CSCD18 A3

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1 Information:

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   We hereby affirm that all the solutions we provide, both in writing and in code, for this assignment are our own. We have properly cited and noted any reference material we used to arrive at this solution, and have not shared our work with anyone else.

   Anson Feng & Peter Chou

2 Instructions To Run Tests & Feature List

All that test buildscenes_*.c are under folder "A3-backup". The folders also contains ppm files of test_outcome of each feature we implemented.

When testing, we should rename "***buildscene_*feature_name*.c***" to "***buildscene.c***", then put it into the root folder "starter/" together with rayTracer.c etc., which is the source code of our ray tracer.

All scripts to run tests for features are recorded in detailed in the file "***Scripts.txt***", we don't have multiple "compile.sh" but have all compile scripts and steps written in detailed in "Scripts.txt". For area light sources, we have two different buildscenes, one for ALS is visible, the other is for softshadows, these two can also be the original scene to compare with "anti-aliasing" version, and thereby "anti-aliasing" doesn't have extra buildscene.c.

To test ray marching, we not only need new buildscene, we also need "utils_raymarching.c", "utils_raymarching.h", "RayTracer_raymarching.c" & "RayTracer_raymarching.h".

For buildscene, we use "buildscene_raymarching.c".

All these files are under folder "A3-backup", to run them, we need to put them under the root folder. And please remember to rename "buildscene_*feature_name*.c" to "buildscene.c" and put it to root folder before compiling and running.

Folder "Texture" contains ppm files for texture mapping.

Further, we no longer support point lightsources, and "full.ppm" is our final scene, it takes 16-17 mins to run on mathlab machine.

Feature list of features we **Implemented** and **working**:

- Anti-aliasing

- Texture mapping

- Area light sources

- Refractive objects (stack version)

- Multi-threading

- Normal mapping

- Ray marching

We didn't implemented any other features other than features we mentioned above.