

Tianyi Chen

The final project of mine contains a scene with a stainless-steel oven in it. The inspiration is from the oven in my home. I successfully implemented the cube map, allowing texture to wrap around the cube instead of showing the same texture on each face. Polygon offset was implemented using functions provide by OpenGL. I also successfully implement the using mouse cursor and button as ways of interacting with the scene. More interactive animation is implemented. Helper function to rotation around axis parallel to x/y/z axis is implemented and used. The use of semitransparent texture was in the list, but did not get implemented due to lack of alpha channel for 24-bit bmp texture file.

Interactive feature:

Press '9' to allow mouse cursor to move the view angle of the scene. Press 'o' to open the oven door and the bagel will slide out with the tray. Click on the left mouse button to remove the cooked bagel and click again to place a new dough. Press 'o' again to close the door and wait for the bagel to be baked.

Key Instructions:

1 : Turn on and off the main light at top of the scene

2 : Turn on and off the oven light

9 : Turn on and off the function using cursor to control the view angle

O: Open/Close the oven door

w : Toggle wireframe mode

c : Toggle culling back faces

m : adjust mesh resolution

arrow keys: changing view angle

Home/End: Bring the scene closer/further

A/D/E/S : toggle ambient/diffusive/emissive/specular lighting

Esc : exit the program

Pictures:



Source of textures:

<https://stock.adobe.com/>