

ErgoViz

Ergonomic 3D-Visualization

Invention

ErgoViz optimizes the stereoscopic visualization of 3D content in real time, thereby slashing the level of visual strain frequently perceived in using these projection technologies. This allows, e.g., to work with 3D screens for longer periods of time.

A stereoscopic visualization provides the viewer with the impression of real depth. **ErgoViz** is based on the principle that this visualization is adapted continuously to the respective viewing situation. Via an eye-tracking system the current viewing conditions are measured. This information is used in real time for the corresponding adjustment of the technical parameters of the stereoscopic projection. This guarantees, i.a., to prevent the occurrence of double images, even if virtual objects at close range are examined.

ErgoViz is not restricted to a special technology for stereoscopic projections. The only requirement is that the position and the line of sight of the right and the left eye can be measured.

Commercial Application

Stereoscopic visualizations are becoming more and more important, e.g., in product development, in medical engineering, or in the entertainment industry.

Such visualizations, however, lead to perceptive impairments in many users, resulting in eye fatigue, headache, and even sickness. This is a central reason for the still low acceptance of stereoscopic projection technologies, especially with respect to a longer lasting usage of, e.g., several hours.

ErgoViz allows to reduce this visual strain drastically, e.g., by reliably preventing the occurrence of double images. In sum, the work with 3D content is facilitated, so that it can be utilized in a much more efficient way.

Current Status

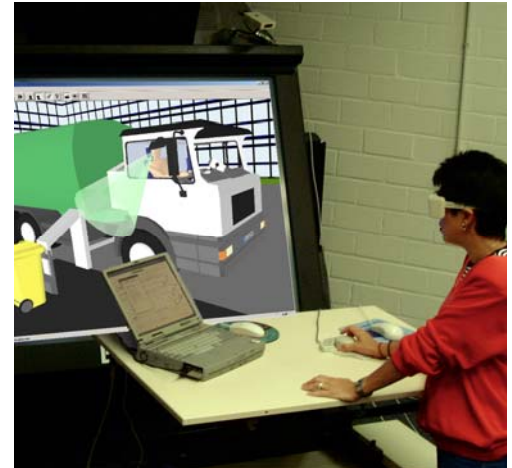
A patent application has been filed at the German Patent Office. The practicability of the invention has been demonstrated with a prototype, serving as a proof-of-concept. On behalf of the University of Applied Sciences of Dortmund and the Leibniz Research Centre for Working Environment and Human Factors, PROvendis GmbH offers licenses and opportunities for further development of this technology to innovative companies.

Keyword: ErgoViz

An invention of the Leibniz Research Centre for Working Environment and the University of Applied Sciences of Dortmund

PROvendis GmbH is the patent licensing agency for the universities of North Rhine-Westphalia / Germany

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Advantages:

- Continuous adaption of a stereoscopic projection to the current viewing conditions
- Lower stress and less eye fatigue during the perception of the 3D content
- Allows longer and more concentrated work at 3D screens

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