

**CS 557 -- Winter Quarter 2016**

**Project #6 Report**

**Deer Poster**

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In project6, I draw a sika deer and put it in a park. The skin of the deer has small white dots, and the park environment is the cube mapping. Also, I add the morphing effect of the deer. It can make deer disappear from its head to its bottom.

## (1) File

Six pictures bmp files: negx.bmp, negy.bmp, negz.bmp, posx.bmp, posy.bmp, posz.bmp

glib file: loading vert and frag and setting TexUnit.

texture.vert and texture.frag used for cube mapping.

kaishi.vert and kaishi.frag used for drawing skin of deer and morphing.

## (2) What I did and Reasons

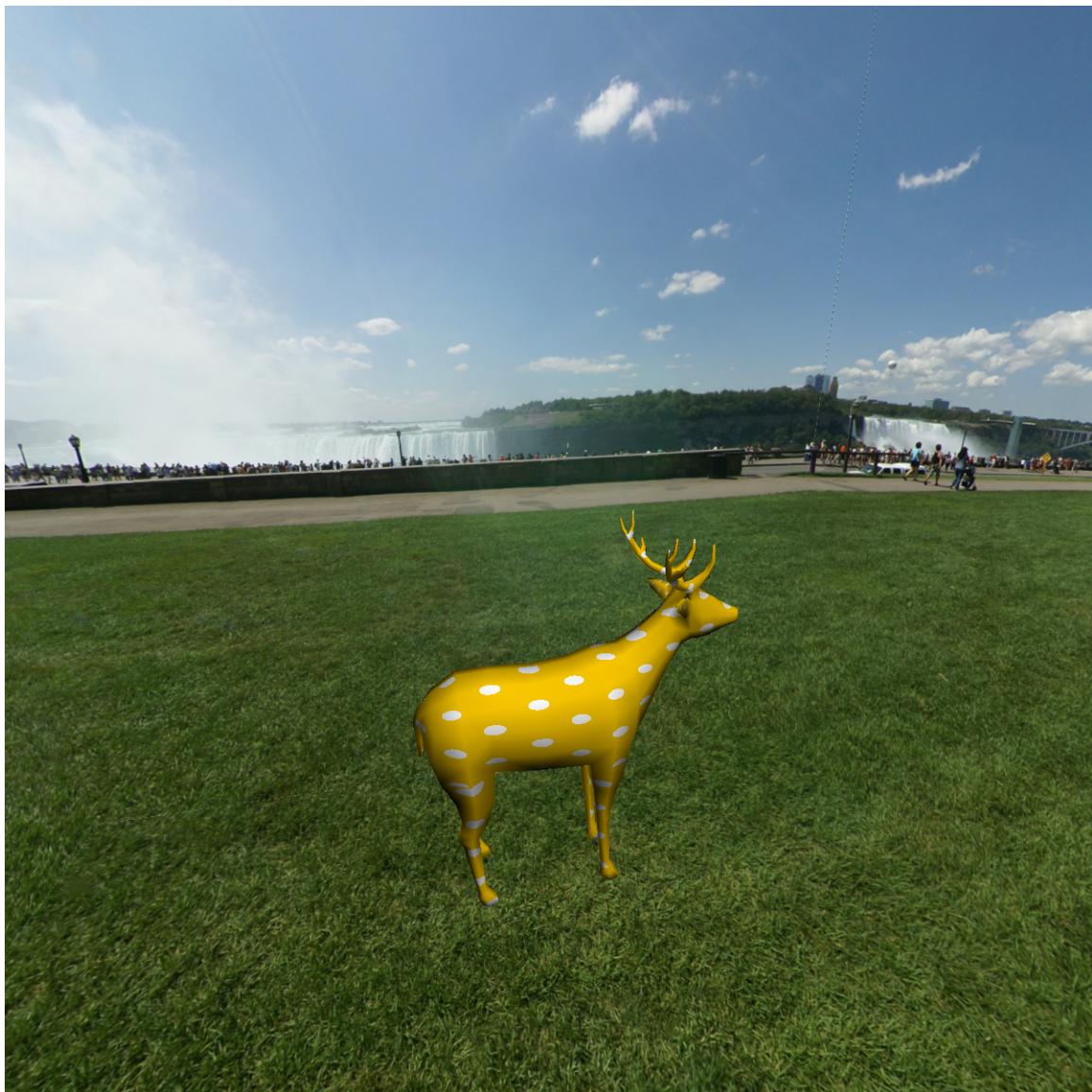
Cube mapping part: I find park pictures and make them pixel be 2048\*2048. Then, I apply the texture vert and frag in the project. In the glib file, I set the TexUnit and draw six Quad, which is 8 wide. After this, I got a cube mapping park environment.

Sika deer part: I use the them method like project3. The only thing need to change is, if mod (numinu+numinv, 2.) == 0, I draw the white dots.

Morphing part: First I set a point in the screen, it's the head of the deer and the deer will disappear from this point. I use the formula  $F/r^2$ . r is the distance between gl\_Vertex and the point I set. Then mix(gl\_Vertex, vec4(uX, uY, uZ, 1.), uForce/(dis\*dis)). Then I calculate two vectors: one is the gl\_vertex to the point I set, another is mix what I mixed and the point I set. If the result is less than 0, gl\_position = gl\_ModelViewProjectionMatrix \*vec4(uX, uY, uZ, 1.).

### (3) Results

Sika Deer in the park:



Morphing:



Disappear:

