




Distributed Renderer

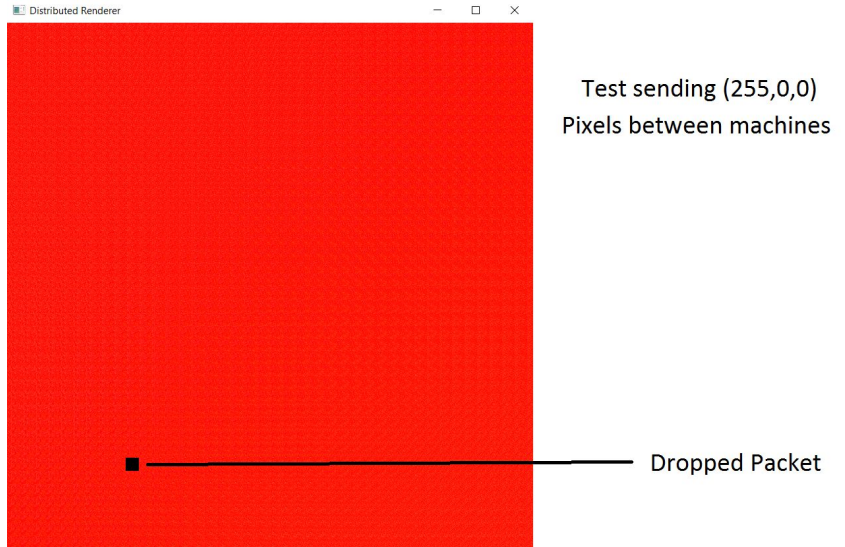
CIS565 Final Project
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**PROGRESS
REPORT #1**

Progress

- OpenGL Viewer
 - With sender & listener polling threads.
- 1-to-1 communication between the viewer and the renderer
 - Across the machine



Problems

- Debugging on one machine is limited.
 - Can't run both at once - "CUDA device not available"
- "Pixels" sent across the network are "uncompressed".
 - The "Listener" thread cannot catch up with the "Display" thread.
 - This means accumulating pixel iterations on the viewer's end is a NO-NO.
 - Change float to 1-byte variables.... better, but the problem is still there!
 - One workaround: instead of sending it per-pixel, send it per-tile
 - Cut down a lot of int32 variables for px and py.
 - Packet dropping becomes more noticeable.
- There are still some bugs involved with the pixel values we pulled out from CUDA

Next

- Get rid of all the bugs!
- If possible, find the way to compress the packet.
- Multiple CUDA Renderer.
 - We might be able to test only 2 renderers vs 1 viewer, given that we only have 3 machines on our hand (and only 2 of them are capable of running CUDA)
- Scene file Distribution
- Light Importance Sampling