

## Can You Make a Live-Action 3D Movie on a Budget?

Shooting *Dark Country* With Silicon Imaging, Red, and Iridas

By Bryant Frazer

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It's been known for a while now (at least since the 2005 release of *Chicken Little*) that animated films do especially well in 3D versions. But the success of recent 3D projects like *U23D*, and especially *Hannah Montana/Miley Cyrus: Best of Both Worlds Concert Tour* — which opened to a stunning \$31 million weekend on a relative handful of digital 3D screens in the U.S. — has many in Hollywood taking another look at the feasibility of 3D for live action, especially on a tight budget.

This summer's release of *Journey to the Center of the Earth 3D* will help answer some questions about the business model for live-action 3D, but it's doubtful that anyone has pushed the low-budget envelope quite as far as the crew behind *Dark Country*, a 3D thriller from Stage 6, a new distribution label within Sony Pictures for low-budget films. With a reported budget of just \$7 million, director/actor Thomas Jane, cinematographer Geoff Boyle, and the team at digital-3D specialist Paradise FX had their work cut out for them. That work included constructing what may be the world's smallest 3D camera rig—small enough to be mounted inside the new MK-V AR camera-stabilization system, a Steadicam-like rig that allows the operator to switch from high-mode operation (with the camera on top of the rig) to low-mode operation (with the camera picking up extreme low-angle shots from the rig's low end) in the same shot. That's where the SI-2K Mini—a 2K optical block about the size of a cigarette pack—came in. "When you think of 3D, you think of a camera half the size of a VW bug, and of Alfred Hitchcock literally digging trenches in the studio to film *Dial M for Murder*," director Thomas Jane tells *Film & Video*. "In the past, you were very limited by a 3D camera. But in this film, we were extremely mobile. Most filmgoers will probably take it for granted. They won't realize all the new ground that we've broken with this." *Dark Country* also used a stereo rig with Red cameras, but because it was very heavy and hard to fit into tight spaces, the smaller and lighter SI rig was used for Steadicam-style shots. Jane calls *Dark Country* a "film noir psychological thriller," and says it's great subject matter for 3D. As an example, he cites the film's key location — the interior of a baby-blue 1961 Dodge Polera. "When we put the camera in the back seat of the car, you feel like you're in the back seat," he says. "You have the background, which is the landscape out in front of you; the midground, which is the bonnet of the car and the windshield; and the foreground is your subjects, the people and the seats. This enhances the stereoscopic effect. The idea of getting inside people's heads and creating a universe the audience can really feel like they're participating in was the challenge of making *Dark Country*." So what is it about a low-budget thriller that demanded all this cutting-edge hardware? Jane doesn't hesitate to

describe one shot that made it all worthwhile. “We did a shot where we tracked along with a character, did a 360-degree move around the car as he got into the car, and then the car took off out of the parking lot and onto the highway, disappearing into the mountains,” he says. “We ended in a big, wide high shot — we had to build a ramp. Our MK-V operator followed me out of the restaurant, went all the way around the car, then followed the car, ran behind the car as the car exited the parking lot, and then, as we exited on the highway, walked up a 40-foot ramp that we constructed to get this big, high vista. “Of course, we shot it all in stereo. It proved to be quite challenging, but it’s really effective when you see the final shot. It’s great, because you start on a rather close subject, and then as the car takes off we get farther and farther away and end up on this wide, beautiful vista.”

### **Workflow**

No matter how great the subject is, 3D isn't easy. With the exception of cinematographer Geoff Boyle and A-camera operator Howard Smith—who wielded the MK-V AR rig—the entire camera department on location was affiliated with Paradise FX, a Van Nuys production company that's been doing 3D work for more than 15 years, and digital 3D for almost nine, according to Jim Hays, digital workflow supervisor. That meant the company had the knowhow to make connections between production and post-production workflows, which is key to making the process work.

