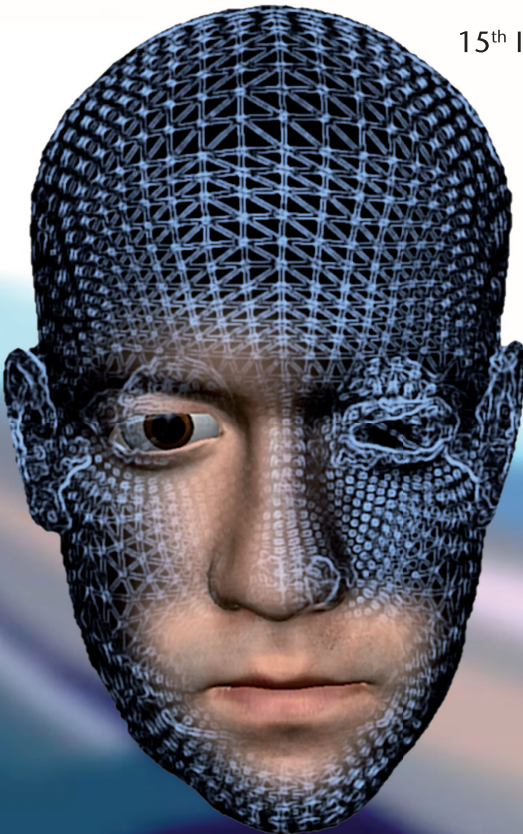


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(Eds.)

Challenging Presence

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The Virtualizer

Abstract. This device, developed by the young virtual-reality-enthusiasts of Cyberith, is a locomotion device that delivers completely new impressions and experiences.

Keywords. Movements; Presence; Human-Computer-Interaction

Realistic experiences in your own private home

It delivers the most realistic experience of virtual worlds possible - in your own private home. The Virtualizer was developed with the goal to optimize the realistic impression of first-person games but free the player from his chair and place him right into the action. Using the Virtualizer yields the opportunity to actively participate in the adventures of your favourite character and for the first time not to be stopped by the borders of your screen.

Wide range of natural movements

This is possible because the device is not restricting your natural freedom of movement. The Virtualizer not only supports simple forward-faced movements like walking or running, but also walking backwards, crouching, jumping and even sitting. The device is the world's first omnidirectional treadmill for home use that has its sensor system integrated. The highly engineered sensor system combined with VR-glasses that support 3D places the user directly into the virtual world and delivers overwhelming experiences.

Stepless movements without the need of special shoes

This experience is enhanced by the Virtualizer's ability to detect and process movement stepless, which makes it possible to move in the same speed in game as you do in the real world. Moreover, it was a matter of high interest for the developers to make the device usable without the need for special shoes. These would only imply additional costs for the customer and problems regarding shoe sizes. The underlying functional principle is based on a special platform that features a highly elaborated surface with the right coefficient of friction and a vertically adjustable ring-construction in hip-height that absorbs the remaining frictional force. The ring was designed to enable the user's free movement and is adjustable to the operators' specific body height.



Easy to install and quiet as a whisper

Additionally, the device is designed to work in a "plug and play"- manner and thus it is very easy to set up and install. Because the Virtualizer is to be used with plain socks it does not yield the risk of noise disturbance.



All-purpose Device

The fields of application of the Virtualizer go much further than just gaming. Because the device enables joining any virtual world you can imagine, there is a wide range of possible applications in fields like architecture, tourism, psychological therapy, education, training,...