FILMLOOK INC. NEWSLETTER
SUMMER www.filmlook.com 2008

# FOCUSING ON THE BATTLE FOR DIGITAL CINEMA HD vs. 2K vs. 4K

Finally at long last, the consumer high definition disc format war is over and Sony's Blu-Ray has been declared the winner. HD has since reached an even higher level of awareness among consumers and the entertainment industry. We are less than a year away from a national transition to digital television (all digital television unfortunately does not mean all HD), and more homes are installing HD televisions. The consumer's appetite for high definition content will soon be insatiable. Producers are searching for the best HD cameras to create programs and movies. Some producers are even pushing the envelope further than HD, choosing to invest in 2K and even 4K acquisition although not necessarily for television. The perceived logic is that film has much higher resolution than even HD, so digital cameras that can image at even higher resolutions than HD will be needed in order to compete with film's versatility. With new and cheap digital cameras that can shoot in HD (1920 x 1080), 2K (2048 x 1556) and even 4K (4096 x 3112), should producers invest in a camera that offers megapixel performance but is hampered by budget-busting post workflow?

First off, the RED (advertised as 4K), Dalsa and Silicon Imaging (2K) cameras do not use tape cassettes-media must be recorded on portable hard drives or flash cards. Once the media is captured and transferred to a RAID in a post facility, then it can be edited and color corrected. It is at this stage that 4K files run into a problem: the files are so massive they are difficult to display, edit or color correct. 4K is four times the size of 2K. This is a lot of data to push around in a post production facility, requiring proprietary software and hardware solutions even to down convert files for SD offline editing. Real time playback of 24 frames per second 4K images is extremely difficult on even the fastest RAIDs working on the fastest computers. Displaying a 4K image is impossible on a broadcast-quality CRT monitor (like the ones that colorists prefer) and 4K can only be seen on a handful of LCD displays or projection systems such as Sony's SRX-X110 4K projector. 2K files are a bit more manageable since they start to approach the size of 10 bit uncompressed HDSDI video. Any editing or image manipulation of 4K files is usually done via a scaled-down 2K proxy file anyway, then the changes are applied to the original 4K files. Plus, all of this data manipulation will be costly-only a handful of facilities that just so happen to deal with major motion picture studios can handle 4K files, and because of the difficulty with just storing the 4K files, there is little incentive to offer low rates to independent and low budget producers with a project shot on inexpensive pseudo 4K cameras like the RED.

If 4K is too cost prohibitive then 2K or even HD may be a more cost effective solution, especially if your sale objectives includes consumer HD, cable and broadcast. 2K is very close in data size to HD (1998 x 1080 digital cinema 2K versus 1920 x 1080 HDTV). The work paths for 2K and HD are established; most digital cinema venues will accept and display 2K and HD originated material. It is far easier to negotiate favorable rates for editing and digital cinema packaging for a 2K or HD project . If minimum compression and maximum color space are concerns, then it makes even more sense to consider shooting, editing and color correcting on HDCAM SR with dual stream HDSDI in 4:4:4 color space. There are several major motion pictures that have been or are currently being shot using the Panasonic Genesis and Sony F23 cameras. Despite the costs involved in renting these cameras, your postproduction budget will be far more reasonable and predictable than attempting to work with 4K.

One more thing to consider-despite the perceived superiority of film's resolution, actual resolution tests from the best possible film prints projected in theatres, average measured values taken from answer prints and release prints were about 1000 lines and 750 lines per picture height, respectively. This test was done under ideal conditions, and the white paper detailing the results can be found at http://www.cst.fr/IMG/pdf/35mm_resolution_english.pdf (Although using digital intermediate methods would be significantly better.) From these tests, we can conclude that even ordinary HDCAM (1440 x 1080) digitally projected at digital cinema 2K resolution (1998 x 1080) can significantly outperform a film release print, at least when comparing native resolution. Dual stream 4:4:4 HDCAM SR will look even better than HDCAM, with minimal compression artifacts, full 1920 x 1080, and with a tried-and-true work path in most modern post facilities.

## CONGRATS TO HBO SPORTS

HBO Sports' "Brooklyn Dodgers: The Ghosts of Flatbush" has won the 2008 Emmy Award for outstanding sports documentary. We congratulate executive producers Rick Bernstein, Ross Greenburg and producers Ezra Edelman, Amani Martin on their achievement. We are proud to have worked on this exceptional documentary, and wish HBO Sports continued success on their future productions.

## EVERY LITTLE STEP

Endgame Entertainment used FILMLOOK Media & Post's editorial services to complete the visual post work on their feature length documentary "Every Little Step" in time for festival consideration and DI film out. "Every Little Step" examines the origins of the success of "A Chorus Line" as well as a backstage look at the casting process and rehearsals for the revival of the acclaimed musical. The documentary was assembled from over 400 hours of footage, ranging from archive video of writer/producer Michael Bennett to HD footage of opening night. All tapes, ranging from DV to DVC Pro HD, were brought into FILMLOOK Media & Post's Final Cut Pro suite, conformed to a 24 frame timeline in HD, then the feature was color corrected in the da vinci 2K suite for final output on HDCAM SR for video distribution and broken down to 20 minute reels for scanning to film negative. "Every Little Step" is currently being reviewed for consideration for several film festivals later this year.

## SCARE TACTICS

Hallock Healey Entertainment is using the exclusive FILMLOOK®/da vinci 2K suite on their hidden camera reality series "Scare Tactics" for the Sci-Fi channel. Hosted by 30 Rock's Tracy Morgan, the series pits unsuspecting victims in terrifying and unexpected situations while shooting their reactions on a multiple camera setup.

## BATTLE OF GETTYSBURG

Morningstar Entertainment has finished post work on the documentary "Gettysburg: The Battle that Changed America," an HD documentary on the pivotal civil war battle. Combining accurate and authentic locale battle re-creations, computer simulation and historian interviews, the documentary is a comprehensive look at the strategies and blunders of the Gettysburg battle that would change the course of American history forever. The documentary was shot in HD then brought to FILMLOOK Media & Post. for da vinci 2K color timing. Morningstar Entertainment has used FILMLOOK Media & Post. for several Discovery Channel and National Geographic Channel documentaries, including "Battleground: The Art of War," "Secret History of Religion: Knights Templar" and "Decoding the Past: Tibetan Book of the Dead." "Gettysburg: The Battle that Changed America" will be seen February '09 on the Discovery Channel.

## FIGHT ON DVD

Rob "Heavy Metal God" Halford is releasing a new "Fight: Into the Pit" DVD, featuring the legendary but never released Phoenix concert, rare interview footage and never before seen rehearsals of the heavy metal group. "Fight: Into the Pit" required FILMLOOK® processing, color enhancement and DVD authoring for worldwide distribution. "Fight: Into the Pit" is now available through robhalford.com and on amazon.com worldwide.

## EVERT ON TENNIS CHANNEL

The Tennis Channel has produced "The Evert Era," a television documentary based on legendary tennis star Chris Evert and her family. "The Evert Era" is an intimate look at the family's past successes and their current business in Florida running the Evert Tennis Academy. The HD documentary was brought to FILMLOOK Media & Post for da vinci 2K color timing prior to air. This is the first project that FILMLOOK Media & Post has worked on for The Tennis Channel.

*If you have a news item for the FILMLOOK Newsletter, please email us at anna@filmlook.com and it will be included in our next issue.*