

## **VIRTUAL REALITY AND ITS PROSPECTS IN THE MODERN WORLD**

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Virtual Reality (VR) is the term to describe computer simulations of reality which are very similar to real-life experience. Virtual reality simulates both an action and reactions to an action. The user can influence these objects according to the real laws of physics (gravity, properties of water, collision with objects, reflections, etc.). Often for entertainment purposes, users of virtual worlds are allowed to do more than it is possible in real life.

Hollywood cinematographer Morton Heilig introduced the virtual reality project to the public back in 1962 (3Dvisor, n.d.). In his vision, Morton sought to expand the concept of cinema, he wanted to turn ordinary viewing of the film into a

transition to another world. This is how Sensorama appeared – an invention that has a slightly frightening appearance of a “booth”, where a person sits on a stool, puts his head inside and really immerses himself in another world (3Dvisor, n.d.). This was facilitated by the stereoscopic 3D technology. Among the main areas of development of virtual reality technologies, the gaming industry occupies a special place. Today, the volume of this market is large, but even so it does not stand still, it is constantly growing and developing. VR clubs are a great opportunity to immerse yourself in the virtual world and have a good time. Using a unique technology any person can safely enter an unknown world, get acquainted with it and interact with it. But the invention was too complicated and very expensive: no one dared to invest in Sensorama and the technology was later completely forgotten. The idea continued its life even in spite of Heilig’s failure and the next time it was embodied in the helmet of Ivan Sutherland, in the project “Sword of Damocles” (3Dvisor, n.d.), that had a very bulky appearance and was attached to the ceiling, which excluded comfort, besides, it was very heavy.

Immersion in the virtual world takes place with the help of special technical devices. While in the virtual environment, the user can participate in various tests, perform different tasks, fight zombies or fly on a spaceship. Everyone can independently choose any scenario.

The gaming industry is constantly monitoring new trends, that is why virtual reality technologies have become extremely popular in this industry with special glasses and a helmet being mainly used (Vrata Club, n.d.). The instructor puts the headset on the head and it works as simply as possible. In front of a person's eyes there is a display on which the necessary video is being shown. An accelerometer and gyroscope are attached to the case. They analyse head movements and send up data to the program. This information is processed and the image on the display changes according to indicators.

VR is close enough to the real world, being both useful and enjoyable. It has obvious practical uses. Virtual reality is used to help novice doctors avoid harming the patient; helps prepare pilots for work; helps simulate possible life situations and allows officers to prepare for them; can help overcome a person's fears (Vrata Club,

n.d.).

Now most users associate VR exclusively with video games and movies but this technology has already penetrated into other areas. Most of all, virtual reality is of interest to people in the field of medicine and education. The latest research and development have made it clear that VR can solve very serious problems.

In spite of great achievements in the field of virtual reality, it is currently not possible to claim a full reproduction and creation of the real world. Currently, it is impossible to create a perfect complete 3D picture of real life, but VR is constantly developing, broadening the horizons of human knowledge.

#### **References:**

1. History about Sensorama. (n.d.). *3Dvisor*. Retrieved from <https://www.3dvisor.com/>
2. Names of special technical devices and their principles of operation. (n.d.). *Vrata Club*. Retrieved from <https://vrata.club/ua/blog/virtualnaa-realnost-segodna>