

Post Focus: Degraining Super 16 for *Alien Trespass*

By Noah Kadner

Alien Trespass, an independent feature that was recently given its premiere at the 2009 Palm Springs International Film Festival, presents a classic 1950s sci-fi plot with a unique twist: it was designed to look as though it was actually shot in 1957 rather than simply set in that era. Depicting an accidental alien invasion of a small American town, the movie was directed by Robert Goodwin and shot by David Moxness, CSC. "This had been Bob's passion project for a long while, and I was really into the idea," says Moxness. "It's one thing to shoot a period piece and another to actually be one."

Aiming for a theatrical release on 35mm, the filmmakers initially explored high-definition video and 35mm as potential acquisition formats, dismissing Super 16mm because of its pronounced grain. "I've worked with a lot of HD in television, but I was against it for this project from the start because it felt like the wrong aesthetic and emotion for a 1950s picture," says Moxness. "We needed the image to have a noticeable texture, so I really pushed film. However, 35mm was stretching the overall budget a bit too far."

During prep in Vancouver, Digital Film Central introduced Moxness to a process called Detail-Specific Grain Reduction. "It's a remarkable proprietary recipe they use after the film is scanned for the digital intermediate," explains the cinematographer. "They showed us a demo, shot on 16mm, of a hallway filled with smoke. After DSGR was applied, the grain was gone, but you could still see all the detail and the smoke. It looked like a perfect solution – we would be able to shoot on Super 16 and deliver a solid 35mm print."

Alien Trespass was filmed over 15 days on stages and locations around Vancouver. Moxness and his team used two Arri 416s and worked almost exclusively with 35mm Zeiss Ultra Primes, favoring the 12mm, 20mm and 28mm. "I brought along a whole box of lenses, but I tried to shoot the whole picture on those three primes to give the film a rigid, 1950s consistency," says Moxness, who tapped Clairmont Camera for the package. He shot most of the picture on Kodak Vision2 200T 7217 and 50D 7201. "I ended up making one shot on [Vision2 200T] 7218 one day, when the schedule got away from us a bit, but apart from that, we used the slower stocks. I wanted to go with older EXR stocks, but Kodak told us they just wouldn't be available in a reliable quantity."

Working in the 1.85:1 aspect ratio, Moxness aimed for a period Technicolor palette enhanced with careful use of filtration. "Modern film stocks are less saturated, and I really wanted shift things tonally," he says. "We used CTO gels on the lights to achieve a warm bias combined with warming filters on the lenses, primarily Tiffen corals. We also used Tiffen Classic Softs and Schneider Black Frosts to control contrast."

During filming, Moxness added subtle, playful touches to the cinematography to pay homage to the technical limitations of the era. "On our process photography, we ran some of our background slightly out sync, even though it was all done with green screen," he says. "So, for example, a car pulls up and stops, and the background plate stops just a beat later. We also played with lighting cues by having the cue

slightly behind the actor's action. In one sequence that was inspired by a sequence in the original *War of the Worlds [1953]*, you see a practical light go off onscreen, and then we go to pitch black before coming back up with dimmed lighting."

After the production wrapped, DFC scanned the original camera negative using an Arriscan. "We scan Super 16 at 3K and then down-convert to 2K for grain reduction and the DI," explains James Tocher, DFC's founder and DI producer. "The Arriscan's ability to scan Super 16 at 3K really helps improve the image quality. 16mm stocks are really good these days, but a lot of people don't realize how much resolution there is behind the grain. The DSGR process utilizes a proprietary processing algorithm specific to each film stock – 7219 receives a different method than 7201, for example. We first sort the project into its specific stocks, then we begin attacking the grain directly."

"Other degraining processes typically blur and soften grain by mashing it together," he continues. "Then they use image-sharpening similar to the Unsharp filter in Photoshop to give you the illusion of retained detail. The resulting artifacts are really evident in areas of the frame that have fine detail like wispy smoke or hanging fog. With DSGR, it's not nearly as much of a trade-off between grain reduction and loss of detail as it used to be."

For Moxness, using DSGR was a simple addition to the DI workflow. "It's not an all-or-nothing process," he notes. "You can choose the percentage of grain reduction on a shot-by-shot or scene-by



Before and After versions of a scene from *Alien Trespass* (featuring Jody Thompson) illustrate the effect of Digital Film Central's Detail-Specific Grain-Reduction process.



-scene basis. They bring up each scene and implement a pre-built formula that they think will be the best match for the specific contrast and color tones and then manipulate from there. It takes a little extra time, but it didn't hold us up at all."

DFC has applied the DSGR process to 35mm projects as well, according to Tocher. He estimates that the process adds one day to the total DI time on an average project; reels can be processed while the DI continues simultaneously. "We spent the better part of a year developing this process after looking at the existing real-time and rendered processes on the market," he notes. "A lot of broadcasters have been discouraging the use of 16mm because the grain takes a serious compression hit on their digital broadcast signal, and that's really the big fringe benefit of DSGR: the Blu-ray discs and broadcast versions derived from our masters are virtually grainless, allowing for flawless compression." DFC plans to offer the DSGR process to the post market at large sometime this year, he adds.

After grain reduction, *Alien Trespass*' DI was complete at DFC using a Baselight 2K color-correction system playing out to a Christie 2K digital projector on a 13' screen. "We spent most of our six days in the DI enhancing the 1950s Technicolor look that we'd set out to achieve," says Moxness. "I come from the pre-'fix-it-in-post' days, so I try to deliver the best image at the end of each shoot day rather than leave it to the DI."

Digital Film Central changed the name of its process to Detail-Specific Grain-Reduction (DSGR) after this article was originally published. This reprint uses the new name.