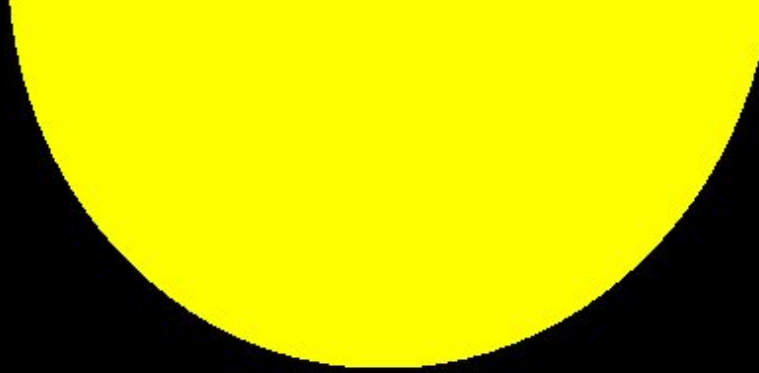


Precomputed Shadow Fields for Dynamic Scenes

Tao LIN 林涛

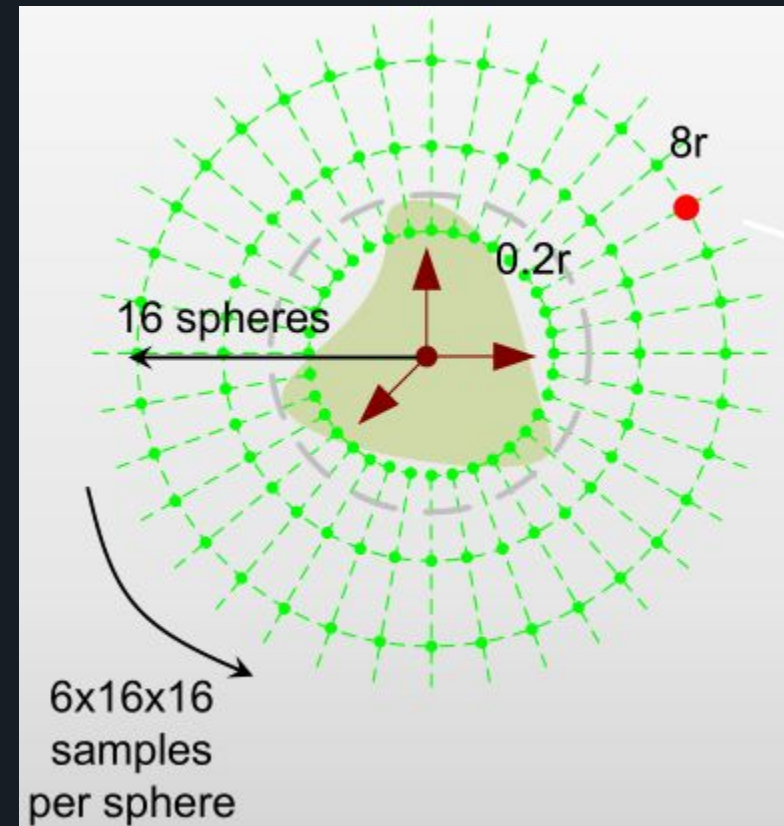
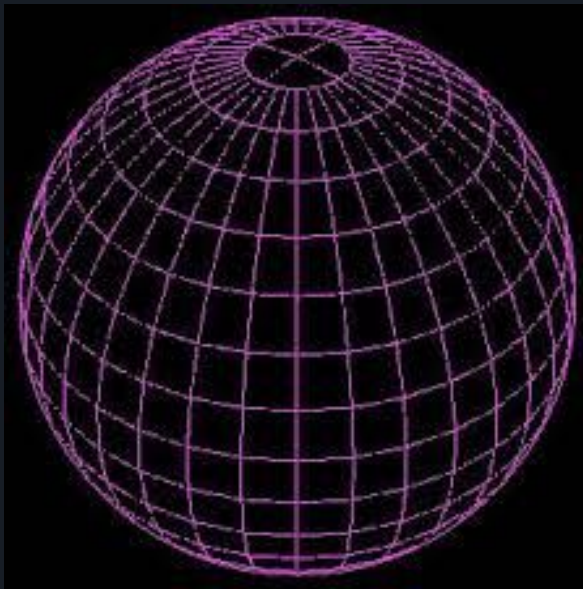


