

SCRATCH® Powers the VFX Dailies Pipeline on Cinesite's Battle: Los Angeles

The Facility: Cinesite Europe Ltd.

With one of the largest and most comprehensive VFX facilities in Europe, Cinesite has the capacity and creativity to produce all manner of effects, both digital and physical, for feature films and broadcast projects of all scales.

Its award-winning team of highly talented visual effects artists take filmmakers' ideas and turn them into spectacular cinematic reality, and they have been using SCRATCH at the heart of the VFX pipeline for many years. The first SCRATCH systems were used on Warner Brothers' *Harry Potter and the Goblet of Fire* to assist playback and review of the company's VFX work. Cinesite's latest credits include *Harry Potter & The Deathly Hallows: Part 2* (Warner Bros.), *John Carter of Mars* (Disney/Pixar), *Pirates of the Caribbean: On Stranger Tides* (Disney/Bruckheimer) and *X-Men: First Class* (Twentieth Century Fox). The London-based company won an Emmy award for its work on the HBO miniseries, *Generation Kill*. All of them have used SCRATCH.

The Project: Battle: Los Angeles

Directed by Jonathan Liebesman, Sony/Columbia's *Battle: Los Angeles* is a sci-fi thriller that follows a Marine Sergeant (Aaron

Eckhart) and his platoon as they take a stand for mankind against an unknown enemy that's invading and destroying Los Angeles. Cinesite was responsible for many of the standout sequences, including shots of smoldering downtown Los Angeles, the invasion of Santa Monica beach and an explosive conflict against aliens. Creating the scenes of battles and epic devastation meant Cinesite building CG characters, detailed military hardware, helicopters, light armored vehicles, plus elaborate explosions of smoke, dust, fire and water.

Project Leader: Ben Shepherd, visual effects supervisor, Cinesite

One of the industry's shining talents in VFX supervision, Shepherd has brought to life spectacular sequences for numerous feature films. His expertise encompasses practical filmmaking, as well as 2D and 3D VFX. He supervised a team of 80-100 artists on more than 600 shots for Disney's *Underdog* (2007), which involved everything from character and facial animation, plus



lip-synching, to CG fur effects and full-CG city environments. His many other credits include *Eragon* (2006), *The River King* (2005), Tim Burton's *Corpse Bride* (2005), *Alien vs Predator* (2004), *Big Fish* (2003), *Lara Croft, Tomb Raider: The Cradle of Life* (2003) and *Harry Potter and the Sorcerer's Stone* (2001). He was nominated for a prestigious VES Award for his work on *Harry Potter and the Goblet of Fire*.

The Challenge: As a major vendor in the global VFX industry, Cinesite is required to manage thousands of complex VFX shots and versions in any given project. This complexity demands a highly efficient workflow that starts with flawless playback of footage in multiple formats, resolutions and colorspaces in the same timeline. Also essential is the ability to make color adjustments and shot clean-ups in real-time - all while seamlessly integrating into the primary artist pipeline.

Most importantly, all this often happens in client-attended sessions. As Shepherd says, "Clients want to look at the output, view material in context and review progress, as well as make color decisions in real-time. They want the best quality, with no buttons or distracting widgets on the screen, and no spluttering or crashing. SCRATCH gives them all that. It's a very impressive system."

The Solution: Scratch

Cinesite has installed seven SCRATCH systems, and has literally pumped tens of thousands of digital VFX shots through their suites. SCRATCH consistently ticks all the boxes, blending into Cinesite's slick, color-calibrated workflow, and proving its worth as an incredibly fast, flexible and powerful review solution for blockbuster motion pictures like Sony/Columbia's *Battle: Los Angeles*.

"Scratch is utterly essential as we review VFX work-in-progress, from first publish to final output," says Shepherd, who spent 10 months working on *Battle: Los Angeles*. "SCRATCH became a kind of overview of the entire project - a creative map of the history and evolution of the VFX shots. To be able to quickly switch between previous and current versions of an effect, view green screens, VFX elements, reference material and ongoing editorial cuts in context, was absolutely indispensable in our daily work on the movie.

"Since SCRATCH is resolution-independent, files from any source or format can be integrated into the project at hand. So we regularly had many different resolutions on the same timeline - video-res shots from the Avid cut, QuickTimes, TIFFs and quick 1k comps, all in context with the 2K DPX shots. And we could effortlessly play them back with sync audio as well."

Every iteration of the VFX shots in the project were fed through SCRATCH, and vital to this work, Shepherd says, was the ability of the VFX team to collaborate with the clients to compare shots - from the previous day or three weeks before - to the latest published version.

"One shot might have hundreds of iterations, and you have to be perfectly clear in both internal review and the client sessions as to exactly what the changes are and what improvements need to be made. We used SCRATCH's unique CONstruct to run and organise the entire project: it's like a command center. We could keep all the versions 'live', and could also easily do split-screen comparisons, or rock-and-roll between versions." Shepherd says, "In the Santa Monica airport sequence there are several explosions. One advantage of being able to cut

them together in SCRATCH for creative reference was that they also cut well in the final edit."

As part of being well-organised and providing clear communication to the VFX team, Shepherd believes Sticky Notes were a significant advantage. "I love SCRATCH's Sticky Notes feature. I used color-coded notes to keep track of the dates when shots were published, and wrote shorthand memos to keep a log of work-in-progress - red notes clearly indicated that a shot needed extra work, whereas green meant a shot looked good. I also noted any requests and 'to dos' coming from client sessions, and could easily attach Sticky Notes to the head of each shot, then switch them on and off as required."



Images courtesy of Cinesite Europe Ltd.

Real-time Color Grading

"SCRATCH gives us powerful and accurate real-time color grading options that have a significant impact during our VFX work and down the line in the final DI. We can apply a primary grade to a shot and balance it out with other shots and then view the results in context. If an effects supervisor wants to know how a scene is going to look de-saturated, or a stop up or down, we can do that in SCRATCH too. The data from any

color changes can be fed back to the original 2D or CG artist who can then re-render the sequence using new values.

“We can also run our own LUTs, or import custom LUTs into SCRATCH, adjust the printer lights and know that what we see on the monitor will be true to the film output. On *Battle: Los Angeles* the gap between the VFX and the final DI was pretty big. Working to a mutual grade between us and the DI house meant we could pass along finished shots that didn’t need too much in the way of further color grading.”

Tying it Together: Automation and Integration

Cinesite’s engineering team has leveraged SCRATCH’s powerful XML interface to integrate it into its in-house data management system. At any moment of the day, 2D and CG artists working on a particular film can publish their shots, and when rendered these shots load automatically into the relevant SCRATCH system. Cinesite generally dedicates one SCRATCH suite per movie. Shots coming into SCRATCH on *Battle: Los Angeles* often came from more than 15 2D and CG artists.

“We generally held review sessions three times each day. The great thing about using SCRATCH is that it doesn’t fail,” commented Shepherd. “The dailies were always in the CONstruct module ready for the crew to review - and that’s the bottom line.”

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