Review: Microsoft's HoloLens offers glimpse of holographic future

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My entry into the holographic world last week didn't exactly go smoothly.

At times I couldn't see any holograms. When I could, they were often floating far from where they were supposed to be. And when I tried pinching my fingers in front of me to fire my virtual cannon at them,

nothing happened.

With all the buzz surrounding Facebook's Oculus Rift and the other virtual reality headsets that will be hitting store shelves this year, you may not have realized that there's another perception-bending headset-based gadget that's being released into the wild. But last week, Microsoft released to developers its HoloLens prototype and some consumers will get their chance to see it soon.

I got to experience HoloLens at the company's annual Build developer conference here. If my experience was any indication, headset-based augmented reality in general and HoloLens in particular aren't anywhere close to being ready for prime time.

But that's OK. Even with all the bugs and frustrations I experienced, the technology was very cool and it was clear that it has lots of potential.

Starting this summer, visitors to the Kennedy Space Center in Florida will be able to don a HoloLens system to make a virtual visit to Mars with Apollo 11 astronaut Buzz Aldrin serving as their holographic tour guide.

 HoloLens could allow anatomy students to study body structures virtually.

And homeowners could even use HoloLens to view and collaborate on building or design projects or get help with their home improvement projects from trained professionals who could see what consumers are seeing as they walk through their yard, attic or garage.

Microsoft unveiled HoloLens early last year. Unlike the Rift, HoloLens doesn't try to block you off from the real world and replace it with a virtual environment. Instead, Microsoft's headset allows users to see

virtual objects - which Microsoft calls holograms - projected onto the real world.

The device has see-through, wrap-around lenses. In between them and your face are transparent screens that are placed right in front of each eye that are used to project the virtual images.

HoloLens differs from the Rift and the other high-powered virtual reality headsets in another way - it's completely self-contained. Built into the headset itself are processors, storage, communications radios and a host of sensors, so you can use it untethered.

That gives you a lot more freedom of movement that you get with Rift, which has to be connected at all times to a computer that provides its processing power. With HoloLens, you can wander about a room, and because the lenses are transparent, you don't have to worry about tripping over something you can't see.

One of the neat features of HoloLens is that the holograms it projects don't have to exist in just one headset. Instead, the virtual objects can potentially be viewed by multiple HoloLens wearers in the same place in real space at the same time.

In my demo, a group of six of us were able to view something that looked like an alien spaceship as well as a hole in the ground from whence small floating robots were flying into the room around us. Although each of us was in a different place in the room, the virtual objects were located in the same real position for each of us. That's a very cool feat, because it required the system to calculate in real time where each of us was looking and where we were is in real space.

Of course, it would have been better if it worked consistently. After struggling to get my headset to work, I ended swapping it out to get the

full experience.

You interact with HoloLens via physical buttons on its sides, voice commands and gestures that you make in front of your face where its built-in cameras can see them. I had trouble getting it to recognize my gestures, but some of that was due to the faulty demo unit I was using.

But the prototype had two bigger, and related, problems. HoloLens' screens offer an exceedingly narrow angle of view. You can only see holograms if you are looking directly at them. If you move your head only a little bit in one direction or another, they'll disappear.

Unfortunately, the headset is bulky and hard to adjust to your head, particularly if you're wearing glasses, as I was. I had a really difficult time positioning it so it was comfortable and so its screens were lined up properly.

It's important to remember, though, that this isn't yet a consumer product. It almost certainly will be refined before it becomes one.

And despite HoloLens' present shortcomings, it was fun to see all the ideas that Microsoft and its partners are exploring for how the gadget will be used. Augmented reality systems like it could allow teachers to help students visualize concepts in ways they never could before; could help take companies offer much more effective customer support remotely - and could be a lot of fun. As much excitement as is being generated by virtual reality, HoloLens and its descendents could end up being a lot more important and useful in our daily lives.

That is, once the bugs get worked out.

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