Review the Pipeline

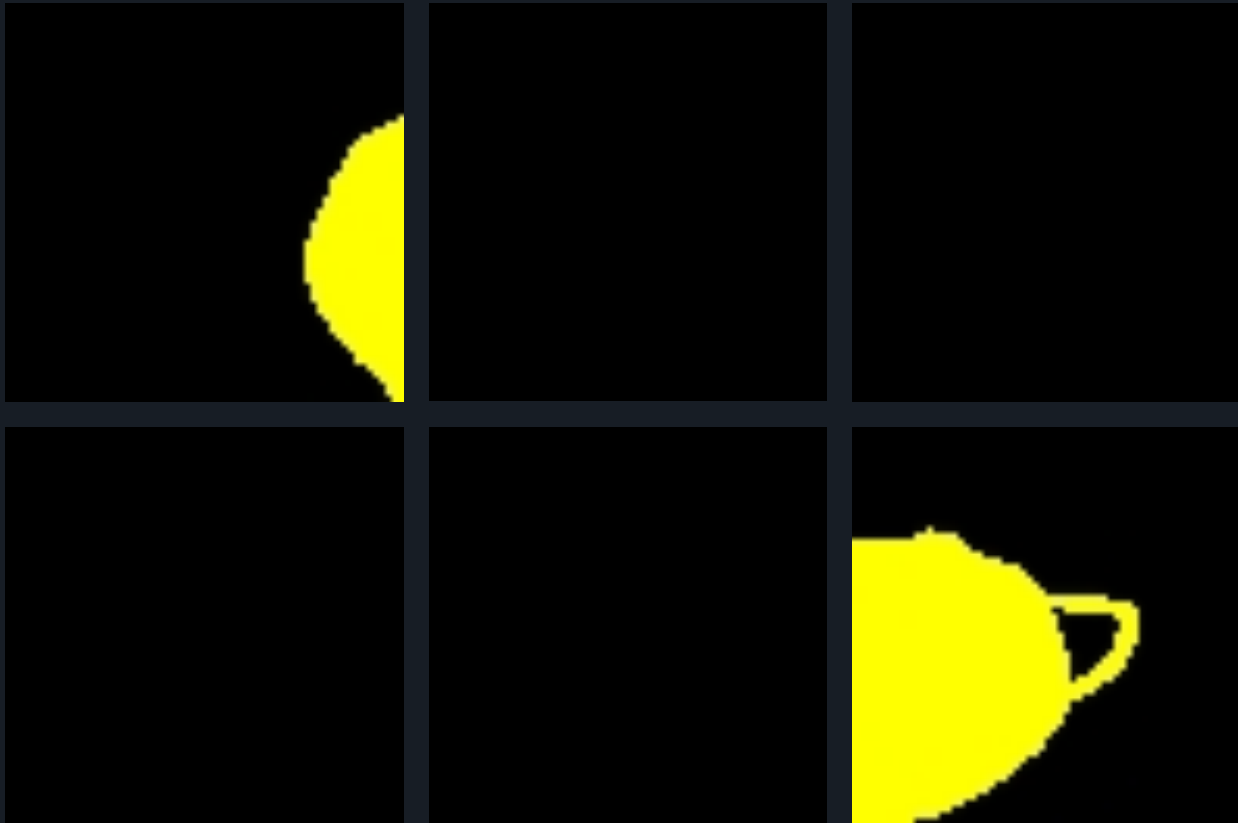
- ◆ Sampling
- ◆ Merging

Sample

- Distance (8)
- Latitude (4)
- Longitude (4)



Different Direction (CubeMap)

