From virtual to reality

Magic Leap is working feverishly to get to that point. Since building its first prototype in 2011, the company has continued to shrink its technology down.

Already it works on something smaller than the unwieldy scaffolding I used. In another demonstration, using hardware on a cart, I can poke at a tiny flying steampunk robot, a character from a first-person-shooter game called Dr. Grordbort's Invaders that Magic Leap is making with Weta Workshop, which created many of the special effects in the *Hobbit* movies. The robot can follow my finger around with surprising accuracy, right between the cubicles in Magic Leap's office.

To judge from a look I get at a design prototype—a realistic-looking piece of hardware that's completely nonfunctional—the company appears to be aiming to fit its technology into a chunky pair of sports sunglasses wired to a square pack that fits into your pocket. A somewhat similar image in a patent application Magic Leap filed in January suggests as much, too. The company won't say for sure, though; Abovitz confirms that the headset will be a glasses-like wearable device, but I have to twist his arm to get him to agree to use even that hazy phrasing on the record.

It's clear that getting the technology into that small form will be very hard. The smallest demo hardware I've seen at Magic Leap can't yet match the experience of the bigger demo units. It includes a projector, built into a black wire, that's smaller than a grain of rice and channels light toward a single see-through lens. Peering through the lens, I spy a crude green version of the same four-armed monster that earlier seemed to stomp around on my palm. In addition to improving the resolution of smaller units, Magic Leap will have to cram in sensors and software that will track your eyes and fingers, so you can control and interact with its virtual creatures—which themselves will have to incorporate real-life objects into whatever they appear to be doing.

That's where last year's half-billion dollars of investment come in. Magic Leap is hiring like crazy. It's looking for software engineers for everything from eye tracking and iris recognition to the branch of artificial intelligence known as deep learning. It needs optical engineers, game designers, and other people who will dream up virtual objects to display. To give you a sense of where their minds might go, I saw ray guns and magic wands lying around the office. As its chief futurist, Magic Leap has hired the science fiction author Neal Stephenson, whose 1992 novel *Snow Crash* imagined a virtual world called the Metaverse.

The excitement of such quick growth is palpable at Magic Leap's brightly decorated headquarters, where staid office trappings are punctuated by red high-backed love seats and yellow chairs. Employees energetically describe the games, sensors, and ray guns they're working on.

With the massive investment last year, interest in the company has intensified. Abovitz says, "We went from 'Does anyone care about this?' to 'Okay, people do care.'" Now he and the team are feeling the weight of these expectations. He says, "The inner 11-year-old—we want to blow that away."

Abovitz was enigmatic in his brief appearance on a TEDx stage in 2012. "A few awkward steps for me; a magic leap for mankind," he said from inside his spacesuit.

COURTESY OF TEDX