20220712 Project Meeting

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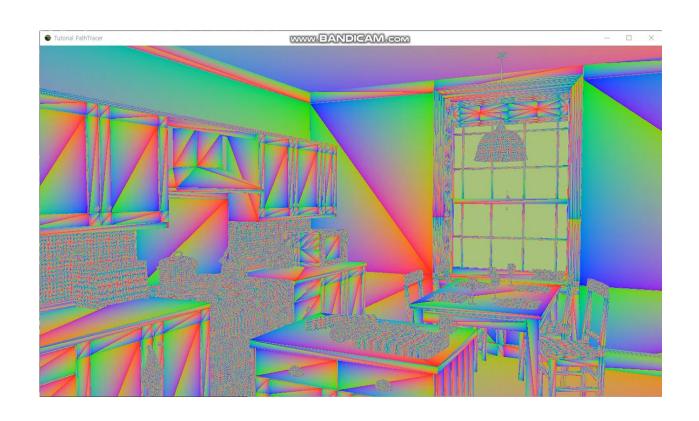
2022.07.12.

PEARL ABYSS

Contents

- (2 Week) Work Progress
- TODO

Recall - (1 Week) Work Progress



Implemented a very simple ray tracer that loads meshes and show geometry only.

(2 Week) Work Progress

Material & Normal & UV using Structured Buffer



```
Geometry info (t1)
                                    Material info (t2)
                                                                             Indices info (t3)
                                                                             Mesh 0 indices info
Instance 0 geom info
                                          Material 0
Instance 1 geom info
                                          Material 1
                                                                             Mesh 1 indices info
                                                                             Mesh 2 indices info
Instance 2 geom info
                                          Material 2
                                                                             Mesh 3 indices info
Instance 3 geom info
                                          Material 3
                                      Struct MaterialInfo
Struct GeometryInfo
                                                                                  uint32
   materialIndex;
                                        diffuse:
   indicesOffset;
                                        diffuseTextureID;
   verticesOffset:
```

Vertices info (t4) Mesh 0 vertices info Mesh 1 vertices info Mesh 2 vertices info Mesh 3 vertices info Struct VertexInfo position; normal;

texcoord;

```
Global root signature!!
```

(2 Week) Work Progress

- Implemented texture using DirextXTex.
- Instead of global texture array, local texture using local root signature is used (good?)



(2 Week) Work Progress

• Implemented a simple path tracer for diffuse material.

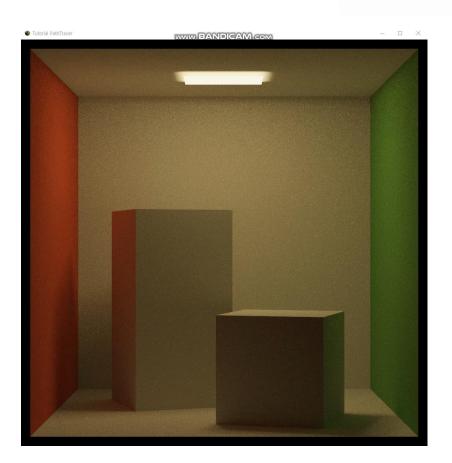


(2 Week) Work Progress

• Implemented a simple path tracer for diffuse material.







With MIS (direct light sampling)

lightPdf

wi of bsdf

TODO

PEARL ABYSS

- MIS with multiple light
- Conductor, Dielectric materials