

Winter Semester 2018/19

Assignment on Virtual Reality and Physically-Based Simulation - Sheet 5

Due Date 22.1.2019



Figure 1: Realistic rendering showcase from the unreal learning section

Exercise 1 (Interaction Metaphors, 20 Credits)

In this exercise, the goal is to create a new interaction metaphor or implement one from the lecture. The metaphor should either solve a selection task or a modification task.

- In the first part of this exercise, you should define your metaphor theoretically. Therefore, draw an almost complete taxonomy (or decomposition) of it.
- In the second part, implement your interaction metaphor using Unreal 4.

You will present your metaphor, taxonomy and your implementation to your fellow students and me, on January, 22, in the tutorial.

As main input devices for your metaphor, mouse and keyboard are forbidden. You must use at least one of the following devices, which are available in the lab:

- Oculus Rift or HTC Vive
- Leap Motion: <https://github.com/leapmotion/LeapUnreal>
If you use your own pc, make sure to install the Leap SDK: <https://developer.leapmotion.com/get-started/>
- Kinect 2: <http://www.opaque.media/download-k4u> For your own PC: Windows 8 or newer is required and don't forget to install the SDK: <http://www.microsoft.com/en-us/download/details.aspx?id=44561>

For your implementation you can use the realistic rendering showcase (fig. 1) from the learning section in the unreal launcher. Remember to add collision to the smaller objects, either simple, or complex,

as shown in the tutorial. You can visualize the collision bounds in the editor by pressing Alt-C (Show->Collision). If you would like to use other input devices or implement a different interaction task, please feel free to write a very short proposal by mail (5 lines max should suffice).