

CS4300 HW6

USER MANUAL

Set Config Files to Run the Code

All the config files are under `src/main/resources/configs`

For example, just copy `src/main/resources/configs/old_hall_drone.config` to configuration and the code is going to run.

`old_hall_drone.config` is displaying the drone. The main window is showing the global view and the small top right window is showing the drone camera's view.

Similarly, other 3 files work as well, including `camera.config`, `tower_global.config`, `tower_drone.config` and `YMCA_global.config`.

Configuration file

A template for a valid config file should look like this:

```
path [path to the xml scene graph file]
mode [GLOBAL/MOVING]
fix-position [x] [y] [z]
fix-center [x] [y] [z]
move-position [x] [y] [z]
move-center [x] [y] [z]
```

The fix/move-position specifies the position of the camera in global/drone view; and the fix/move-center specifies the point the camera is facing in global/drone view. The up direction of the camera is set to the positive-y direction by default.

Camera Operations

There are two different mode to observe in this virtual world. You can switch between the two using `Space` key on your keyboard.

1. Global View

In the global view, you can observe this virtual world from a constant distance, which is defined by the config file you passed in. In this view you can use your mouse to drag the world like a trackball.

2. Drone View

In the drone view, you can view this virtual world through a camera mounted on an unmanned drone flying around. Press `up`, `down`, `left`, `right` to move the drone. Press `w`, `a`, `s`, `d` to turn the direction of the camera. You can also use `f`, `c` to make the camera to slope to the left or right. Press `+`, `-` to zoom in or out, but notice there is a limitation on zooming too far or too near.