Erasmus+

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WORLD OF PHYSICS

TECHNICAL GUIDE

Using 3D Glasses / VR Gear (Oculus Rift) in WOP

1. Introduction

Oculus Rift

First you need 2x Touch controllers (first picture), Oculus Rift headset (second picture), 2x Oculus sensors (third picture) and all required connecting cables.

In addition to the hardware you will also need CtrlAltStudio Viewer [1], this enables you to have a look around in World of Physics with Oculus Rift headset.

Use the viewer as normal to get to where you want to go, then toggle into “Riftlook” mode (Ctrl-Alt-3), and put your Rift headset. Move your head to look around and use the arrow or WASD keys to move about.

2. Setup and Usage

- Oculus Runtime installed from https://www.oculus.com/ and your Rift (CV1 or DK2) set up.
- Oculus Rift output turned on: Preferences > Graphics > Display Output > Oculus Rift and restart the viewer.
- To “zero” your orientation and positional tracking location press Ctrl + Spacebar.
- To exit Riftlook and move the viewer window back to your main display: Ctrl-Alt-3
- To improve your frame rate, reduce your draw distance and/or tweak other display settings such as advanced lighting model, shadows, FOV, pixel density…
- If you have a new, high performance graphics card but graphics preferences such as “Basic shaders” are disabled this means that your graphics card isn’t recognized by the viewer; tick the “Enable All GPU Features” setting to enable the missing settings.

3. Tips and Tricks

- Make sure you don’t have Preferences > Graphics > Rendering > Limit Framerate enabled.
- If you have configured Oculus Rift output for seated operation, “forwards” is the direction your Rift was pointing when you toggled into Riftlook.
- If you have configured Oculus Rift output for standing operation, “forwards” is the direction your Rift is pointing.
- With floating text you may want to adjust the distance the floating text fades at so that distant text is not so annoying in Riftlook: Preferences > Graphics > Rendering > Floating text fades.
- To get into 3rd person view, depending on your “Mouse moves cursor / view” setting, either scroll out with your mouse wheel or press Alt and scroll out with your mouse wheel. You can then orbit around points etc. with your mouse and Ctrl, Alt, and Shift keys as usual. Press Esc to get back into 1st person view.

4. References/Links

[1] http://ctrlaltstudio.com/viewer

[2] https://www.oculus.com

[3] https://conference.opensimulator.org/2014/opensimulator-community-conference-announces-principal-scientist-at-oculus-vr-as-keynote-speaker/