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Biography of John Carmack

John D. Carmack II is an American software engineer and pioneer of the first-person-shooter video game genre through the revolutionary success of games such as Doom, Wolfenstein and Quake. After an illustrious career in video game development John became the Chief Technical Officer for Oculus VR, before more recently stepping back from that role to focus on artificial intelligence.

Early Life

Born in Kansas, Missouri, in the August of 1970, it was evident from a young age that John Carmack aspired to be a computer programmer. At 14 years of age John - along with a group of accomplices – broke into a local school in an attempt to steal Apple II computers. Despite gaining entry to the building by burning through a window with thermite, the staged robbery was ultimately unsuccessful, landing John a psychiatric evaluation and a year-long sentence in a juvenile home. Some years later John would attend computer-science classes at the University of Missouri-Kansas City for a few semesters before dropping out to pursue freelance software engineering opportunities himself.

Early Career

After being offered a position at Softdisk, a software company from Louisiana, John began working (somewhat ironically) on an Apple II publication. It was during this time that he met John Romero, Tom Hall and Adrian Carmack, with whom he created his first freely distributed title, the side-scrolling platform game; *Commander Keen 1: Marooned on Mars.* Published by Apogee Software this game would turn into a relatively successful series, prompting the four to leave Softdisk and become co-founders of id Software.

id Software

A year after its inception in 1992, id Software released it's first title *Wolfenstein 3-D,* a game that brought a huge amount of popularity to the emerging first-person-shooter genre. The game was played from the perspective of a weapon wielding soldier navigating through a 3-D

environment all the while shooting Nazi's – not too fundamentally different from many games today. Following this successful release, John and id Software shifted their focus to the first installation of the now infamous *Doom* series. Even more entertaining, immersive, realistic and violent than *Wolfenstein*, *Doom* quickly became one of the most popular video games on the planet.

Doom

Contributions to the Gaming Industry

There were a multitude of factors that lead to the popularity of *Doom* and its ancestors such as *Quake* and *Doom*'s sequels. John developed and popularised many techniques and graphics engines which lend to the success of these games. The 'ray-casting' 3-D rendering model, the

'binary space partitioning' method, the 'Carmack's Reverse' technique of adding shadows to a 3-D model and the 'MegaTexture' game engine used for *Doom 3*, are just some examples from the long list of John's inventions which revolutionised how games would be made in the future. In fact, many of the most popular video games today such as *Call of Duty, Half-Life* and *Medal of Honour* have all licensed and use John's engines.

Along with the release of Quake came another game-changing feature to the industry, via the addition of multiplayer capability over the internet. Quake was originally designed for local multiplayer, and the extension *'Quakeworld'* was developed afterwards, which unlike its predecessors allowed several people to play with or against each-other in the same environment from separate remote locations. This was in many way the birth of real online FPS games, an industry that would grow to become worth just shy of 200 billion USD today.

John was and is a huge advocate of open source software, deciding to make large portions of the code for Doom and id Software's other titles open source thereby enabling their dedicated fanbase to modify the game to their hearts' desire. On multiple occasions John has voiced his distaste for software patents, going as far as to call them "robbery".

One such Simpson's themed Doom mod

Career Change

In late 2013, John officially resigned from id Software after some 22 years, having seen the company grow from 4 people to over 150. John joined the virtual reality mogul Oculus VR as their Chief Technical Officer. Prior to taking up this role John was a vocal proponent of Oculus and virtual reality technologies as a whole, so much so that he left id Software due to it's parent company ZeniMax Media's refusal to support Oculus Rift. Unfortunately, the transition between jobs was far from a smooth one for John. ZeniMax launched a law suit against Facebook (oculus' parent company) and John himself over stealing ZeniMax's intellectual property. While John was absolved of any individual liability, Oculus were held responsible for violations of trademark and contract. The bitter transition didn't end here, with John returning the favour in early 2017, suing ZeniMax to the tune of about 20 million USD over an unpaid portion of the purchase made by ZeniMax for id Software. Eventually this dispute was settled outside of court, with John dropping the suit saying "ZeniMax has fully satisfied their obligations to me".

Time at Oculus

John's primary focus at Oculus was mobile virtual reality. He was instrumental to the creating and production of 'Gear VR', a Samsung phone powered VR headset that has become one the most widely distributed headsets in the world. With its first release coming in December of 2014, John again showed his appetite for open-source and community driven development: The original release was primarily targeted at developers so they could learn how to create apps and games for the VR headset, that would be functional in time for the headset's consumer-aimed release.

Gear VR Headset

Despite the early success of this production with about 5 million units being sold in the first year, by 2019 John's relationship with mobile powered VR had somewhat soured. For a variety of reasons - not limited to the draining of battery life, the awkwardness associated with setting it up, and the price tag – John oversaw the discontinuation of the headset and said himself; "I really haven't been satisfied with the pace of progress that we've been making".
By late 2019, after receiving a Lifetime Achievement Award at the third annual VR Awards, John announced his intention to step down as CTO of Oculus to focus his time on artificial general intelligence. Despite remaining attached to the company as 'Consulting CTO', John is now pursuing a passion in AI.

Giving AI a Go

Unsurprisingly, no tangible product has been developed by John in this field as of yet. When announcing his intentions to work on AGI on Facebook, John wrote; "When I think back over everything I have done across games, aerospace, and VR, I have always felt that I had at least a vague "line of sight" to the solutions, even if they were unconventional or unproven. I have sometimes wondered how I would fare with a problem where the solution really isn't in sight. I decided that I should give it a try before I get too old."

With AGI being a largely undefined concept, and one in it's very primitive stages, it may be a while before we see any Doom-esque revolutions in this field from John. He currently works on this passion of his from home, which he shares with his wife; Katherine Kang, and two children.

Conclusion

John's contributions to the gaming and technology industries as a whole are in many ways to vast to articulate. With dozens of awards received over his career - including multiple Lifetime Achievement Awards, #1 rankings in GameSpots' 'most influential people in computer gaming' lists, inductions to Arts and Sciences' Halls of Fame, Emmy awards, and even a (questionably produced) Doom movie featuring The Rock – his face has certainly been carved into the Mount Rushmore of software engineering.

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