The future of VR

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The enthusiast VR space

In late 2019 at Oculus Connect 6 Chief Scientist at Oculus VR, Michael Abrash stated that VR is in a similar position as personal computers were in the nineteen eighties, only used by hobbyists and industry[[1]](#footnote-1), and that it has yet to see its inevitable explosion in popularity that personal computers did in the late nineties, but thanks to the internet and VR’s popularity among the average pc enthusiast it is growing at a much faster rate than PCs did in terms of the commercial use.

Virtual Reality’s primary application in the home is gaming and recently some key software releases have provided a much-needed boost in the platform’s popularity among the “hardcore” games market. This market had about 16 million users as of 20182 but Valve (creators of the Index and Vive VR headsets and the world’s biggest PC game store Steam3) announced a sequel to the highly acclaimed Half-Life 2: Episode 2 causing millions who were originally dismissive of VR gaming due to its lack of a “killer app” turned their attention towards the platform as it was the only platform that supported the next entry in the Half-Life series which had previously ended on a cliff-hanger ending plot-wise, leaving a massive amount of consumers begging for another entry in the franchise. This led to a mass shortage of stock for VR headsets that persists today (9th May 2020) as thousands rushed to get the headsets before each other to play it on launch day. Half-Life: Alyx is estimated to have brought almost a million new customers to high end VR.4

What this means for the future is, that due to the explosion in the enthusiast grade VR headsets’ (HTC Vive, Oculus Rift S, Valve Index) install base developers have begun to take the VR market much more seriously as a platform to release high budget software on, whereas previously many developers rightfully had little faith in the platform as it was relatively small compared to “flat screen” gaming. This means the platform will likely receive many more high-budget, cinematic experiences for those with powerful PCs and high-end headsets in the next decade.

The mainstream VR space

While the above applies to the VR/Computing/Gaming enthusiast community there is a much larger market that has only somewhat come into existence yet that companies will be much more interested in spearheading as it grows. For the most part the casual VR market currently consists of low-fidelity headsets that use a mobile phone’s screen for its display that but in May 2019 Oculus released the Oculus Quest HMD (Head Mounted Display) that was completely wireless and now has hand tracking that doesn’t require controllers, while having computing power almost on par with PC powered VR HMDs all for under 500 Euro.[[2]](#footnote-2) This massively increased the amount of things that people without much knowledge of PCs could do in VR. This increase in quality for wireless headsets means AR (Augmented Reality, Essentially VR but where the real world can be seen but with digital elements visible, similar to the parking assist camera on some cars.) and VR can be used in the industrial world to a much greater degree. One major use of AR that is inevitable is assistance in surgery and the medical field in relaying important information to EMTs and Surgeons that normally would require them to take their attention away from the patient. A headset could identify incision points and if there is an abnormality in the alignment of an insertion.[[3]](#footnote-3) As the use of head mounted displays in a professional environment is normalised we are almost guaranteed to see this come to fruition as it would be able to reduce to reduce the cost of surgery by reducing the amount of people needed to be present in an operation and would reduce the amount of accidents/mistakes that occur in surgery by reducing the number of human errors that can occur in communication.

This level of precision and ability to be able to see through objects in VR would be a breakthrough in the engineering world in order to test concepts before they have entered the prototyping phase as they can see their models in a much more realistic perspective than they can on a monitor.[[4]](#footnote-4)

The future of VR lies in mostly in industrial, non-gaming fields but they will simply be an extension of what we currently use our computers for in the professional space such as remote lectures for universities and remote calls for work that could exist in 3D in order to make it easier to communicate non verbally together. Eventually this technology will become required to function in modern society just like computers and smartphones once did.

For VR to reach this mainstream point it will need go through a period where companies compete to reduce the sizes of their displays, much like phones did in the eighties and nineties. While mobile phones were able to gather mainstream popularity while they were still quite big, due to the wearable nature of virtual reality devices they will need to be reduced in size to almost the size of a pair of glasses in order to be inobtrusive enough to wear for extended periods and be comfortable enough to carry around all day.

1. ‘Oculus Connect 6’*,* <https://www.youtube.com/watch?v=7YIGT13bdXw>, retrieved 6th May, 2020.

   2 Statista Research Department, <https://www.statista.com/statistics/426469/active-virtual-reality-users-worldwide/>, retrieved 7th May, 2020.

   3 Wikipedia, <https://en.wikipedia.org/wiki/Steam_(service)>, retrieved 7th May, 2020.

   4 Ben Lang, <https://www.roadtovr.com/steam-survey-vr-headset-growth-april-2020-half-life-alyx/> retrieved 8th May, 2020. [↑](#footnote-ref-1)
2. Oculus, <https://www.oculus.com/quest/?locale=en_US>, retrieved 8th May, 2020. [↑](#footnote-ref-2)
3. P. Vávra,1 J. Roman ,2 P. Zonča,1 P. Ihnát,1,2 M. Němec ,3 J. Kumar ,4 N. Habib ,4 and A. El-Gendi5, <https://www.hindawi.com/journals/jhe/2017/4574172/>, retrieved 9th May, 2020. [↑](#footnote-ref-3)
4. VRS, <https://www.vrs.org.uk/virtual-reality-applications/engineering.html>, retrieved 9th May, 2020. [↑](#footnote-ref-4)