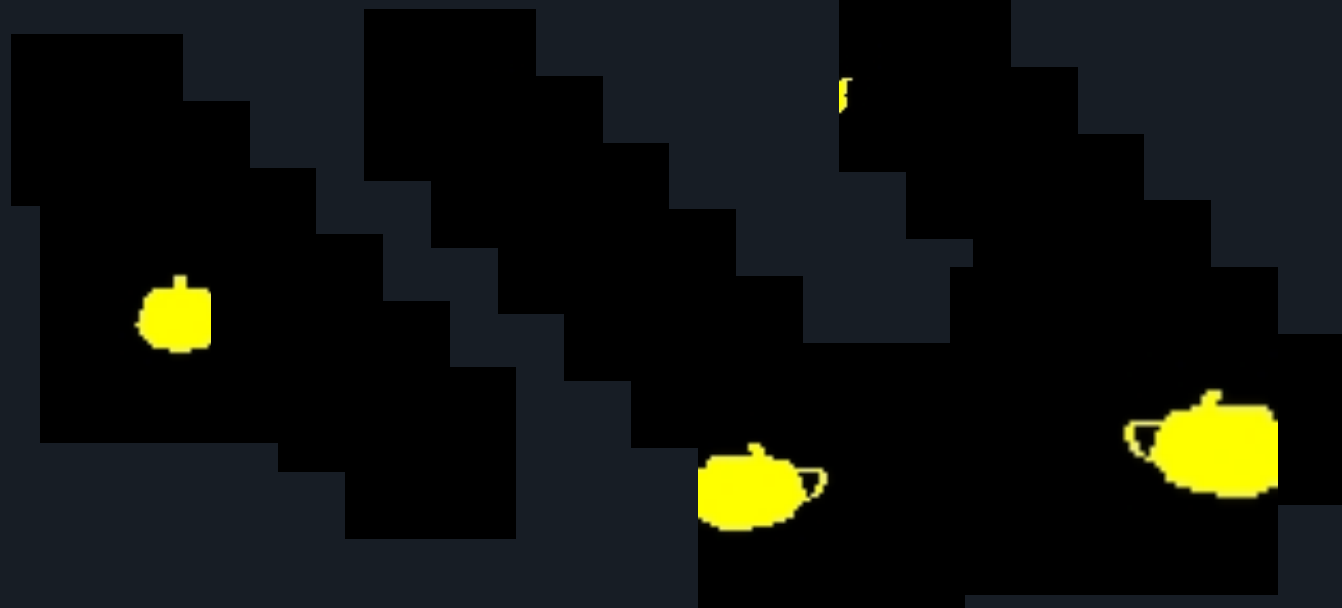


Different Position

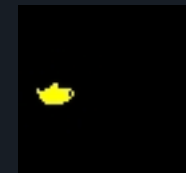
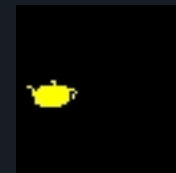
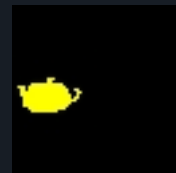
◆ Latitude:



◆ Longitude:



◆ Distance:



