

15-400 Milestone 2
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<https://thenumbat.github.io/15400-s21/>

Changes

No major changes.

Accomplished

1. Wrote automated benchmarking and analysis system, added some more metrics.
2. Confirmed performance properties on a variety of large scenes.
3. Currently working on adding new foundational bounding volume types. Some preliminary analysis implies this will be helpful.

Milestone

My scheduled milestone for this week focused on “complete scaling work” and “begin GPU implementation.”

The scaling work has been completed, although we decided not to spend much time on the SIMD-width side of the implementation. Instead, we decided to test out better bounding volumes, which I’m still working on. I haven’t yet started the GPU implementation, but this should happen in the next week or two.

Surprises

No surprises again, but I am still having some trouble scheduling dedicated time to focus on this project.

Looking Ahead

I hope to finish the bounding volume work today/tomorrow, and then start working on new designs and/or a GPU implementation next week. Hopefully, I will be able to dedicate progressively more time to the project as the semester progresses, since all 3 of the other classes I’m taking end with final projects instead of assignments, and I’m planning on combining this with my 15-418 project.

Revisions

The next few milestones are still on the right track, as they mostly focus on writing a GPU implementation of our system.

Resources

Same as previously: still working on getting an RTX GPU, but this is not (yet) a blocking issue for working on the project.