institute of media informatics

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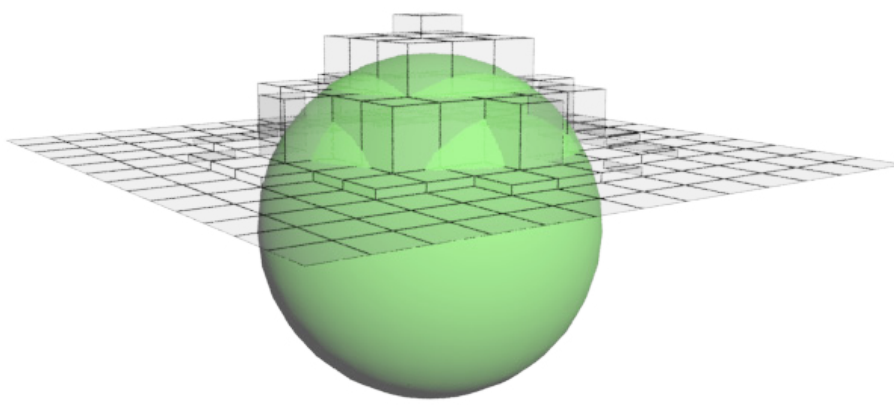
Haptic Feedback in Virtual Reality
Exploring a Deformable Input and Output Device

Open Bachelor‘s/Master‘s Thesis

Background

While virtual reality (VR) head monted displays (HMD) are evolving in displace quality and tracking performance, the interaction with virtual content is still far from being realistic. Most HMDs offer only vibro-tactile feedback via controllers and fail to simulate the properties of virtual objects like their shape or density.



Scope of the Thesis

Interacting with the virtual world is a key factor for an immersive VR experience. The more realistic this interaction feels, the more engaged and absorbed the user can become. The goal of this thesis is to design, implement, and evaluate a concept for a deformable haptic input and output device to-hatprovides haptic feedback for a virtual that is being touched by the user‘s hand. While there are existing large-scale tangible interfaces for the table-top, the challenge for this thesis is to design a mobile version that can serve as an output and input device in an ergonomic, hend-held form factor.

Contact

Dennis Wolf
Institute for Mediainformatics
3305

Mail: dennis.wolf@uni-ulm.de
Phone: +49 (0)731/50-31311