

Final project report

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1. Introduction

Our final project aims to produce a short and adorable video which applies what we learn in this class. There are so many convenient 3D animation software so that we can completely apply our creativities including Maya, Blender, and so on. Since blender has more online resources, we finally choose Blender as the tools to produce a video.

What's more, the theme of the video is battle royale of 5 ducks. The inspiration of the video is the duck fried noodles on uber eats. We image that when we order the duck fried noodles, ducks need to be in a battle royale which will catch 4 ducks as the ingredients of duck fried noodles, so there is only one duck can survive. There will be 4 flying robots catching the ducks. It's a trilling but exciting game for ducks!

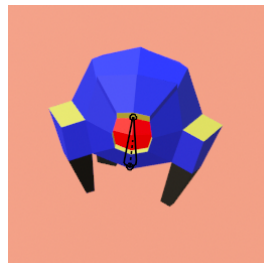
2. The process of this project

2.1 Modeling

We constructed a big city as our background with a plugin, building-tool [1], from github. This plugin can construct floorplans, floors(slabs and walls), doors, windows, roof, stairs and balcony. It's really a convenient tool to design a big city. Besides, we added some street lamps, traffic lights and post boxes to be more like reality.



There are three kinds of main characters in our video, ducks, robots, and car. Firstly, we didn't know how to model a feature, so we referred to other's teaching video to design a duck. And there is the video we referred to online teaching video[2], mentioned in section 5, because of this video, we successfully modeled an adorable duck and slightly modified it to be ours. As for cars, we use the existing resource[3], and the reference is mentioned in section 5.



2.2 Render

As for render, firstly, we had no idea that it needs really long time to render a frame to become video, so we used at least 3 laptops to render at the same time to ensure we can meet the deadline. Out of blue, in the first render, we found that the light and some features' materials were incorrect, according to the picture rendered, we modified some parameters to adjust to the correct one.

3. Result and problems we met

We uploaded our demo video on YouTube, and here is the link:

<https://www.youtube.com/watch?v=8CFj-l1jIZw>.

The first annoying problem is how to roll our camera. If using the same technique as moving the models, the screen will be badly unsteady. Fortunately, we find a mode that called walk mode in blender, which can use "wasd" to move the camera like fps game. It greatly smooths our camera rolling and save almost half of the time on rolling camera.

The second annoying problem is that the render process is extremely slow. I got 1050ti on my computer but the time to render one frame is 15 minutes, and our video need at least 1440 frames. The time is definitely unaffordable. To accelerate the process, we decrease the number of samples, the number bounces of light, and fps.

4. Distribution of this project

蕭彧：

1. Motion design
2. Filming video. (including light and camera)
3. Render process

宋珮瑜：

1. Building models and setting bones
2. Motion design
3. Render process
4. Video post-processing (clip video)

5. Reference

[1]: https://github.com/ranjian0/building_tools/

[2]: <https://www.youtube.com/watch?v=sX-sCrRpgfY&t=138s>

[3]: <https://free3d.com/zh/>