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VIRTUAL REALITY

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Ця стаття про віртуальну реальність та про приклади її використання у галузі медицини.

What is a virtual reality? Virtual reality is the term used to describe a three-dimensional, computer generated environment which can be explored and interacted with by a person. This person becomes part of this virtual world or is immersed inside this environment and being there, is able to manipulate objects or perform a series of actions.

The term "virtual reality" is familiar to many people, but they are not sure how to use this technology in real life. There are a lot of areas where virtual reality is used, such as the Military, Education, Healthcare, and Entertainment, Fashion, Heritage, Business, Engineering, Sport, Media, Telecommunication, Construction and even Programming languages.

Virtual reality is widely used in Medicine for surgery simulation, phobia treatment, robotic surgery, diagnostic, skills training and for many other actions.

The first example of use of virtual reality in medicine is the HumanSim system. This technology makes possible for healthcare professionals to acquire new skills and improve existing skills without any danger for their patients. Doctors, nurses and other medical personnel work out different complicated situations and scenarios, connecting with each other in interactive environment. HumanSim features learning content was designed in collaboration with experienced medical professionals affiliated with premier medical institutions and provides content derived from leading clinical references. It is a powerful system for web-based educational content delivery and assessment and evaluation.

One more use of virtual reality now is a robotic surgery. Remote surgery is the ability for a doctor to perform surgery on a patient even though they are not physically in the same location. A robot surgical system generally consists of one or more arms which are controlled by the surgeon, a console, and a sensory system giving feedback to the user. Nowadays, the major limiting factor that is stunting the development of robotic surgery is the time delay between the instructions issued by the surgeon and the movement of the robot which responds to the instructions. With the current level of technology, the surgeon must be in close proximity. Robotic technology is extremely expensive both in terms of capital costs, as well as running expenses and will require the training of specialized personnel to properly repair and care for it. Such expenses may far outweigh any savings earned at the present time.

In conclusion, I would like to say that in future the complete development of virtual reality can give people opportunity to study faster and more effective with less efforts, although now it's still expensive and evolving technology.

Literature:
1. http://www.vrs.org.uk/
2. http://www.techrepublic.com/