



Virtual Reality & Simulation Special Solutions

Virtual reality describes the realistic representation of computer-created objects and environments. This technology is primarily used for the evaluation of three-dimensional generated prototypes and for the training of pilots, operators and task forces.

VR systems provide an alternative for real training which saves money and avoids unnecessary risks, but the requirements towards the technology in use are very high. A realistic and high-quality training-simulation is indispensable for successful learning effects and the prevention of simulator sickness.



The visual system is the core of such an environment and is therefore of high importance for the success of the simulation. For example, the simulations for night-flight and tower training require a high contrast and an optimal black level of the visualisation system. The training of drivers of police cars, fire engines and ambulances with flashing blue lights requires an optimal visual field and an optimum precision of the images presented.

Depending on the field of application there are huge differences regarding the requirements towards the VR systems. eyevis provides several products for the creation of high-quality VR environments in order to cover the complete range of the varying applications. Short processing time for the signals passing the device, as well as excellent sync behaviour and simple integration provide the technical basis for a flexible use in simulations and presentation environments.



Our manifold experience with control room applications and their particular requirements as far as reliability and stability of the system are concerned had a decisive impact on the development of our VR components. This has led to a high availability of our products due to their stability and trouble-free operation.

The field of application for VR systems has been widened tremendously, from the mere representation of three-dimensional images up to the creation of multi-functional interactive workstations. The multi-media presentation of research results or prototype models is becoming increasingly important. These new tasks which combine virtual reality and the presentation of multi-media content constitute a new challenge to the technology of VR systems. eyevis provides the ideal technological platform for the upgrade of existing installations, as well as for the planning and realisation of new state-of-the-art systems.

With the openWARP Combiner and the immersiveCUBE Solution eyevis provides two custom-designed devices which were especially developed for such applications.

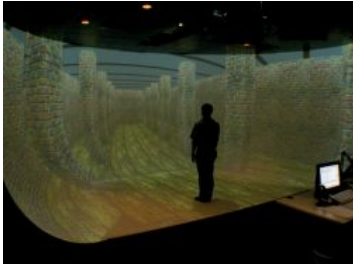
Effective Training

VR systems and simulators are frequently used in areas where real trainings and instructions courses would be unreasonably expensive., for example the training of helicopter pilots, but also in areas where the concerned people have to be trained in realistic emergency situation to prepare them for their activities in the real world. In virtual realities and simulators it is possible to realise efficient, price efficient training situations in which the users learn how to behave in certain situations and how to react in the appropriate way.



Design

3D systems are used by automobile designers, for example. The technology is used for the realistic and true to scale representation of models and prototypes.



Application Possibilities:

- Simulators (driving, ship, tank and flight simulators)
- Design (e.g. automobile industry)
- Science and research
- Training
- Military applications
- Presentations (e.g. in museums, on trade fairs, on events)
- other