



POWER TO THE CREATORS

## Virtual Reality Breakthrough: Real-time 3D Post for Color Grading “Kaiju Fury!”

ASSIMILATE’s SCRATCH is the first real-time post-production tool for Oculus Rift to be used in a Virtual Reality (VR) film project — **Kaiju Fury!** — with DI/post done by the colorist team at Local Hero.

“Kaiju Fury!” (3D) has gained global attention as the first real-time post-production of color for a film (short) in the immersive VR space. New Deal Studio created “Kaiju Fury!” in the cutting-edge 360° virtual reality (VR) space, with DI/post done by the colorist team at Local Hero, and made possible by ASSIMILATE’s SCRATCH real-time DI workflow and tools.

Kaiju Fury had its premiere at Sundance 2015. ([www.kaijufuryVR.com](http://www.kaijufuryVR.com))

As the “Kaiju Fury!” VR project demonstrates, the promise of a high-quality, immersive VR experience in 2D/3D digital cinematography is now becoming a reality with producers developing VR content, and the availability of 360° cameras, headsets for 360° viewing, and advanced software that gives post-production professionals the tools to color grade, finish, and master color content in the VR space, in real-time. The value to the viewing audience is a truly immersive and high quality experience that can elicit a stronger emotional impact than traditional media formats because the viewer has the sense of being inside the media. The development and use of the Oculus Rift VR headset enables viewers to “participate” in this experience as described below.



Today’s quality VR experience is in contrast to the early days of virtual reality, with the cardboard viewing glasses that gave a very campy, low-budget look-and-feel to VR film/video.

Together, post facility Local Hero and ASSIMILATE, with its SCRATCH digital tools and real-time workflow, have demonstrated that quality post production – grading, finishing, and mastering of color – can be accomplished for VR film projects with cost-effective, mainstream tools. This breakthrough in VR proves that quality post-production, with high production values, makes VR video viable for numerous real-world applications, such as entertainment (films), real estate, gaming, simulation environments, learning and training applications – various types of surgery, rehabilitation, law enforcement, how-to-do just about anything – and far more.

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In the near term, such applications will most likely be in short form due to the ergonomics of the VR headsets, but in the long term, as technology advancements occur in VR headset technology, longer-form projects could be developed in the future.

- The colorist team at post-production facility Local Hero developed the stereo VR workflow for “Kaiju Fury!” and did the real-time grading, finishing, and mastering of the color.
- ASSIMILATE ([www.assimilateinc.com](http://www.assimilateinc.com)) provided the enabling software – SCRATCH digital workflow and tools with real-time VR mode – so that Local Hero could do the grading, finishing and mastering of color for the film. ASSIMILATE implemented and built upon the Oculus SDK in SCRATCH, which resulted in a real-time VR mode for artists to work within a 360° environment. SCRATCH is the only software that currently provides real-time color grading, finishing, and mastering in a true 360° VR space.

The following companies developed the original content of *Kaiju Fury!* and other essential tools/elements needed in the production of the film.

- New Deal Studios ([www.newdealstudios.com](http://www.newdealstudios.com)) and Jaunt VR ([www.jauntvr.com](http://www.jauntvr.com)) partnered to develop and produce “Kaiju Fury!” Ian Hunter of New Deal Studios, and recipient of the 2015 Oscar for Visual Effects of *Interstellar*, was the writer, director, and editor of “Kaiju Fury!” The project was shot at the New Deal Studios using a Jaunt VR 360° camera. The data was conformed and stitched at their studio. New Deal also created the special effects.
- JuantVR did the final mastering of the entire production, including sound and the combining of all other elements.
- Local Hero also used the Oculus Rift DKII headset ([www.oculus.com](http://www.oculus.com)) to immerse themselves in the VR environment and do the post-production functions in a natural way. They could also review their work in the VR space and verify how the film would look to viewing audiences.

Local Hero faced several challenges in the post-production for *Kaiju Fury*. As a cutting-edge short-form project, this was the first time VR material had a supervised color grading session using a VR headset. Local Hero had to develop a first-time workflow, which was powered by new SCRATCH VR tools. Local Hero worked in stereo (3D) VR, which is very compute intensive. They had to determine the color space – unique to the film – within the Oculus Rift DKII VR headset, but the headset allowed the post to be done very naturally within the VR space.

Ian Hunter attended and supervised the live grading sessions with the Local Hero team in the color-grading suite at Local Hero. Just as in any client-review session with SCRATCH tools, they were able to work in real time, review different versions within the timeline, and make changes on the fly.

In addition, the work was previewed inside the headset, even during live grading – a first for any post system that we are aware of – meaning the director could dictate changes to the colorist while wearing the headset, moving freely in 360°, and seeing the results occur in real-time.

