

Clustered Shading

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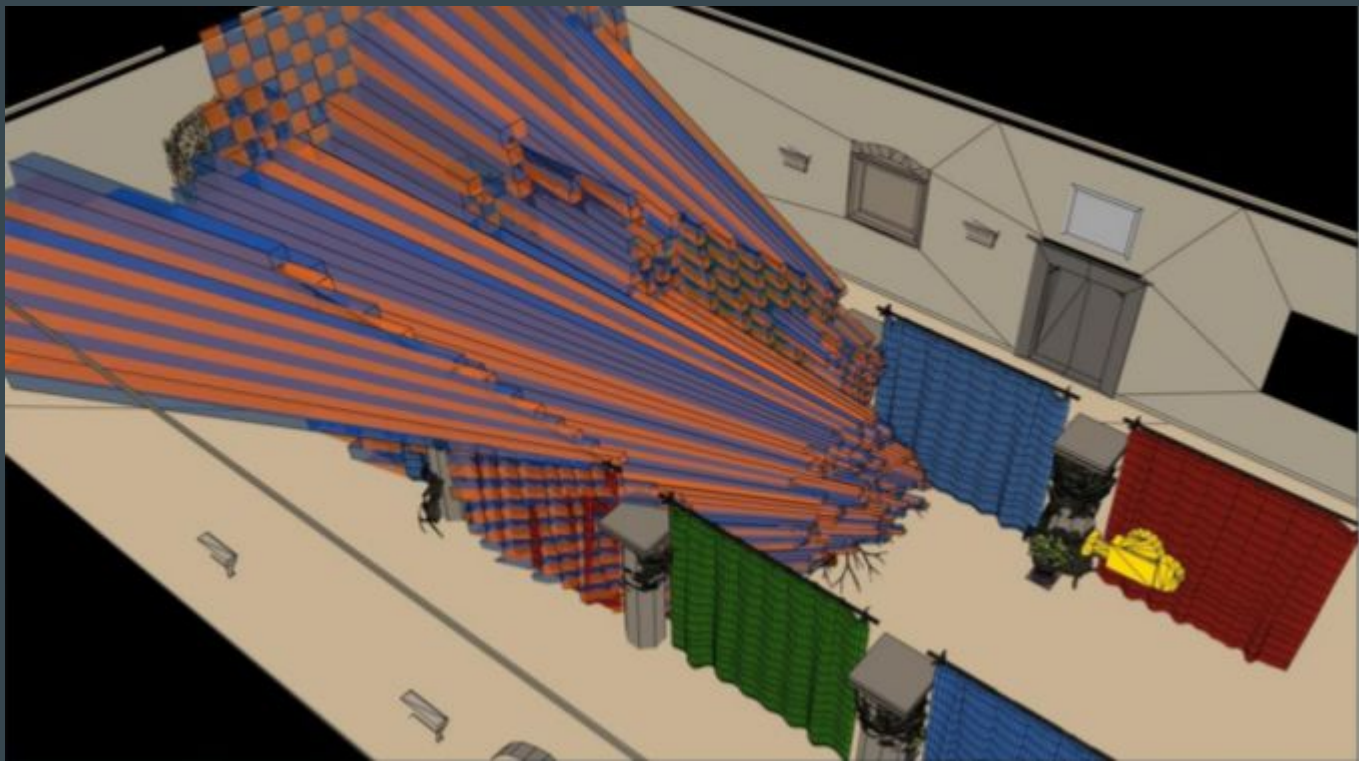
What is clustered shading?

- Same idea as tiled shading but in 3D!
- Compatible with both deferred and forward shading.
- Lose depth discontinuity for free.
- Fewer lights to calculate per cluster.

Tiled shading



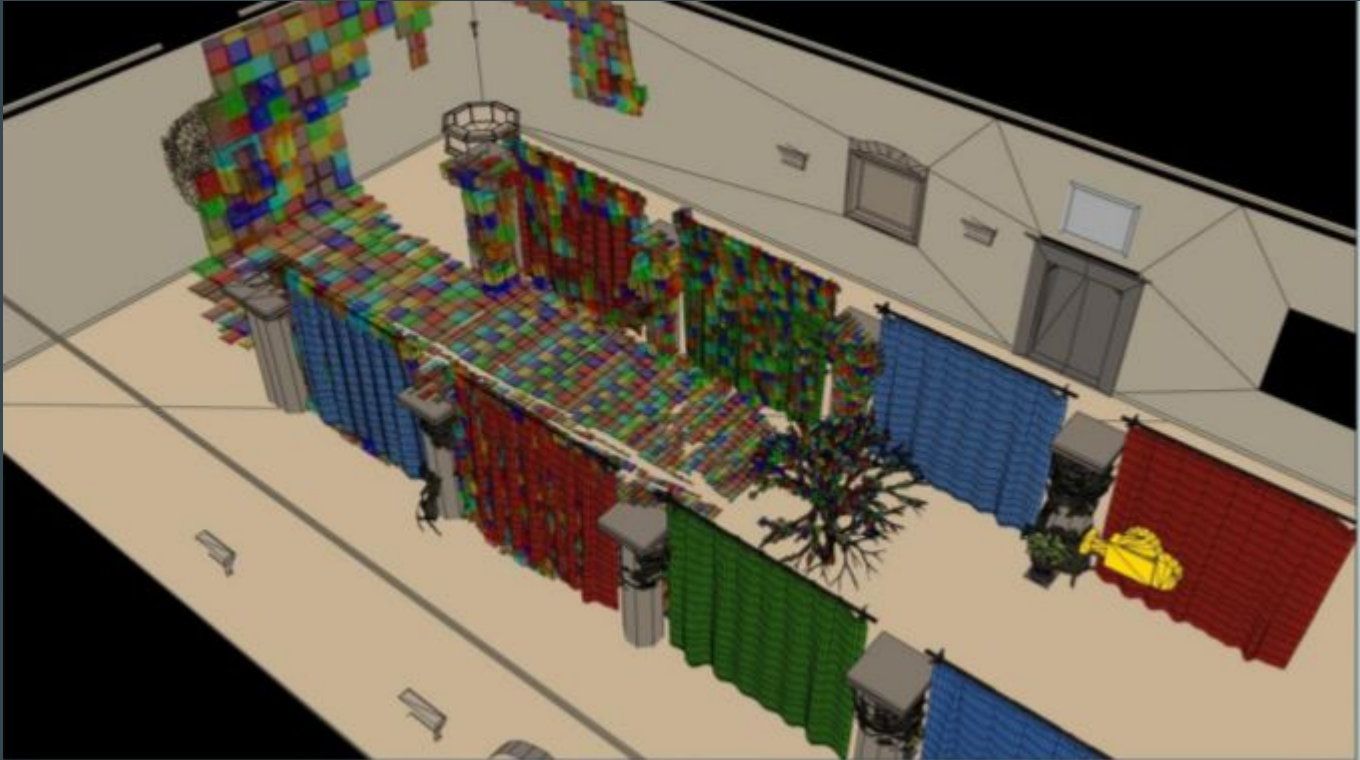
Problem with tiles.