To date, Hays says, 3D workflows handled by Paradise FX have largely involved Final Cut Pro and After Effects, partly because those tools are friendly to lower-budget productions. For *Dark Country*, however, Paradise decided to work with Iridas SpeedGrade—partly because Iridas was compatible with the CineForm RAW codec out by the SI-2K Minis, but also because it had a built-in feature to automatically flip one of the two eyes when stereo footage is dropped on the timeline. (The mirror used in the 3D beam-splitter rig reverses one of the two camera images during acquisition.) “None of the tools that we had before would allow us to do that,” Hays says. “That was the biggest help in terms of working with the footage on location in Albuquerque.”

Small and light as it was, that’s not to say the SI-2K Mini stereo rig was a breeze to work with. For one thing, the first-generation camera-control and recording system was fairly primitive, with separate gigabit Ethernet cables running to two different laptop systems that were mounted on a board that had to be kept near the camera operator. Each computer recorded one of the two stereo views, including Iridas .Look files (metadata for non-destructive color grading), in the CineForm RAW format. (Silicon Imaging has since demonstrated a new version of the control-and-recording system, dubbed SiliconDVR, that will record the footage from both cameras to a single system via gigabit Ethernet.)

Although SpeedGrade could feed a Samsung DLP screen for 3D playback using active stereo glasses, it was still difficult to organize a timely schedule for viewing dailies on the time-strapped, low-budget production. “It was a very grueling struggle to make *Dark Country* on budget, and everyone had to do a lot more than would normally be

expected of them,” explains Hays. “They didn’t get a chance to see the 3D dailies until about a week into production, mostly because of time commitments. But once they saw it on the Samsung DLP TV that we took there, the people who hadn’t been involved in 3D before got it. It’s an intangible benefit.”

### **'Free-Viewing' in 3D**

For a dedicated 3D buff like Jane, however, there were ways of checking his work in stereo as he went along. “With the Red cameras, we had a live image in stereo—we had a monitor on the camera so we could put on polarized glasses and see the image, which was really great,” he recalls. “But with the SI cameras, we just had the two images on the laptops that were nailed to this goddamned board, and because of our budget we didn’t have a monitor that could flip [the images] back and forth in stereo.

“We ended up free-viewing,” he says, referring to an age-old tactic for merging a side-by-side stereo image pair by working your eye muscles to overlap two images and create a fused 3D image. “Some people can do it more easily than others. Fortunately, I had some experience, so I could check the stereo in an image if I crossed my eyes. It was really primitive, but it worked.”

“We were basically beta-testing these new systems,” Jane continues. “Different problems arose through production, all of which we were able to solve, but it slowed us down a little bit. Future productions will benefit from the ground that we broke. The second-generation SI-2K Mini cameras and the MK-V system will be tetherless. The capturing systems will be on board, and hopefully the motors will get smaller. What we want is ease of use. We want to be able to use the system just as quickly and conveniently as we would a 2D rig.”

So what is the prognosis for stereo filmmaking on a budget? Iridas CEO Lin Kayser is bullish, encouraged by what he sees in the marketplace. “I think it was last year at IBC, when I walked through the aisles and saw all the 3D playback technology being presented, that it struck me that this is a totally different situation than [the previous big surge in 3D production] 50 years ago,” he says. “There are so many technologies converging that allow you to see stereo on the screen that I think it’s here to stay. To prove the point, we’ve got this wonderful little small-budget movie, *Dark Country*. It shows that the tools have evolved to a point where even if you don’t have a big budget, you can work with them.”

Hays is a little more cautious. “I think a number of 3D features will be made this year in the \$10 to \$20 million range,” he says. “I’m not sure if it’s possible to repeat it on the budget *Dark Country* was made on. Bob Johnston, one of our executive producers, works really hard with people on a scenario to transition from a 2D budget to a 3D budget with the tools we have. What it takes to create not only a 2D movie—because, obviously, every 3D movie can be a 2D movie—but also the 3D movie as well, with all the potential additional revenue associated with that.

“When people see good live-action movies in 3D in the theater, it’s really going to be a turning point. But the material is not out there. Journey to the Center of the Earth 3D, the first 3D digital live-action feature, is coming out in July, and hopefully Dark Country will come out later this year. But 3D so far has been mostly for children. And when adults go and see that they can enjoy a movie in 3D even better than they can a standard 2D movie, that’s when you’re going to see an additional push in the market.”