The Future of Virtual Reality: Crash Course Games #21

Crash Course: Games
https://youtube.com/watch?v=BfcBjJ3c9lg
https://nerdfighteria.info/v/BfcBjJ3c9lg

Hi, I'm André Meadows and this is Crash Course Games. Today we're going to take a look at what seems to be a cutting-edge new gaming technology has actually been around for decades: virtual reality. People have been trying to create and experience truly immersive worlds like what you see in the holodeck on Star Trek for years, but none of these attempts have had any staying power, but why is that?

By the looks at the huge Kickstarter out pour for the Oculus rift VR headset in 2012, lots of players want, or at least think they want, VR games. And the industry has responded with headsets from some of the largest technology giants. But even now we're still in the early stages of VR, and there's still a lot of uncertainty. So let's take a look at how far the technology has come and hopefully we'll get a better idea if it's finally here to stay.

[CrashCourse Intro plays]

Virtual Reality has actually been a recurring aspect. It attempts to deliver us a deeply enhanced experience by immersing us in the worlds that populate our games. This feeling is one of the core experiences game developers and designers seek for their players. The lower the barriers into the alternate realities presented by games, the easier it is for players to feel transported to another world.

Over the years, these attempts have had varying degrees of success to say the least. Some of the very first attempts involved art that surrounded and immersed people. Giant full 360-degree panoramic paintings, such as the Panorama Mesdag by Hendrik Willem Mesdag in 1881, have popped up throughout history. They were found in the 12th century dynasties of China, and more recently in seventeenth and eighteenth century Europe.

The term panorama was coined by an Irish painter Robert Barker, to describe the massive, fully cylindrical paintings he made depicting Scotland in 1792. And Scientist Charles Wheatstone showed in 1838 how the human mind combines similar 2D imagery into 3D imagery. When two identical images are placed close enough together, our mind merges them and can make them appear three-dimensional.

These early findings were the first stereoscopic images. They gave viewers a deep deep sense of immersion when they were viewed through appropriately named stereoscopes. These handheld devices would come with images from around the world. The most famous of these devices was a 1939 view master by William Gruber.

In literature, Pygmalion's Spectacles written by Stanley G. Weinbaum in 1935, describes people of the future experiencing entirely new worlds That involve tasting food, touching fabric, and smelling flowers, all through a head-mounted display. And these ideas were implemented in Morton Heilig's 1950s Sensorama. It combined full-face immersion with a stereoscopic 3D display, and also had fans, smell generators, stereo speakers and even a vibrating chair to thrust people into full sensory films like dune buggy, belly dance, date with Sabrina, and my personal favorite I'm a coca-cola bottle. It wasn't a game by any means, but was a huge step towards immersive experiences.

Morton Heilig went on to create a new device called the telesphere mask, which really looks like a prototype oculus rift, that was won over the eyes. And in 1968, Professor Ivan Sutherland and a student created the gigantic Sword of Damocles VR device. It was too heavy to be worn, and had to be suspended from the ceiling, but it did show basic computer generated wireframe objects and rooms they could exist in.

So as you can see virtual reality has been around for a long time, but the term virtual reality wasn't coined until 1987, The founder of the visual programming lab, or VPL, Jaron Lanier used the term to describe all the devices his company was creating. They created the first VR goggles, and the data glove that could work with the VR imagery.

About this time VR began to get noticed by the public, thanks to the virtuality group. VR can be found in various public arenas, most commonly in local malls. The company created many arcade games and VR machines that can hold multiple players in one continuous virtual space. Players would strap into large, bulky chairs, otherwise known as VR pods, and then Don massive neck breaking head-mounted displays. And the games are pretty weird. Like Dactyl Nightmare: up to four players bounced around a series of floating checker boarded platforms while dodging the neon green pterodactyls that swooped around them. That was a game.

VR also showed up in the home console markets. One of the earliest attempts was a 3D image of peripheral for the vetrix console released in 1984, but it was retired the same year it was released due to the great video game crash in North America. Almost a decade later Sega actually tried to start a new VR crazed when it debuted the Sega VR headset for the Sega Genesis at the 1993 consumer electronics show but it was never released.

