

Game system castAR debuts at Maker Faire

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(Phys.org) —Two tech talents, formerly employees at video game publisher Valve, have been working on their own vision in the form of game-ready glasses. Their company, Technical Illusions, will seek to commercialize their technology, being introduced to gaming fans as castAR, a projected augmented reality (AR) game system. The system features a pair 3-D AR glasses. The two creators are Jeri Ellsworth,

former Valve hardware engineer, and programmer Rick Johnson. They belong to a corps of inventors with products designed to delight game players with novel ways to interact with their computers. Ellsworth and Johnson's creation made an appearance at Maker Faire, where they decided to debut their prototype system.

"If it wasn't for Maker Faire," they said on their company site, "we wouldn't even be revealing castAR yet. It's just that Jeri loves Maker Faire and this is for more than just players; it's for Makers as well. Each system not only lets you play, but also includes a complete development kit. You can get up and running quickly using our simple scripting language, or go as deep as you want by connecting our API to your game. And don't worry, this is an [open platform](#). If you make something, you can give it away or sell it anywhere you want."

castAR is in a certain realm of VR tech where the user is not totally immersed in VR. The design of their system is such that the user still has peripheral, real world vision from the sides of the glasses. "We take game quality graphics and project them into your world." according to the two.

Little projectors attached to the glasses beam images from a connected computer. A retroreflective projector screen bounces them back to the user's face. The glasses filter out images for left and right eyes, and the viewer sees the images in 3-D. A camera built into the glasses sees infrared LEDs positioned around the edges of that projector screen so that the glasses can optically track the user's head position.

Sean Hollister from *The Verge* got to do a hands-on test of how castAR works, and reported that he was playing a [game](#) with the system's infrared [wand](#), picking off blocks, all of this happening on a retroreflective surface. There was a pair of projectors on the glasses sending light toward the surface, he said, bouncing back, toward each of his eyes, and

he said the movement felt smooth and fluid.

The handmade, bulky prototype shown at the Faire is to be refined into a sleeker model, and a Kickstarter project is the company's next step. The campaign is expected to launch in late summer or early fall; donations will be sought for the system's further development.

Ellsworth and Johnson think they can keep the cost of a system down to under \$200 with the use of commodity components.

Johnson was one of the original developers at Raven Software and also worked at Activision, Gearbox, and Valve, where he initiated Valve's push into Linux. Ellsworth is a hardware engineer/inventor.

More information: technicalillusions.com/

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