Inventor Jeri Ellsworth and programmer Rick Johnson present a novel means of augmenting boring old reality-- the castAR, a pair of goggles with a clip-on accessory promising a full virtual reality experience.

Initially a project at Valve (of Half Life and Steam Box fame) before Ellsworth and Johnson left the company to form Technical Illusions, the castAR consists of a relatively slim and lightweight (100g) 3D glasses-style frames packing 2 tiny LCD projectors, a camera module and active shutter lenses. The projectors beam images (at 720p resolution and 120Hz refresh rate) on a special retroreflective surface, with the camera tracking the position infrared LED markers so the system adjusts images accordingly.

The result? A "holographic" 3D image one can interact with using a special wand peripheral. Users wanting to play virtual Dungeons & Dragons can also get an RFID tracking grid for the tracking of figurines and the like.

Equally intriguing is a clip-on accessory turning the glasses in to "full" VR goggles so that, as the developers put it, "you will have no need for any other head mounted display."

Currently the castAR depends on wired connections to PCs (HDMI for the projectors, USB for the camera) but the developers promise wireless connectivity with mobile devices is in the works. Also in the works is software for the device, with the tracking system API supposedly fairly simple to graft onto Oculus Rift-style games.

Technical Illusions is currently looking for donations and/or preorders on Kickstarter (where it already nearly reached the required $400000 goal), with the hopes of finishing the castAR package by September 2014.

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