

Lytro Immerge light field camera offers focus on cinematic VR

November 6 2015, by Nancy Owano



Lytro has announced its "Immerge" as the world's first professional Light Field solution for cinematic VR. The company said it provides presence for live action VR through six degrees of freedom in a live action environment.

Lytro Immerge was designed to blend live action and computer graphics (CG) using "Light Field data" and the company makes frequent reference to its suitability for "immersive storytelling."

"Break away from the creative limitations of existing tools designed for flat video frames," said the company. "With configurable capture and playback solutions, it supports a range of new immersive storytelling needs."

Will Mason, editor in chief of *UploadVR*, said that Lytro has "the world's first live [action](#) light field 360° camera." He said the new camera and technology stack to go along with it "represent a potentially massive step forward for high-end VR content creation."

Drew Olanoff of *TechCrunch* said "The rig has a sphere containing five rings of light field cameras and sensors to capture video. The key is it's collecting all of the data from all directions at any given location. As a viewer, you'll be able to seamlessly look up and down, side to side and the like when you're wearing a VR headset. "

Lytro's website is inviting viewers to apply for prototype access.

David Cardinal, professional photographer and technologist, said in *ExtremeTech* that the company is presenting an "end-to-end VR video capture, storage, and processing system."

The components include camera, server and player.

In a promotional video, Lytro's CEO Jason Rosenthal talked about who the company had in mind for this system. "With Lytro Immerge we took the approach of going back to first principles. What do immersive storytellers want in terms of an end to end system, to be able to create professional-level content for virtual reality?"

Cardinal said, "The design provides a more-realistic viewing experience than other VR capture rigs by allowing for visual parallax, maintaining stereo perception even after [head](#) movement, and eliminating stitch

lines."

Rosenthal said the Lytro Immerge server gives a user the storage and processing needed to capture and manage all the data. Also, the team built a set of Light Field editing tools which integrate with industry-leading editing solutions, according to the company. The advantage here is that the "immersive storytellers," said Rosenthal, can work in the environment to which they are accustomed.

Rosenthal also made note of the Immerge player, which lets you take all that content and play it back "on all the leading virtual reality headsets."

At a conceptual level, said Colvin Pitts, senior architect, the team is building a capture system. "A way to think about it is—imagine you have this spherical surface, and every ray of light coming from the outside is captured and recorded. We are recording two pieces of information. First, where that ray of light hits the surface and second, the direction that light is traveling."

"Game-changer" has become quite the cliché by companies touting their products but *TechCrunch* is apparently taking this company's product announcement quite seriously in being able to bring out something special. One might consider this a change.

The CrunchBase description said, "Lytro is developing a new type of camera that dramatically changes [photography](#) for the first time since the 1800s. Rather than just capturing one plane of light, it captures the entire light field around a picture, all in one shot taken on a single device. A [light field](#) includes every beam of light in every direction at every point in time. Experimentation in this field started in the mid-1990s..."

Reports said Lytro expects Immerge to be available in 2016.

Mountain View-based Lytro was founded by Executive Chairman Ren Ng. His Ph.D. research on Light Field imaging won Stanford University's prize for best thesis in computer [science](#).

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