A video by the musician St. Vincent floats on a virtual screen in a break area in Magic Leap's headquarters.

Abovitz says he and his employees are trying to "blow away" their inner 11-year-olds.

eyeballs and, though I've made him pocket-sized, looks about as authentic as a monster could—he seems to have rough skin, muscular limbs, and deep-set beady eyes. I extend my hand to give him a base to walk on, and I swear I feel a tingling in my palm in expectation of his little feet pressing into it. When, a split second later, my brain remembers that this is just an impressively convincing 3-D image displayed in the real space in front of me, all I can do is grin.

Virtual- and augmented-reality technologies used in movies, smartphone apps, and gadgets tend to underdeliver on overhyped promises with images that look crappy. Typically that's because stereoscopic 3-D, the most commonly used method, is essentially tricking your eyes instead of working with the way you normally see things. It produces a sense of depth by showing each eye a separate image of the same object at a different angle. But since that forces you to look simultaneously at a flat screen in the distance and images that appear to be moving in front of you, it can make you dizzy and lead to headaches and nausea.

To be sure, stereoscopic 3-D has recently started getting better. The best system you can currently buy comes from Oculus VR, which Facebook purchased last spring for $2 billion; the $199 Gear VR, which was built in collaboration with Samsung and is aimed at software developers, lets you slide a Samsung smartphone into a headset to play games and watch videos.

But while Oculus wants to transport you to a virtual world for fun and games, Magic Leap wants to bring the fun and games to the world you're already in. And in order for its fantasy monsters to appear on your desk alongside real pencils, Magic Leap had to come up with an alternative to stereoscopic 3-D—something that doesn't disrupt the way you normally see things. Essentially, it has developed an itty-bitty projector that shines light into your eyes—light that blends in extremely well with the light you're receiving from the real world.

As I see crisply rendered images of monsters, robots, and cadaver heads in Magic Leap's offices, I can envision someday having a video chat with faraway family members who look as if they're actually sitting in my living room while, on their end, I appear to be sitting in theirs. Or walking around New York City with a virtual tour guide, the sides of buildings overlaid with images that reveal how the structures looked in the past. Or watching movies where the characters appear to be right in front of me, letting me follow them around as the plot unfolds. But no one really knows what Magic Leap might be best for. If the company can make its technology not only cool but comfortable and easy to use, people will surely dream up amazing applications.

COURTESY OF MAGIC LEAP