

Using Multimedia in Legal Proceedings

Virtual Reality

You can fly to the moon by pointing your finger. With a flick of your wrist, see the world through the eyes of a child. Reach out and grasp furniture, windows, or walls that exist only within the silicon memory of a PC. Wave your hand to create virtual paper on an empty desktop, a simulated skid in a nonexistent car, or X-rays of the human body.

- PC Computing

VR (virtual reality), according to VR theorists William Bricken and Brenda Laurel, respectively, is "an electronically mediated experience" and "a multisensory representation." As generally agreed, virtual reality refers to having the ability to interact with data in a way that provides the user to "enter" and navigate through a computer-generated 3-D "world" or environment and change your viewpoint and interact with objects within that environment. The user can move around the virtual reality, examine things from different perspectives, and gain a greater understanding of the reality being simulated. Virtual Reality is characterized by "immersion" into an artificial world created through vision, sound, and touch. Virtual Reality is interactive and the participant enjoys autonomy, or freedom to move around and manipulate virtual objects at will. Today, in virtual reality, you can see and hear, point and move, pick up things and throw them, and sometimes touch and feel.

The history of virtual reality is a history of computers. With computers, we moved from 1-D (inputting text one character at a time), to 2-D (Graphical User Interface), to 3-D (multimedia), to Virtual Reality. Virtual Reality is meant to emulate the life that you create.

To experience virtual reality or a personal reality simulator, you don special headgear the size of a tissue box. Look into this headgear, and you will see a stereoscopic 3-D image of the "virtual reality." Move your head to the side or up and down, and the computer shifts the display to realistically match your point of view. You are in the scene, not an outside observer.

Next, you have to slip a glove onto your hand. The glove is calibrated for the individual

participant. The glove uses fiber optics to keep track of the basic motions of the user's right hand. On the back of both the glove and the helmet are magnetic sensors that monitor motions and send them to computers. When moving your hand and the fingers, you see a disembodied image of the glove. The display moves in the direction you do. Point the glove straight up and the room appears to fall away. With your feet still on the ground, you're flying. Point your finger toward the ground and you return. Move toward a wall and you go through it to the outside.

Dr. Michael McGreevy, who guided NASA's entry into virtual reality, has secured funding for a project called Visualization for Planetary Exploration that will result in virtual environments of the moon and the planets. Visual data recorded by satellites and space probes are used to create computer models of the planets.

See (www.seas.gwu.edu/faculty/musgrave/sci_viz.html) and (<http://olias.arc.nasa.gov/publications/McGreevy.AFO.WWW/SIGCHI.89/SIGCHI.89.html> .com). Experts anticipate that when it is completed, you can hold the moon or planet in your hand and point to where you want to go. The computer will place you in the surrounding area of the planet. You will feel like you are there.

"Virtual worlds are meant to be perceived by touch, shattering the barrier between the computer screen and the real world."

Using the same virtual reality application, you could visit exotic places, resorts, ride roller coasters, or experience any "virtual" reality.

The legal applications in the legal field are obvious and immense. Finally, we can take jurors to the "actual" scene of the accident, and they can view through their own eyes a reconstruction of the accident. They would be able to move their hands and enter a car. The computerized reconstruction would start, and the jurors could see the accident from the driver's perspective. It could be programmed to slow down or increase the speed of the car by moving a finger on the glove. The jurors could move the location of a pedestrian by grabbing the pedestrian with their hands and moving the person to a different location.