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SHOOTING DIGITAL CINEMA

Pioneers in New Territory



Film, HD, or digital cinema? The Spirit of Yosemite was a little of each—filmmakers shot on film and posted in HD for projection on DLP projectors.

In the not-so-distant future, feature films may well be acquired, post produced, and distributed in the digital realm, and transferred to the local movie theater over satellite or fibre. But digital cinema filmmakers aren't waiting for that future. Today's digital cinema pioneers do not simply replace analog technology with digital, they integrate traditional storytelling with digital technology in varying and ingenious ways.

Millimeter takes you on a tour of two very different productions in which filmmakers utilized digital technology to best convey their stories. As these productions indicate, in the hands of creatives, digital technology can unleash a multitude of paradigms for "Digital Cinema." These are, indeed, optimistic times for the future of storytelling.

At the Yosemite Visitor's Center, for the last 17 years, visitors to the spectacular national park have been introduced to its wonders with a very old, very scratchy 16mm film. It was time for a change, and Park Service technical director Eric Epstein found Greystone Films and David Vassar, who produced, directed, and wrote *The Spirit of Yosemite*, 30 years after making his first documentary—on Yosemite.

Commissioned in September 1998, the new film—paid for by the nonprofit Yosemite Fund—was to be shot in 35mm and projected by laser disk. "I was horrified," recounts Vassar. "I said, if we're going to project using that incredibly old, bad RGB technology, why are we bothering to shoot in 35mm?"

Though Vassar lobbied hard for a 35mm projection, logistics made it impossible: The theater was too small for a 35mm projection, and the program's 10 daily showings would require the regular expense of new prints. One hundred yards from where the film was to be screened is a gallery featuring Ansel Adams' stunning B&W photographs of the park. "That was the aesthetic, visual challenge," says Vassar.

"Given that the essence of Yosemite is the light and we were shooting in film, I was pretty hard to convince that we could project in video and do the place justice," says Vassar. "It would be a crime."

Setting aside issues of postproduction, Vassar and his director of photography Christopher G. Tufty began production in April 1999, with an Arriflex 435 and an Arriflex III for back-up, from Keslow Camera in Culver City, California. For lensing they used a set of Zeiss Super speeds

T1.3 Primes and Angenieux, Canon, and Cook zooms.

Production of this documentary was an adventure that took the camera crew throughout the park, from familiar sites in Yosemite Valley and the Mariposa Grove of Big Trees, to remote, unfamiliar landscapes in the High Sierras. Shot MOS in Kodak 5245 and 5277, the film required a two-year shoot to capture the right lighting conditions.

"Yosemite is so startling that anyone can expose and come back with magnificent images," says Vassar. "It's catching those fleeting moments when the scenery is lit by extraordinary changes in the atmospheric conditions. Those moments are gone in a flash. We caught them one time out of 10."

Tufty adds: "We waited for God's light. We were trying to match the Ansel Adams feel where you'd wait for a day or two—or even a season—to shoot in the ideal light."

In the two years that have passed since the first roll of film was shot, HD became a feasible format for both acquisition and projection. Though both Vassar and Tufty were still skeptical, out of curiosity, they went to see the HD projection of *Phantom Menace* at a Burbank movie theatre.

"It knocked our socks off," remembers Vassar. "Then there was a big click in my head. We saw that we could resolve an image in HD video."

That didn't mean that they abandoned film. Vassar considered transferring the film dailies to HD and finishing the show in an HD online environment, but Laser Pacific Video president Leon Silverman helped them weigh the alternatives. They decided on a film finish.

"Five years from now let's say there's a new generation of digital storage or digital projection," Vassar explains, "and the Park Service says, 'Wow, that's a significant improvement; let's buy that projector.' Then we can go back to camera negative, retransfer and re-online—easily a \$50,000 process—the IP is the perfect film archive." Silverman agrees: "This is the ultimate marriage of film and HD."

Developed at Foto-Kem Laboratories, the negative film

was color corrected and transferred to Beta-SP at 24 fps, which was then digitized into an Avid Film Composer. The picture was edited by Susan Crutcher, and the original camera negative was cut into AB rolls and then printed through interpositive, internegative, and release prints.

At Laser Pacific, the 35mm IP was transferred to Sony HD-CAM



Christopher G. Tufty, DP on The Spirit of Yosemite, was satisfied with the HD post and digital projection of his film and looks forward to shooting in HD.

on the Spirit. In the telecine suite, Laser Pacific set up a high-definition 5000 GV DLP projector, the same projector that will be installed in Yosemite, so that the colorist could correct to the projected image. The color corrections and density adjustments were "saved" from the projection master and then reused as a starting point for the creation of an HD CRT master. After the transfers, both the HD projection and CRT masters were digitally cleaned of dirt and scratches.

Howard Anderson Company, North Hollywood, California, created the optical wipes and dissolves; composer Tony Humecke created the soundtrack; and the 5.1 DTS surround mix was recorded digitally at Saul Zaentz Film Center.

At Yosemite Valley, the visitors center theater is being completely renovated for a digital DLP projector at 1080-lines onto a 20 x 11-foot screen in 1:78 perspective. The 5.1 digital sound will be reproduced in HPS-4000, with 18 speakers.

"To be perfectly honest, I think the projected HD image is better than the 35mm print," offers Vassar who, with Tufty, says he's eager to work in HD on his next project. "For a filmmaker who spent two years slogging this around on his back, to know that the film will be pristine no matter how many times it runs—that's a great gift."