



Fotokem posts *Star Wars: The Last Jedi*

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Burbank-based post house FotoKem provided creative and technical services for the Disney/Lucasfilm movie *Star Wars: The Last Jedi*. The facility built advanced solutions that supported the creative team from production to dailies to color grade. Services included a customized workflow for dailies, editorial and VFX support, conform and a color pipeline that incorporated all camera formats (film and file-based).

The long-established post house worked directly with director Rian Johnson; DP Steve Yedlin, ASC; producer Ram Bergman; Lucasfilm head of post Pippa Anderson; and Lucasfilm director of post Mike Blanchard.

FotoKem was brought on prior to the beginning of principal photography and designed an intricate workflow tailored to accommodate the goals of production. A remote post facility was assembled near-set in London where film technician Simone Appleby operated two real-time Scanity film scanners, digitizing up to 15,000 feet a day of 35mm footage at full-aperture 4K resolution. Supported by a highly secure network, FotoKem NextLab systems ingested the digitized film and file-based camera footage, providing “scan once instant-access” to everything, and creating a singular workflow for every unit’s footage. By the end of production over one petabyte of data was managed by NextLab.

This allowed the filmmakers, visual effects teams, editors and studio access to securely and easily share large volumes of assets for any part of the workflow.



“I worked with FotoKem previously and knew their capabilities. This project clearly required a high level of support to handle global locations with multiple units and production partners,” says Bergman. “We had a lot of requirements at this scale to create a consistent workflow for all the teams using the footage, from production viewing dailies to the specific editorial deliverables, visual effects plates, marketing and finishing, with no delays or security concerns.”

Before shooting began, Yedlin worked with FotoKem’s film and digital lab to create specialized scanner profiles and custom Look Up Tables (LUTs). FotoKem implemented the algorithms devised by Yedlin into their NextLab software to obtain a seamless match between digital footage and film scans. Yedlin also received full-resolution stills, which served as a communication funnel for color and quality control checks. This color workflow was devised in collaboration with FotoKem color scientist Joseph Slomka, and executed by NextLab software developer Eric Cameron and dailies colorist Jon Rocke, who were on site throughout the entire production

“As cinematographers, we work hard to create looks, and FotoKem made it possible for me to take control of each step in the process and know exactly what was happening,” says Yedlin. The color science support I received made true image control a realized concept.”

Calibrated 4K monitoring via the Sony X300 and the high availability SAN on site, managed by NextLAB, enabled a real time workflow for dailies. Visual effects and editorial teams, via high density NAS, were allowed instant access to full fidelity footage during and after production for all VFX pulls and conform pulls. The NAS acted as a back-up for all source content, and was live throughout production. Through the system’s interface, they could procure footage,

pull shots as needed, and maintain exact color and metadata integration between any step.

For the color grade, FotoKem colorist Walter Volpato used Blackmagic Resolve to fine-tune raw images, as well as those from ILM, with Johnson and Yedlin using the color and imaging pipeline established from day one. FotoKem also set up remote grading suites at Skywalker Sound and Disney so the teams could work during the sound mix, and later while grading for HDR and other specialty theatrical deliverables. They used a Barco 4K projector for final finishing.

“The film emulation LUT that Steve (Yedlin) created carried nuances he wanted in the final image and he was mindful of this while shooting, lighting both the film and digital scenes so that minimal manipulation was required in the color grade,” Volpato explains. “Steve’s mastery of lighting for both formats, as well as his extensive understanding of color science, helped to make the blended footage look more cohesive.”

Volpato also oversaw the HDR pass and IMAX versions. Ultimately, multiple deliverables were created by FotoKem including standard DCP, HDR10, Dolby Vision, HLG, 3D (in standard, stereo Dolby and 2D Dolby HDR) and home video formats. FotoKem worked with IMAX to align the color science pipeline with their Xenon and laser DCPs and 15-perf 70mm prints as well.

“It’s not every day that we would ship scanners to remote locations and integrate a real-time post environment that would rival many permanent installations,” concludes Mike Brodersen, FotoKem’s chief strategy officer.

