

Oculus Rift brings a whole new dimension to communication

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Oh hi Dad, can you put Mum on? Credit: nan palermo, CC BY

Mark Zuckerberg's latest spending spree has landed Facebook an exciting new gadget in the form of the Oculus Rift, a virtual reality headset that is used by gamers and researchers alike to enhance encounters.

Announcing a deal worth US\$2 billion, Facebook said it plans to move



the Oculus Rift beyond gaming, into "communications, media and entertainment, education and other areas". It also said that it has the potential to be "the next social and communications platform".

The news has fuelled enormous speculations about what Facebook is planning. Will <u>virtual reality</u> become part of our children's classrooms kit? Enhance our Internet movie experiences? Will we able to "poke" someone with a virtual wink or play a more compelling version of Farmville?

Introducing a more immersive way to communicate with people remotely is a challenge that companies and researchers alike have pursued for some time, so all eyes are on Facebook to see what it will do.

Oculus Rift is a low-cost device that fits onto the face, allowing the user to experience a 3D version of all kinds of scenarios. Oculus VR sells developer kits and connects with the Unity 3D game engine. Anyone with the right skills and a minimal investment can produce an immersive game or use it for other purposes. To date, 75,000 orders have been placed for the headsets, and interest is growing.

The Oculus Rift have been used for <u>research</u> into helping amputees become accustomed to prosthetics and for <u>military and medical training</u>. At my own university, we use it for creating immersive gamified training.

I am also interested in recreating believably social synthetic interactions, and in modelling collective behaviour via intelligent virtual agents, to be used for training and decision making. The Oculus Rift enhances the experience of being there, in the virtual crowd and has the advantage of being affordable.

In these sorts of social applications and more, the Oculus Rift can be



used as a way to enhance our experience of remotely located people and places, so it's little wonder that Facebook sees it as an opportunity to bring people together in a new way.

The device delivers images to the user but more importantly, it gives them a sense of being somewhere else, inside the <u>virtual world</u>. The depth cue provided by the stereoscopic view in the Oculus Rift is very powerful in triggering a suspension of disbelief in the user.

You really feel like you're driving along a highway or on a tropical island. The experience is completely absorbing and it is easy to forget where you really are. If that feeling can be extended to make you feel like you are really with someone from whom you are physically separated, something quite powerful will have been created.

Oculus Rift won't be the ultimate solution for face-to-face communication between people who aren't in the same room at the same time though. There are drawbacks to using the device in this way.

The amount of time one can spend navigating a virtual world visualised in a head-mounted display is limited. This is subjective but after a prolonged time of between 15 and 20 minutes, users can experience motion sickness. That rules out long chats with your mum on your Oculus Rift or virtual holidays with your long-distance love interest.

And while the Oculus Rift has been hailed for bringing virtual reality to the masses, it's low-cost approach means the quality of the graphics is lower than other more expensive kits. That might trigger motion sickness even earlier on in the experience.

Despite these setbacks, it's very exciting for researchers and potential users alike to see what has long been a virtual reality starting to become a concrete prospect in the mainstream, not least because it helps us justify



the work we do all day on our Oculus Rifts.

In its own statement on the Facebook deal, Oculus VR described the move as: "one of the most important moments for virtual reality" and suggested that, in 10 years, virtual reality will be everywhere and affordable for all. That's a very alluring prospect, but I hope it will take less.

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