The mighty VFX house talks to Paul Hellard about its work on Captain America: The Winter Soldier and more

Scanline VFX’s roots are in producing commercial special effects for European media as a smaller house in Munich – which it has been doing successfully for 25 years. In 2007, Scanline branched into international film VFX with some impressive work on Poseidon and 300. Danielle Plantec is Co-Founder and VFX Supervisor at Scanline VFX in Vancouver. “We opened the Los Angeles studio in 2007,” she says, continuing the timeline. “Our proprietary fluid software Flowline won a Sci-Tech Academy Award in 2008. We grew very quickly in Los Angeles with films like 2012, Super 8, The Avengers and we were nominated for an Academy Award in 2010 for Clint Eastwood’s Hereafter.”

Scanline VFX has had steady growth over the last few years. In fact, the Vancouver studio opened with seven people just three years ago. “We’re currently in the process of moving to a new 34,000-square-foot facility in Yaletown in Vancouver. Historically, we were chosen to work primarily on high-end destruction and fluid effects, such as destroying the White House in 2012 or the Helicarrier coming out of the water in The Avengers, and now in the latest Marvel blockbuster, Captain America: The Winter Soldier,” adds Plantec.

stroking close
The Scanline VFX team has always worked closely with Chaos Group in implementing V-Ray into their pipeline. In fact, it’s always been part of their pipeline, right back to 2001 in Europe. The ability to bring up the V-Ray interface and see the preliminary view of what the full render looks like has always made the effects work at Scanline VFX a whole lot less stressful. “Over the last couple of years we’ve broadened our range quite a bit by becoming the lead vendor on 300: Rise of an Empire, which we delivered with more than 700 shots,” says Plantec. “We even added character and creature work into our roster of skills, with 300, Iron Man 3, Captain America: The Winter Soldier and the White Walkers on Game of Thrones. With this full spectrum of capabilities, and the capacity to produce over 2,000 shots yearly, we found ourselves working on larger numbers of setups and a lot of films in parallel. Last year we had 11 shows overlapping. Our current line-up includes Ron Howard’s Heart of the Sea, Fast & Furious 7, San Andreas, Pan, Hunger Games: Mockingjay, and Batman v Superman.”

A nice sequence in Marvel’s The Winter Soldier where we used V-Ray extensively was the Quinjet leap in front of the Triskelion,” says Plantec. “This is where massive amounts of geometry were rendered with powerful V-Ray proxies. It was a great opportunity to render a harmonic light setup combining V-Ray with our Flowline rendering engine for smoke and fire that hooks directly into the V-Ray SDK, allowing effects to interact nicely, while rendering everything with true 3D motion blur.”
300: Rise of an Empire.

“The rise of an empire was the most fun I’ve had on a show in 18 years”

Bryan Grill, VFX Supervisor at Scanline VFX, teams up with Overall VFX Supervisor Dan DeLeeuw from Marvel, Russell Earl, VFX Supervisor at ILM, and Edson Williams, VFX Supervisor from Lola VFX to show the SIGGRAPH 2014 Production Session audience how they created some of the heart-stopping effects in the Marvel blockbuster Captain America: The Winter Soldier. Scanline VFX also plans to present some of its latest work in the Exhibits Fast Forward session, set for Monday 11 August.

Community

Some VFX companies have such a large community that too many artists feel swamped and lost in the crowd. Despite Scanline’s expansion, the culture survives through these days with solid social interaction and staff involvement. While Scanline VFX has become a lot bigger, they’re still not a corporation, so it is a lot easier for them to arrange fun things for their hard-working crew and to maintain that smaller company feel. “We arrange a lot of parties, screenings, events and cool swag for the team,” says Plantec. “Our wrap parties and SIGGRAPH parties always have something fun to offer.”

There’s even been a weekend in Vegas at the Venetian for the Scanline crew. Sometimes they have acrobats and fire dancers, or sunset boat rides. “In fact, the team is very involved with building and maintaining the culture so the crew feel valued and they know we appreciate them.” Artists will also join in the organizing and will arrange trips to festivals and concerts for their department. Sometimes even skiing, paintballing, go-karting, kayaking, river rafting, zip lining and karaoke. “We have a fantastic soccer team and an ultimate team... all arranged by the artists themselves,” Plantec adds.

A lot of the work at Scanline VFX is with integrated cooperation with V-Ray plugged into the Flowline SDK. Scanline Co-Founder Stephan Trojansky also spoke to us about how Flowline and V-Ray work so closely together. “We just use the API to define another primitive in V-Ray that connects to the Flowline render engine,” Trojansky explains. “This lets us integrate Flowline with V-Ray reflections, refractions, dome-lighting and global illumination, sub-surface scattering – and all the other V-Ray ray-tracing features. The integrated versions of V-Ray for use within 3ds Max and Maya are also very convenient for Scanline because it all lives in the same space with the same memory access.”

“We just recently finished our first show with pure Maya rendering, which was Game of Thrones, and this pipeline allows us to take the best of both worlds, with the V-Ray abilities inbuilt,” says Trojansky.

Scanline VFX has just upgraded its complete facility and render farm to V-Ray 3.0. Among the overall speed improvements is the new Progressive Renderer in particular, which allows you to define image quality by time allocated – this is great to keep any test renders at a predictable speed. The Chaos Group keeps a tight relationship with Scanline VFX on the R&D side, communicating weekly with their developers. They also visit the facilities once or twice a year to get a first-hand impression of what the biggest needs for the future are. “I’ve known Vladko [Koylazov] for almost 13 years,” adds Plantec, “when we implemented the first implicit surface renderer into V-Ray 1.0. Ever since then a great relationship has evolved over the years.”

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Scanline delivered more than 700 shots on 300: Rise of an Empire, making it the lead version on the blockbuster and widening the studio’s range even further.