Definition: **Virtual reality** from Brewer's Dictionary of Modern Phrase and Fable

A computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real way by someone wearing a head-mounted display screen and special gloves. The term was originally used by computer programmers in the 1980s to describe any interactive technology but took on its present sense in 1989, when an American musician, Jaron Lanier, designed the equipment that allows users to participate in the simulation.

Summary Article: **virtual reality**

From The Columbia Encyclopedia

(VE) or virtual environment (VE), computer-generated environment with and within which people can interact. The advantage of VR is that it can immerse people in an environment that would normally be unavailable due to cost, safety, or perception restrictions. A successful VR environment offers users immersion, navigation, and manipulation. VR encompasses a range of interactive computer environments, from text-oriented on-line forums and multiplayer games to complex simulations that combine audio, video, animation, or three-dimensional graphics; and scent. Some of the more realistic effects are achieved using a helmetlike or goggleslike apparatus with tiny computer screens, one in front of each eye and each giving a slightly different view so as to mimic stereoscopic vision. Sensors attached to the participant (e.g., gloves, bodysuit, footwear) pass on his or her movements to the computer, which changes the graphics accordingly to give the participant the feeling of movement through the scene. Computer-generated physical feedback adds a “feel” to the visual illusion, and computer-controlled sounds and odors reinforce the virtual environment. Other VR systems, such as flight simulators, use larger displays and enclosed environments to create an illusion. Immersive VR systems can cause a form of motion sickness due to a mismatch experienced by the body between aspects of the virtual world and the real one. Less-complicated systems for personal computers manipulate an image of three-dimensional space on a computer screen. In a virtual network many users can be immersed in the same simulation, each perceiving it from a personal point of view. VR is used in some electronic games, in amusement-park attractions, in military exercises, and to simulate construction and architectural designs. Experimental and envisioned uses include education, industrial design, surgical training, and art.

See Rheingold, H., Virtual Reality (1991);
Earnshaw, R. A., Virtual Reality Systems (1993);
Larijani, L. C., The Virtual Reality Primer (1994);
Levy, J., Create Your Own Virtual Reality System (1995);

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