Fall 2016: ELG5124/CSI5151
Assignment 5
Due: Monday, December 5th, 2016, 11:00pm in Virtual Campus
University of Ottawa - Université d'Ottawa

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1   Overview

This assignment will have a small required part in which you will need to set up *Jmonkey* to render to two viewports as it is needed for head mounted displays. The remainder of the assignment, you will have a chance to implement some small aspect of a virtual environment that you are most interested in.

1.1   Getting Started

This assignment will again be using *JMonkey 3.0* (`http://www.jmonkeyengine.org/`). There is a short tutorial on how to render to more than one viewports in the advanced documentation on *Camera: Multiple Camera Views*. You also want to review technical background on stereo rendering. Paul Bourke's tutorial at (`http://paulbourke.net/stereographics/stereorender/` gives an applied introduction. Chapter 6 Visual Perception of our textbook gives more background on depth perception and is worth while read.

1.2   Stereo View [4]

Create a converging stereo view of your scene (see the above mentioned tutorial by Paul Bourke). Your scene may be your implementation from Assignment 3 or 4 but see also Section 1.3.

1.3   Your Extension [6]

Use your creativity to explore a further feature not yet explored in an assignment of *Jmonkey* into your implementation that you will demo in your presentation on December 6th, 2016 during class. Some suggestions are listed below but you can choose something else. The suggestion is to tackle one of them (and not all).

1. Android Deploy your application on your Android device and try to set up the stereo view that you can have a stereo view in a cardboard device setup (no head tracking).

2. Shadows and Lighting Combine the dinosaur animation from Assignment 3 into the box from Assignment 4 and add shadows, textures and lighting effects.

3. Sound Create sound effects for your collisions and user interactions with the tiger.

4. Nifty GUI Put a GUI which allows the user to control your scene, e.g., the number of balls entering the scene, mono vs. stereo viewing, or switching between tiger and dinosaur etc.

5. User Interaction Use mouse picking to switch control between the tigers and various balls. Maybe let the user open the door.

6. *Something different.*

2   Submission

As before, you will need to submit your solution (only the source directory and your assets directory along with the `*.xml` project files but no other files) to BB learn by the deadline. No late submissions are allowed, you can submit multiple times but only your last submission is marked.