## **MODERN DIRECTION IN ART: VIRTUAL REALITY**

Virtual Reality (VR) is a technology enabling users to become fully engaged in a simulated, computer-created world and respond to it instantly. This immersive, interactive experience helps people visualize and grasp complex ideas, mimic human actions, and explore virtual landscapes. Its reach is vast; it's not restricted to a single area. It can actually link entire realms, as seen in the Metaverse.

This simulation is strongly oriented to the real world. In order to adapt the digital world to the real world as best as possible, modern AI algorithms are usually used. These have the task of projecting new and familiar elements onto a mathematically defined surface. The result is a virtual world that looks deceptively real to users.

The equipment usually consists of a headset or screen, hand-held controllers, and detectors that monitor the user's actions and hand motions as they occur. The programming side means building a digital world with computer-created visuals, sound, and other sensory data to produce a completely engaging sensation.

As VR gradually become more mainstream, an increasing number of brands are already working on developing immersive branding experiences. While immersive experiences have existed in the world of video games for a few years now, brands are just beginning to tap into the power of these experiences.

Smart brands are discovering how to craft virtual experiences. These experiences support their overall marketing efforts. The goal is to generate positive feelings, which in turn captivate audiences and strengthen their bond with the brand.

At this stage of development of VR technologies, the following types of virtual reality can be distinguished:

- 1. *VR technologies with the effect of full immersion*, providing a believable simulation of a virtual world with a high degree of detail. Their implementation requires a high-performance computer capable of recognizing user actions and responding to them in real time, and special equipment that provides the effect of immersion.
- 2. *Non-immersive VR technologies*. These include simulations with images, sound, and controllers that are broadcast to a screen, preferably a large-screen one. Such systems are considered virtual reality because they are much more immersive than other multimedia tools, although they do not fully meet the requirements for VR.
- 3. *VR technologies with shared infrastructure*. These include Second Life, a threedimensional virtual world with elements of a social network, which has over a million active users, the game Minecraft, and others. Such worlds do not provide full immersion (however, Minecraft already has a version for virtual reality that supports Oculus Rift and Gear VR helmets). But in virtual worlds, interaction with other users is well organized, which is often lacking in "real" virtual reality products.
- 4. *VR based on Internet technologies.* These include, first of all, the Virtual Reality Markup Language, similar to HTML. Now this technology is considered obsolete, but it is possible that in the future virtual reality will be created, including using Internet technologies.

The most common means of immersion in virtual reality are special helmets/glasses. A 3D video is displayed on a display located in front of the user's eyes. A gyroscope and accelerometer attached to the body track head rotations and transmit data to a computing system that changes the image on the display depending on the sensor readings. As a result, the user has the opportunity to "look around" inside virtual reality and feel like they are in it, as in the real world.

VR matters a lot because it could change how we engage with and understand our surroundings. It gives a fresh way to absorb information, enabling people to study, rehearse, and discover within a secure, manage able space. Furthermore, VR can help combine real and digital interactions, crafting deep experiences applicable to training, treatment, fun, and other areas. As tech evolves, virtual reality is set to become ever more integral to our existence, touching fields from schooling and medicine to games and amusement. These engaging experiences provide a fresh way for designers to share concepts and explain the narrative of a product or company in a more impactful manner.

Virtual Reality (VR) is a cutting-edge technological advancement, providing new ways to engage with digital content and settings. With its immersive, realistic simulations, VR allows users to visualize intricate concepts, explore novel realities, and interact with information in a more profound and intuitive way. This technology encompasses everything from high-end systems using sophisticated equipment to easily accessible, non-immersive, and web-based VR experiences. Each variation is significant in making virtual environments more widely available and adaptable.

Additionally, with brands embracing VR for emotionally captivating and interactive campaigns, its potential extends beyond entertainment—becoming a vital tool in education, training, therapy, and marketing. The integration of AI improves the realism and interactivity of virtual environments, narrowing the divide between the real and digital worlds.

In conclusion, As VR continues to advance, it's set to revolutionize our everyday lives, creating new avenues for communication, collaboration, and creative expression. Its growing presence across multiple sectors suggests a future where virtual experiences become fundamental to our work, learning, and relationships.

## REFERENCES

1. Virtual Reality (VR) Use Cases [Електронний ресурс]. – ТеатViewer. – Режим доступу: https://www.teamviewer.com/en/solutions/use-cases/virtual-reality-vr/ (дата звернення: 03.04.2025).

2. Virtual Reality [Електронний ресурс]. – Britannica. – Режим доступу: https://www.britannica.com/technology/virtual-reality (дата звернення: 03.04.2025).

3. How Does VR Intersect With the Future of Graphic Design? [Електронний pecypc]. – Playbook. – Режим доступу: https://www.playbook.com/blog/how-does-vr-intersect-with-the-future-of-graphic-design/ (дата звернення: 03.04.2025).