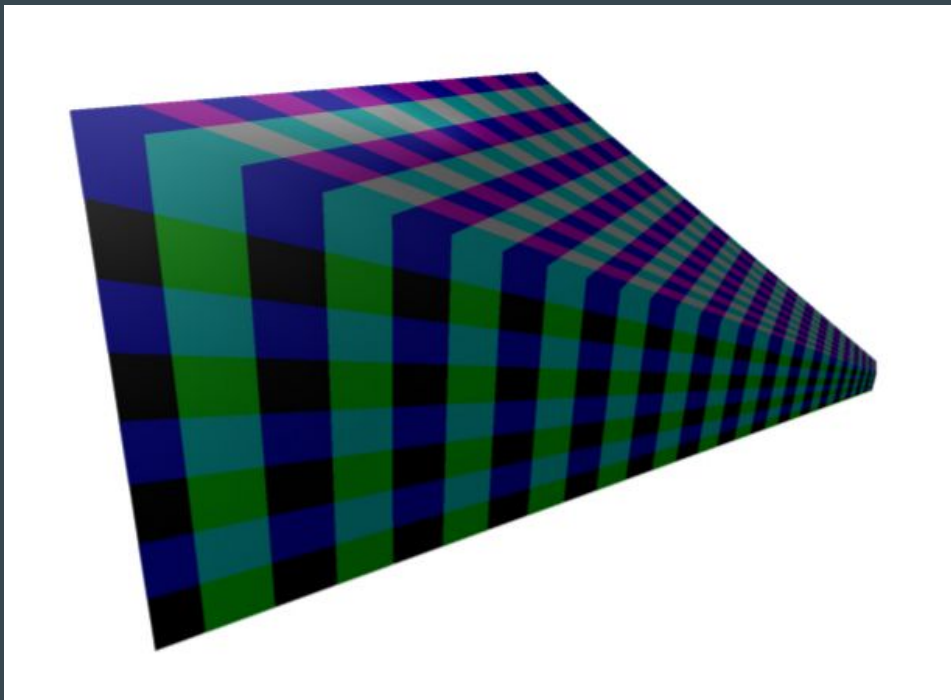
Problem with tiles.



Solution with clusters

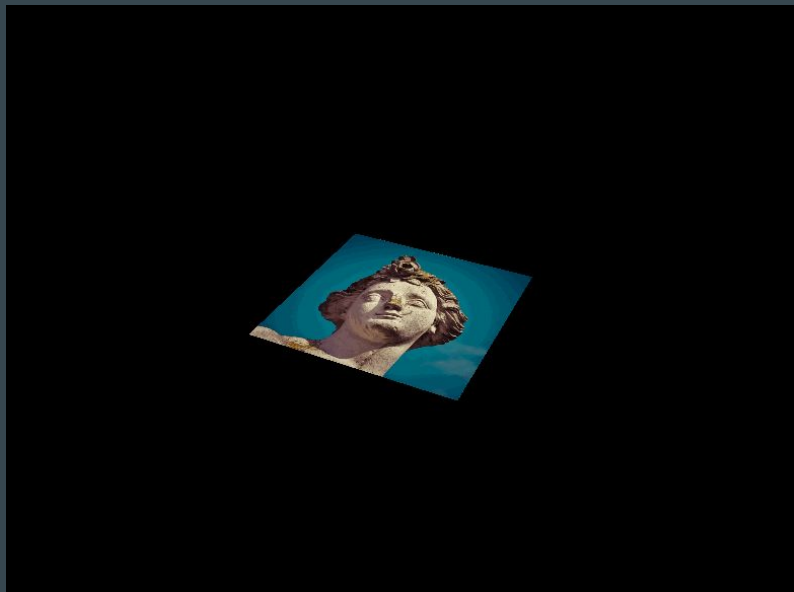


Divide view frustum



Current Progress

Basic Vulkan application created by following Alexander Overvoorde's tutorial.



Future milestones

Milestone 2:

- Finish forward renderer in Vulkan
- Compute shaders that perform clustering + debug view for this

Milestone 3:

- Finish clustered shader
- Stretch goals as time permits