What’s the Future of AR?

Since I first experienced augmented reality, I’ve been convinced that it will play a significant role in HVACR service and maintenance. Augmented reality headsets and glasses have been touted as the way to accomplish complicated service and maintenance tasks such as jet engine repairs. All of the data that a mechanic needs is projected right there, in a virtual sense, in front of him. There’s no need to go back to the manual or to a laptop.

I had an opportunity to try out a Microsoft HoloLens headset and it was truly amazing. It allows you to virtually walk through a construction project. For an actual project that’s underway, a project manager wearing such a headset could look up into the ceiling cavity and see all of the mechanicals—those that have been installed and those not yet installed—and see how everything is going to fit.

Think about how useful a powerful tool like that would be if you were doing a chiller teardown or servicing a CO₂ system. Back in our March 2019 issue, service technician Rich Perrotta wrote, “… each chiller brand incorporates unique and system specific controls and control algorithms. Each requires OEM-specific software and hardware interface.

Today’s chillers require intensive training and, just as with any modern system, technology is constantly changing. Fully trained factory-certified technicians equipped with the system specific interface tools are a mandatory requirement to maintain and service this type of equipment.”

But what if you had a technician who is basically up-to-speed on chiller service—although maybe not that particular brand—and AR could provide all of the information he needs to service that chiller?

I have two concerns. One is that we won’t see any AR providers who are interested in the HVACR market because they’re off chasing markets they find sexier. And the other concern is that the industry will be slow to adopt the tools when they are available.

The website TechCrunch recently reported on the bankruptcy of 20-year-old augmented reality pioneer Osterhout Design Group and that Meta and Blippar, two other AR companies, had fallen into insolvency. Microsoft, maker of the HoloLens that I tried out, spent $150 million to buy patents from Osterhout before its collapse. But Microsoft and another AR biggie, Magic Leap, focus primarily on CAD and BIM in their construction offerings.

There has to be an AR provider willing to chase after the market because it all comes down to software. Somebody has to convince the OEMs in the industry to make all of their manuals available in a compatible format. And then, my other concern is whether service technicians will use AR when it’s available or consider it an annoying intrusion. Then it becomes a chicken and the egg situation. AR providers, OEMs and the service industry all wait for the other parties to make the first move. The HVACR industry would miss out on a transformative service tool.

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