Investigating Tablet and Pen-Based Virtual Reality In-Situ Authoring for the Education of Urban Rainwater Management

Open Bachelor/Master Thesis

Background

Learning urban rainwater management is essential for civil engineers. They need to understand how infiltration takes place on a wide variety of surfaces and how rainwater drainage must be regulated to prevent flooding. At the moment, the courses are based on the theoretical laws of physics. Virtual reality offers the possibility to create virtual environments that impressively illustrates these laws and support the learning process.

Research Goal

The aim of this thesis is to design and create with a game engine a tablet and pen-based virtual reality in-situ authoring application that could be used by lecturers to design immersive urban rainwater management scenarios. It will be based on the publication VRSketchIn. The focus will be on the iterative development of an interaction design concept by using a user-centered design process. The implemented application should be evaluated in a usability study.

Based on bachelor/master level the scope is adapted.

Tobias Drey
Institute of Media Informatics
Room: O27 / 336
tobias.drey@uni-ulm.de
Initial Related Work

