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VIRTUAL REALITY: ANOTHER WORLD WITHIN SIGHT

Virtual reality is a kind of semblance of the world around us, artificially created with the help of technical means and presented in digital form. The created effects are projected onto the human consciousness and allow us

to experience sensations as close as possible to real ones. This technology changed the vision of humanity and made a vital contribution to the development of many fields.

The most common means of immersion in virtual reality are specialized helmets or glasses that are worn on a person's head. The principle of operation of such a helmet is quite simple. The display in front of your eyes displays video in 3D. Attached to the body, a gyroscope and accelerometer track head movements and transmit data to a computing system, which changes the image on the display depending on the readings of the sensors. As a result, the user has the ability to "look around" inside virtual reality and feel in it as in the real world. For the image to have high definition and always fall into focus, special plastic lenses are used.

The active use of virtual (VR) and augmented (AR) realities in a variety of areas forms a "merged reality", in which the boundaries between augmented, virtual and physical worlds are blurred. 7 out of 10 users expect VR / AR technology to revolutionize 6 areas: media, education, work, social, travel and retail.

In mid-October 2020, surgical planning software developer ImmersiveTouch unveiled its VR digital surgery platform. It is intended for dentists and maxillofacial surgeons. In mid-August 2021, a new module for training hip and knee operations in VR was launched on the Osso VR platform. In the face of the pandemic, developers are prioritizing the expansion of the curriculum across multiple majors to provide ongoing training for medical students and residents.

In mid-September 2020, as part of a study, one of the Oxford nursing homes began to implement VR technologies to help patients with dementia. At the same time, VR pictures are created individually for each patient. The pilot project team negotiated with nursing home workers and created a panorama of pictures from the past for dementia patients. Several patients were sent back to their youthful memories: to rock and roll dance halls from the 1950s, to the church where they got married, on trips abroad. Patients described the experienced sensations as "amazing" and added that after such a shake-up they feel much more invigorated. Scientists report that the use of VR technology improved communication and cognitive abilities in more than half of the patients with dementia who participated in the study.

VR projects can not only create conceptually new markets, but also expand existing ones. According to Goldman Sachs analysts, VR in the cinema industry is one of three notable growing market segments, along with the gaming industry and online streaming services. According to analysts, the use of virtual reality technologies will bring the film industry \$ 3.2 billion by 2025 and will have an audience of at least 72 million users.

To summarize, the market for virtual reality technologies mainly influences the human vision of the world. According to experts, the main catalysts for the growth of the AR market have become the availability of technology and the simplicity of smart devices. In addition, the COVID-19 coronavirus pandemic when people had limited physical contact and increasingly used technology for distance communication, education and work, contributed to its growth.