

Computer Graphic Final Project Report

Group 13

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In this project, we use Assimp library to help us read and build the 3D model. The lighting method is a kind of physical base rendering -- Cook-Torrance. To make the scenes more reality, we implement the DoF & Bokeh effect with CoC in the 3D model.

Environment

Mac OS X 10.11

Library

OpenGL 3.3 (GLFW)

Assimp 3.2

SOIL (Simple OpenGL Image Library)

Compile

For Mac / Linux / Unix

`make`

For Windows with MinGW

`./compile.bat`

Execute

For Mac / Linux / Unix

./final_project [OBJ_FILE_PATH]

In our project :

./final_project 5337_Interior_Scene_of_Bedroom/slykdrako_quarto01_blender.obj

./final_project MiniMarket/Shop.obj

For Windows with MinGW

./final_project.exe [OBJ_FILE_PATH]

In our project :

./final_project 5337_Interior_Scene_of_Bedroom\slykdrako_quarto01_blender.obj

./final_project MiniMarket\Shop.obj

How to Use

In our project, there are several functional keys can control the parameters.

[W] / [w] move forward

[S] / [s] move backward

[A] / [a] move to the left

[D] / [d]	move to the right
[M] / [m]	able / disable the mouse
[H] / [h]	able / disable the HDR mode
[C] / [c]	able / disable the CoC map
[B] / [b]	able / disable the blur
[+]	zoom in
[-]	zoom out
[.]	make the focus distance larger
[,]	make the focus distance smaller
[↑]	make the focus lens larger
[↓]	make the focus lens smaller
[→]	make the aperture size larger
[←]	make the aperture size smaller
[1]	change the mouse moving coordination to x axis
[2]	change the mouse moving coordination to y axis
[3]	change the mouse moving coordination to z axis
[4]	change the aperture shape to square
[5]	change the aperture shape to diamond
[6]	change the aperture shape to parallelogram
[7]	change the aperture shape to stellate
[9]	use the lights for bedroom model
[0]	use the lights for mini market model

Demo picture

Diamond bokeh



square bokeh



stellate bokeh



parallelogram bokeh

