**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. Many of the already existing concepts about Virtual Reality couldn’t be tested and analyzed scientifically. This is due to the mentioned rapid development of the technology and the systems and also due to the fact that many of those concepts and approaches to a solution are developed, extended and reprocessed by the community.

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, like the HTC Vive or the Oculus Rift, and the usage in a productive application.

# Goals

The goal of this project is the generation of a concept about the navigation in the Virtual Reality space. The concept addresses the question which navigation method should be used in which scenario. The elaboration of the concept will follow a scientific approach and reflects the current state of research of the Virtual Reality Community.

The navigation methods, elaborated in the concept, should as a framework be implemented in different scenarios and be tested thoroughly. With this can be shown in which navigation method is suited the best of each scenario and how they should be implemented. Thereby it is to bear in mind that the navigation should be used in a home-user-environment.

# Technologies

* Virtual Reality
* HTC Vive / Oculus Rift
* Unreal / Unity

# Milestones

* Milestone 1 – 07 October 2016:
  + Definite version of the project agreement
* Milestone 2 – 04. November 2016:
  + Definition of navigation methods and problems
  + Definition of concept limitation
  + Establishment of the next steps.

Further Milestones will be discussed after the second milestone.

# Relevant dates:

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