Cultural Daily

Independent Voices, New Perspectives

The Tech That Makes Modern Gaming Possible

Our Friends · Thursday, March 23rd, 2023

More and more of us are enjoying video games today than ever before. The number of gamers has been slowly climbing for decades but the last 10 years has seen that growth really accelerate.

There are several factors behind this phenomenon, including the simple fact that gamers of decades gone by are replacing the previous generations of people who remained mostly disinterested. Aside from changing demographics, shifting cultural preferences and a more accepting perception of gaming are helping to make the hobby more attractive.

But more than anything, technology has been the biggest driver in the growth of video gaming. Of course, this isn't a new phenomenon as, without it, video gaming wouldn't exist. However, there are several key technologies that have played a pivotal role in making contemporary gaming what it is today.

The Internet

There's no way of talking about technology that has shaped video gaming without dedicating some time to the internet. This former government military technology and university collaboration tool has morphed into the lifeblood of modern life, helping us to get more done, stay in touch with loved ones, and find all the entertainment we could possibly want.

When it comes to gaming, the internet has helped to make the medium more accessible, sped up the distribution of titles, and allowed players to enjoy new challenges by competing against other people.

One of the best ways to see how the internet has wormed its way into modern video gaming is by looking at the last few generations of consoles. While the PlayStation 2 and original Xbox had online capabilities, it wasn't until the PS3 and Xbox 360 came along that most players took advantage of online play.

Today, the internet is even more embedded into consoles. For example, both Microsoft and Sony sell versions of their machines that can only get new games via the web as they've had their disc drives removed. There are also many titles, such as Call of Duty: Warzone and Fortnite, that only work in online modes, despite the fact that their predecessors had offline single-player functionality.

Photo by Onur Binay on Unsplash

Random Number Generators

Online slots have been around for more than two decades though they've really come into their own in recent years as casinos have created many new and unique themed titles to diversify their offerings and appeal to even more players.

Spotting the popularity of slots, many casinos have begun to offer free spin promotions to new players as a way to encourage them to join their platform over a competitor. These bonuses work differently from other types as they award spins rather than bonus money, meaning they can only be used on slots.

However, even as more players take up slots, few spare much thought to how these games work. This fact is a testament to just how well the systems behind the scenes function as they are practically invisible to the average player.

Physical slot games of yesteryear used mechanical components to spin the reels and to fairly and unpredictably determine which symbols would be down. But since this can't be done on a computer, online slots use a random number generator to achieve the same results.

RNGs work by taking a truly random input, such as atmospheric static or the movement of lava in lava lamps, and running it through an algorithm to determine the outcome of each spin. Without them, casino games couldn't be fair or reliable.

Ray Tracing

Ray tracing is a technology that gets talked about a lot in gaming circles. This is because it has been heralded as the next step in our march towards photo-realistic graphics.

In 2020, Sony and Microsoft included ray tracing in their new consoles, while NVIDIA had already been including the technology in some PC graphics cards for a while before this. Since

then, a lot has been made about the results that ray tracing offers.

It works by tracing the individual beams of light being directed as a particular object and calculating how they will behave. In doing so, objects can appear like they are being illuminated by a single source, rather than a uniform blanket of light.

There are now many more games that support ray tracing and we can expect it to be developed for all possible platforms in the coming years.

Photo by Glenn Carstens-Peters on Unsplash

This entry was posted on Thursday, March 23rd, 2023 at 4:57 am and is filed under Sponsored
You can follow any responses to this entry through the Comments (RSS) feed. Both comments and pings are currently closed.