Project agreement

Project specifications

Project name: Navigation in the VR Space

Project team: Dominic Bär & Marcel Groux

Project client / coach: Stefan Arisona & Simon Marcin

Initial position

The technology of Virtual Reality is developing rapidly. The newest hardware and software are already supporting very complex applications with a high grade of immersion. However, most of the existing concepts could only be tested and analyzed scientifically with specialized hardware. The new cheap hardware enables the development of new products and new extended concepts created by the community. Due to the mentioned rapid development there is neither standard nor best practices available.

The Introduction of the HTC Vive has opened a massive range of possibilities in the scope of Virtual Reality Navigation.

Problem

The community provides a variety of implementation and methods for the navigation in the Virtual Reality space. Many of those however couldn't be tested and analyzed scientifically. Furthermore, the already existing scientifically elaborated concepts are not necessarily suited for the new VR Hardware and the User- Space available for the VR-setup, like the HTC Vive or the Oculus Rift, and the usage in a productive application with users that have varying know-how and experience in Virtual Reality.

Goals

The goal of this project is the generation of a concept about the navigation in the Virtual Reality space. The concept is based on a scientific research and should address the questions of the suitability for different navigation methods and the corresponding parameters (e.g. camera angle/area, scaling in space, …) within specific scenarios, which are to be determined.

Finally, the concept contains a thorough scientific analysis of VR navigation and its parameters, elaborated in a scientific approach and reflecting the current state of research of the Virtual Reality Community as far as possible.

The navigation methods, elaborated in the concept, should be implemented as a template for different scenarios and be tested thoroughly. Such that it can be shown which navigation methods are suited best for different scenarios. Thereby it is to bear in mind that the navigation that we are reviewing should be possible to use in a home-user-environment.

Relevant dates

The list below shows other project relevant dates.

- Project week – 28 November – 02 December 2016
- Project due date – 20 January 2017

Place / Date: _Windisch 1. 12. 16_ _____

Project Team   **Coaches / Clients**

Dominic Bär: _____   Stefan Arizona: _____

Marcel Groux: _____   Simon Marcin: _____