Difference between SRF & OOF

◇ SRF

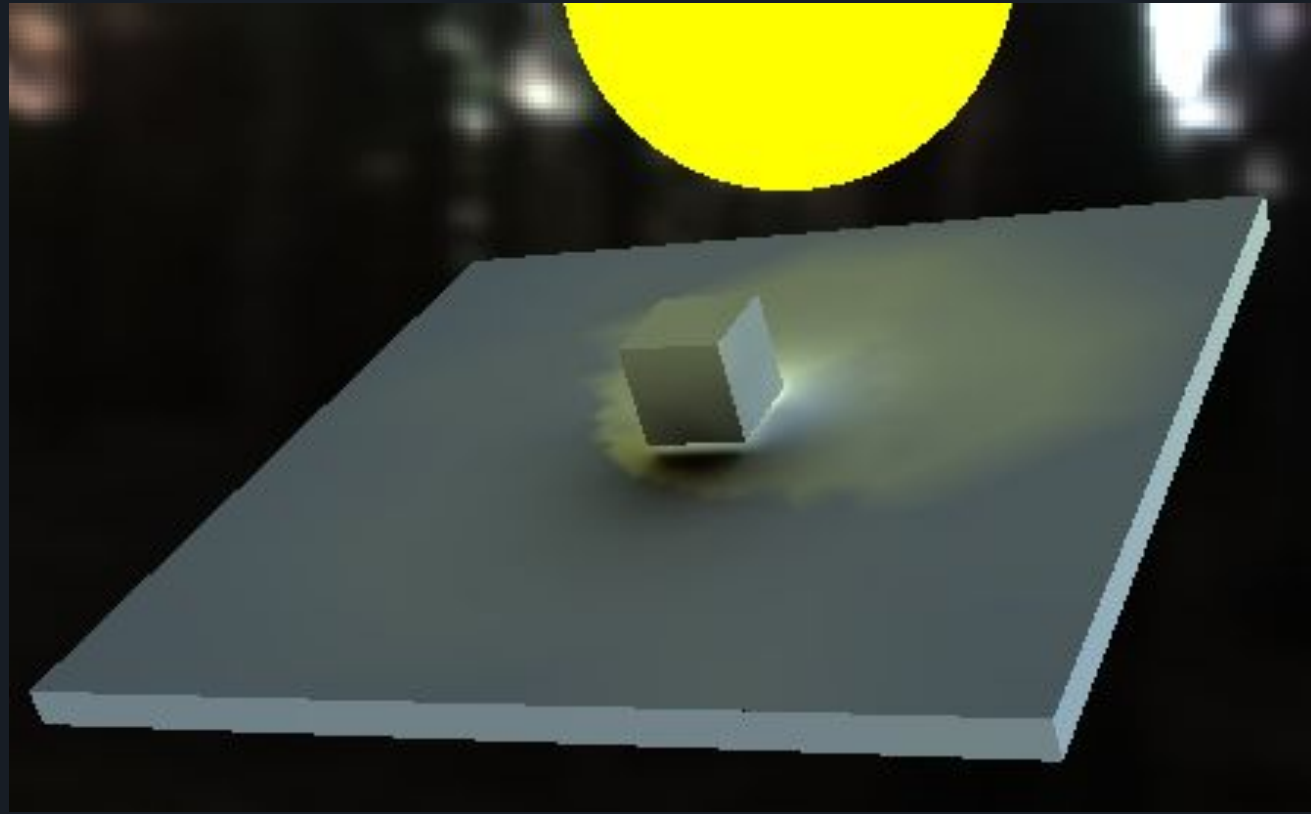


◇ OOF



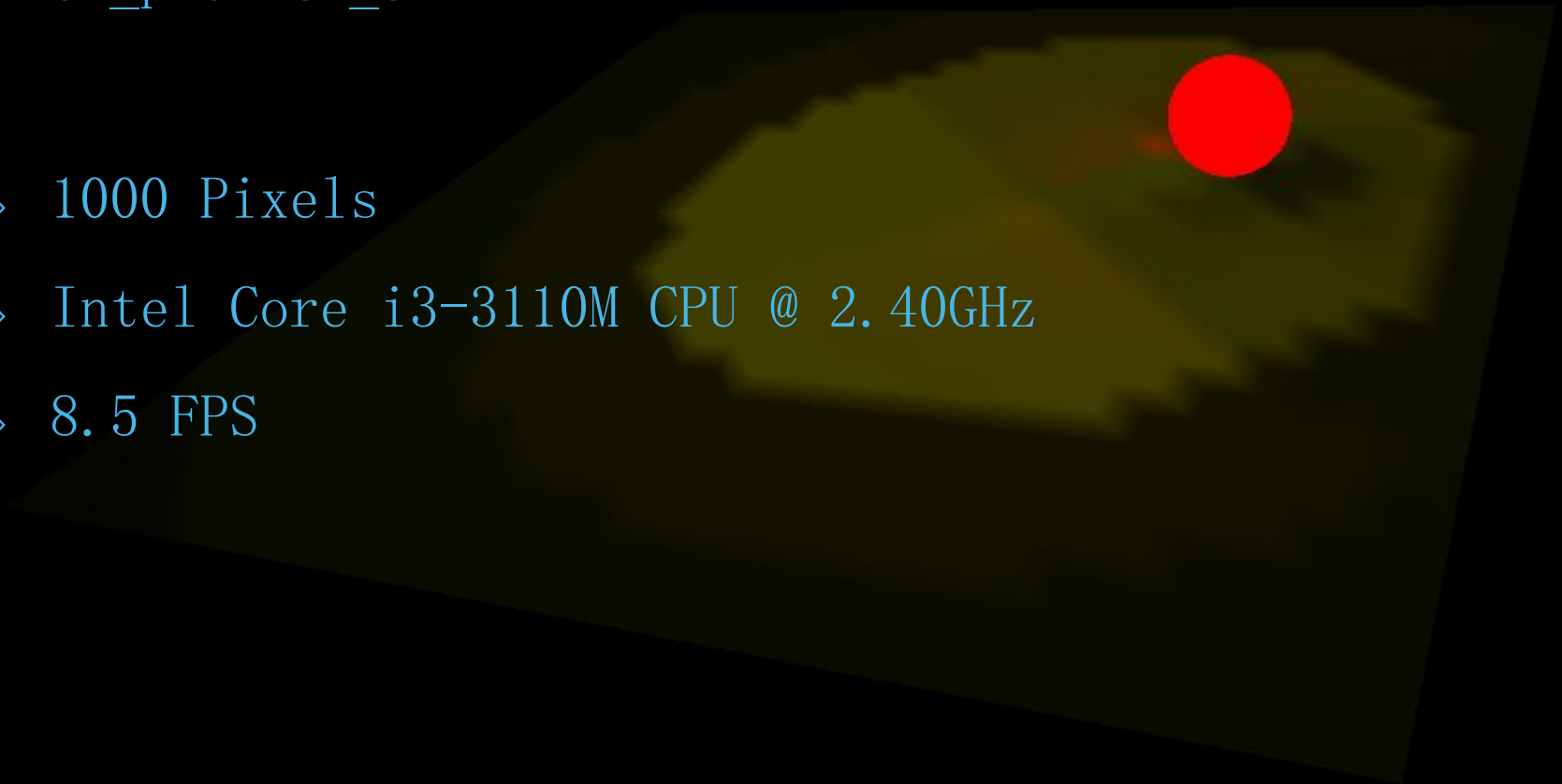
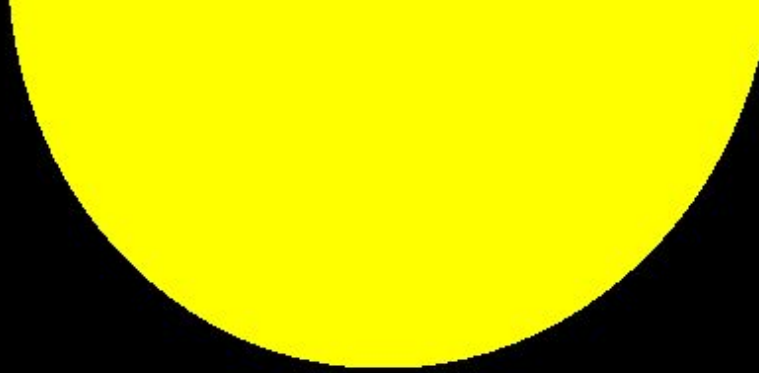
Merging (Vertex Shader)

