blink

By Brian Essex, Ph.D.

As soon as I was let through the doors into the PAX Prime expo hall, I headed straight for the Oculus Rift booth. I had tried virtual reality before, but not for more than ten years, and I couldn't wait to see whether the experience lived up to the hype.

Oculus Booth

I managed to make it to the very back of the line just before it was capped and patiently waited for my chance to don the headset. Eventually my turn came and I was led to a comfortable chair and asked to take a seat.

Brian at PAX with a VR headset

Here I am immersed in a virtual world with a virtual reality headset

A moment later, I was looking down from the sky at a furry fox in a world that resembled Super Mario 64. The fox was my character and I could move him with a joystick as in most video games. The difference here was that the world outside the game had completely vanished. I was inside the digital world and as I moved my head, the view of the world changed with it.

Jessica on Oculus Rift

Fellow Blinker Jessica playing Xing with the Oculus Rift

It was a beautiful experience, but before I knew it the Rift was taken off my head. I couldn't wait to try the Oculus again.

Over the weekend I played every virtual reality game I could get my hands on. There was [Enemy Starfighter](#), an epic science fiction shooter where I flew a small starship in a space dogfight. There was [Darknet](#), a simple cyberpunk puzzle game where I had to hack into a network. And there was [Xing](#), a first-person game reminiscent of Myst where I walked around in a digital jungle and solved riddles.

A PAX Prime participant busy fighting virtual enemies with additional arm sensors

Each experience was exceptional, yet unique. Here are five takeaways from trying the games:

1. **Playing a virtual reality game is qualitatively different than playing traditional video games.** The sense of looking at a screen disappears and you feel as though you are in a virtual space that has real volume. It is a much more satisfying experience than typical gaming.
2. **When using a joystick it can be hard to remember what the controls do because you do not see it or any out-of-game reference materials.** I really appreciated the user interface of the game Darknet because a three-dimensional model of my joystick with labeled controls was readily available for reference during gameplay.
3. **Games in first-person perspective feel very different than games in third-person perspective, and are both more immersive and intense because you are the character.** As I played the game Xing, I actually felt a sinking feeling in my stomach as I fell off a virtual cliff. I can't imagine playing a first-person shooter in virtual reality because the experience would be too real. Virtual reality will challenge game designers to create content appropriate for the medium.
4. **Time perception changes.** Without any out-of-game time cues it is hard to know how much time has passed during gameplay.
5. **Walking in a first-person game with a controller does not feel quite right.** As I played Xing and my character moved, I felt very odd and slightly motion sick. My eyes told me "I" was walking forward, but my other senses did not. I think the mismatched feedback to my brain might have contributed to motion sickness. Interestingly, I did not experience any motion sickness with any other games, even while controlling a starship from a cockpit, so motion sickness might be more likely to occur when controlling an avatar in first-person perspective.

Ben testing Vortex VR

Our friend Ben testing the believability of a digital environment with the Vortex VR augmented reality headset

My biggest takeaway from the weekend is that the digital world as we know it is about to undergo a huge paradigm shift. I looked at several different virtual reality headsets over the weekend and one augmented reality headset. The latter device, by a company called [Vortex VR](#), blew my mind because the experience was completely unexpected. Next to the headset was a table with a printed sheet resembling QR codes on it. When I put on the headset, I could still see everything around me, but code on the table was transformed into a three-dimensional digital landscape with moving characters on it that I could interact with. I felt like I was wearing magic goggles that revealed hidden information to me.

I honestly can't wait to buy a virtual reality headset and see how both virtual and augmented reality transform gaming and our culture at large.

Brian Essex works in user research at Blink UX, joining the team after attaining a Ph.D. in Cognition and Cognitive Neuroscience from Vanderbilt University.