Virtual reality supports planning by architects

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Digital representation by inreal technology helps building owners and architects experience rooms during the planning phase already. Credit: Photo: inreal / KIT

Even the most exact construction plan lacks many details and design options. The building owner needs imagination to obtain an idea of the constructed building. Now, the 3D video glasses made by the KIT spin-off "inreal Technologies" provide a true representation in virtual reality. With the help of integrated high-resolution motion sensors, the virtual environment adapts to the natural movement of the head in real time. At the CeBIT, the young entrepreneurs will present their new product at the stand of their partner, Carl Zeiss AG.

The inreal terminal is an innovation for use in architecture. Users can "access" their future home prior to construction. The key component of the terminal is a head-mounted display, 3D video glasses with integrated high-resolution motion sensors. They measure the position and

movement of the head and, thus, allow for an adaptation of virtual environment in real time. Via tablet control, design wishes, such as changes of the wall color, floor cover, or room layout, can be made immediately. The terminal is advantageous for the client and reduces the architect's working time during the planning phase.

The terminal, consisting of the 3D video glasses, controller, 3D display, and tablet, may not only be used by architects, but also for other purposes. Any environment can be "modeled" on the computer and "accessed" via the terminal. "The terminal gives the users an authentic feeling of space due to intuitive navigation," explains Moritz Luck, one of the founders of the spin-off. In the future, the technology shall be developed further for home users.

inreal Technologies was established in 2010 by the KIT students Thomas Schander, Michael Beyhs, and Moritz Luck. In cooperation with the Institute for Information Management in Engineering (IMI), the young entrepreneurs developed their ideas to maturity. For their innovative approach, they were granted a spin-off stipend under the EXIST program by the Federal Ministry of Economics and Technology.

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