now for the same principles to be applied to the dailies process, but what a difference they make.

Traditional telecine dailies processes have always required the entire telecine suite for the duration of the transfer, syncing and grading process. For much of the session the telecine is parked on a still frame while the grade is set and the right sound element is married to it. If it wasn't on a still frame it was shuttling backwards or forwards, the time the telecine was in play mode was perhaps less than 50% of the total session.

Such inefficient use of arguably the most expensive room in the facility is now a thing of the past. Bones Dailies allows non-stop, head to tail ingest of each lab roll in its entirety, at speeds of up to 25% faster than real-time. By ingesting each frame to high performance hard disks in uncompressed 10-bit Log, Bones Dailies can break the dependency of the Colorist on needing access to the telecine for the grading process. What's more, if using a multi-stream capable SAN as the storage device, the Image Ingest and Grading processes could even happen concurrently.

Taking it to the extreme, by connecting multiple Bones Dailies systems on a high performance SAN it is possible to have the four logical dailies tasks happening at the same time. Put simply, you can start playing out color corrected, sound synchronized, fully logged dailies to HD video, SD video and multiple file formats, whilst your telecine is still transferring the last lab roll for that shoot day.

In a facility where dailies work is slotted in at night, in between client attended commercials or television work in the day, you have much more predictability on when the telecine will be free again. Once every lab roll has been ingested onto the SAN, the telecine is free and ready for another job. The dailies work may still be ongoing, but the telecine is no longer needed for it.

But, not only the image ingest and therefore the use of the telecine will be optimized with Bones Dailies. Also, the fully automatic audio slate detection and its ability to very precisely (sample based) identify the synchronization point within the audio saves time during the audio ingest and preparation phase for the dailies.

1.4 Scan Once Workflow

For budget conscious projects, it would be a significant cost saving if the scans made in doing dailies could be used for the on-line and final grade. We use the term 'scan once' to describe this workflow, and it can only be accomplished if you can preserve the full dynamic range of the original camera negative.

By capturing 10-bit Log images to disk without applying any color correction (see Fig.1 and Fig.2), and by applying the color correction only during the creation of the deliverables, Bones Dailies can keep a pristine digital negative copy of each and every lab roll. Bones Dailies allows you to turn On and Off the color correction as you wish on the play-out timeline, meaning you can make a raw, un-graded 10-bit Log archive copy of all your materials, still with sound, keycode and other meta-data. When time comes for the confirm, you can use these original dailies scans and if you had chosen to use the ASC CDL way of grading you can import the dailies grade as the start-point of your final grading session.

1.5 Consistency & Repeatability

In the middle of the night when things are running late, even the most experienced operators can make simple mistakes. It might be that a batch of viewing DVD's were created in wide screen 16:9 when they should have been 4:3 with a 16:9 letter box.

Bones Dailies uses a mixture of Production templates and Payout Templates to reduce the occurrences of such simple but common errors. Users can quickly create and maintain a fixed set of Output Templates unique to each Production. By logging into the system by User, by Production and by Shoot Day, the same play-out templates can be used every day of that job. This automatically manages things like the correct configuration of character burn-ins, timecode start points, tape striping elements, masking, audio channel mapping etc.

The Production templates add another layer of protection against mistakes. Each project you setup gets its own Production template. In here, the Administrative level users can define specific ways of working which are unique to that client's requirements, such as a particular Print Emulation 3D LUT, audio sample rate, audio bit-depth, size of pre-rolls to each take, client logos etc. Having such settings made and maintained centrally, but kept in a shared access database, means no matter which system an operator sits in front of, they will always accessed be doing their work in the correct way for that client.

1.6 Finally... for the Colorist

There are many creative and talented individuals doing dailies color correction who feel they are simply not given enough time to make the pictures as good as they could be. The simplicity of operation and time efficiencies Bones Dailies brings, gives back the Colorist time to actually grade the pictures. The system automatically manages all the keycode and timecode logging activities, it always makes an A-frame compliant timeline without you having to check a single timecode, and if grading with images off disk then you get instant cueing to any shot on any lab roll.