Sega claimed that the experience was gonna be too "real for audiences," but it had been reported that the limited processing power of the Sega systems at the time could not adequately create a feasible 3D experience. And the next major entry in console gaming VR: the Nintendo Virtual Boy released in 1995 the device, also known as the VR32 was famous... or infamous for its games with only two colors: black and red. It costs around $180 and had very few games.

Players also reported that the virtual boy caused headaches and eye strain, sometimes for up to an hour after playing. The virtual boy was discontinued one year after its release. And that seemed like the end of consumer VR, but in recent years the technology has come thundering back with the Oculus Rift, the HTC Vive, and the PlayStation VR. Let's go to the Thought Bubble.

In 2011, 18 year-old inventor Palmer Luckey was frustrated with the existing selection of head-mounted displays for gaming. So he decided to build his own. He debuted the Oculus Rift on Kickstarter in 2012, and with the vocal support of id Software's John Carmack, the father of first-person shooters, quickly raised 2.5 million dollars, proving once again that there was still an audience that wanted this whole VR thing to work out.

By 2014, Facebook purchased Oculus for 2 billion dollars, and the Rift was officially released in March of 2016. The rift notably included much higher resolution displays, a wider field of view, and significantly reduced lag time which produced a much less nauseating experience.

The industry quickly followed with HTC's release of the Vive in April 2016, in partnership with the Valve Corporation. The Vive platform encourages open development through the Steam Workshop, and utilizes a novel room scale technology that seems like it'll have a lot of important uses, by keeping players from running into walls.

Gaming behemoth Sony also will launch its own headset, the PlayStation VR in October of 2016 the device will work with the PlayStation 4, significantly lowering the price barrier, as compared to the other headsets that require a more expensive PC to process the graphics. The PlayStation VR is also in an interesting position, as it will be able to leverage existing developer relationships, and current install base to bring lots new players and games to the VR

genre.

Thanks Thought Bubble. And if those devices sound expensive to you, well there are more affordable VR devices on the market like Google's Cardboard. and that's not just a name. The cardboard is just that. Cardboard. It's an inexpensive viewing device that turns a smartphone into a VR viewer. Google's goal with this low-cost device is to encourage development for VR applications, and their efforts seem to be successful, as there are now over 1,000 applications compatible with the cardboard.

But Google is not the only contender for phone-based VR. Samsung has teamed up with Oculus to create a VR headset that is compatible with their Galaxy phones. this device serves as a consumer-friendly headset that will only set you back about a hundred dollars as opposed to Oculus's 600. Granted, you still need to purchase the phone too. [Whispers] That's where they getcha.

VR is also starting to expand into other entertainment experiences. Amusement parks are now starting to integrate VR with their rides. Six Flags opened their newest VR coaster, The New Revolution, which promises a complete, immersive experience combining the physical sensation of the coaster with a VR experience that will place you in a futuristic battle to save the planet from an alien invasion.

There's even a virtual reality theme park called The Void being built in Pleasant Grove, Utah. The void will be mixed reality attraction dedicated to the VR experiences that blend VR with physical environments and haptic feedback to provide a convincing virtual world that employs even more of your senses.

All that and we haven't even talked about augmented reality games, games that are overlaid on the real world these games aren't exactly virtual reality, but they're very closely related. The most notable one right now is of course Pokemon GO! Oh sorry. Sorry Pikachu I'll catch you later.

So with all these advances in VR gaming, new and actually pretty convincing worlds are forming inside these games spaces. And yes there are still some existing problems like the field of view on the devices isn't quite as wide as it should be and players have to be tethered to large heavy computers. And we still haven't quite figured out how best for a player to move around in a small room, but it's VR! It's so cool!

And at the same time these VR experiences are growing rapidly in player adoption and immersion capabilities. Never before have we been able to participate in these worlds as we can today. And with the continued improvements in technology as well as seemingly huge selection of games on the horizon, virtual reality might, maybe be here to stay. Only time will tell. Thanks for watching, and we'll see you next time. Either real or virtually.

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[CrashCourse Outro plays]