- ◆ PCA-PRT in PRTDemo(DirectX SDK)
- ◆ PRT
- ◆ BRDF & SRF in shader



Adding OOF

- ◆ Sort with distance
- ◆ SH_product_3
- ◆ 1000 Pixels
- ◆ Intel Core i3-3110M CPU @ 2.40GHz
- ◆ 8.5 FPS

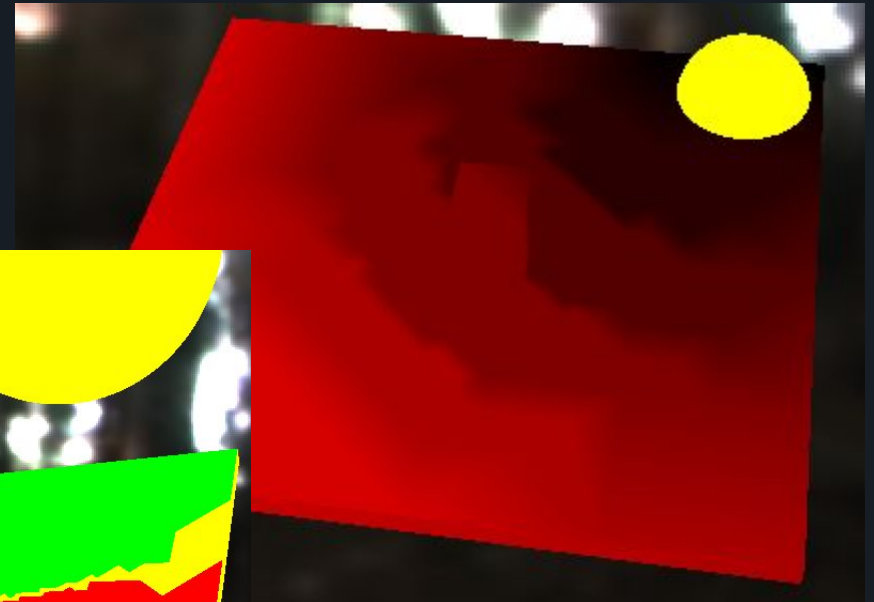


My Battle with Shader

- ◆ HLSL (No Pointer, No Library)
- ◆ Constant data is limited (8*4*4)
- ◆ Instruct number is limited (Order 6 → 4 → 3)
- ◆ Differ in different devices
- ◆ Debug

My Battle with Shader (Debug)

- ◆ Latitude:
- ◆ Longitude:



- ◆ Distance:
- ◆ Sort:

