



AGP Advanced Techniques

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Implemented techniques

- Deferred rendering + light volumes
- Z/Depth pre-pass
- SSAO
- Environment mapping



Deferred rendering + light volumes

- Light volumes is a huge optimization of the deferred rendering itself
- We render actual geometry, then calculates without depth write, the amount of light for each light volume in additive form.



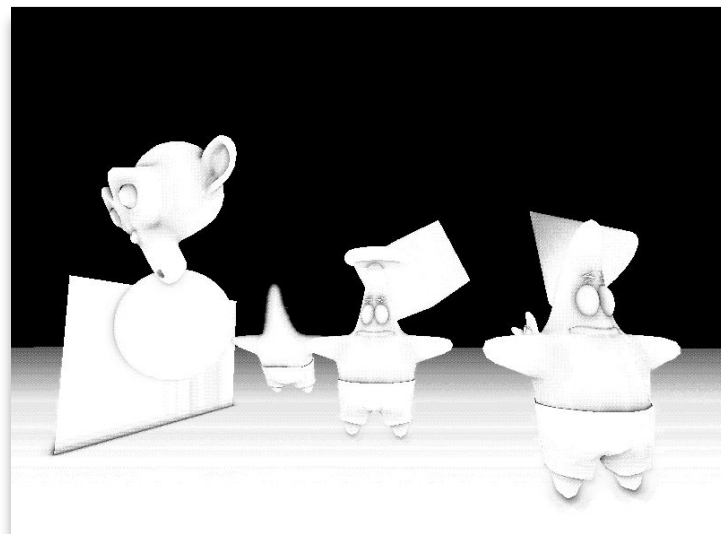
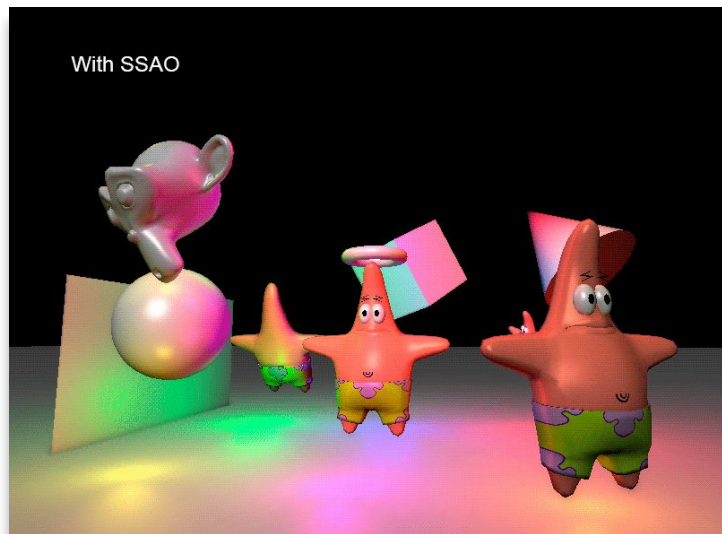


Z/ depth pre pass

- Giving some benefits from gbuffer to forward rendering
- Having early depth opens to multitude of other techniques:
 - SSAO, SSR, screen space/deferred shadows, occlusion culling, raytracing etc



SSAO



Environment Mapping

Specular Fake Reflections

Ambient + Diffuse + Specular 20%

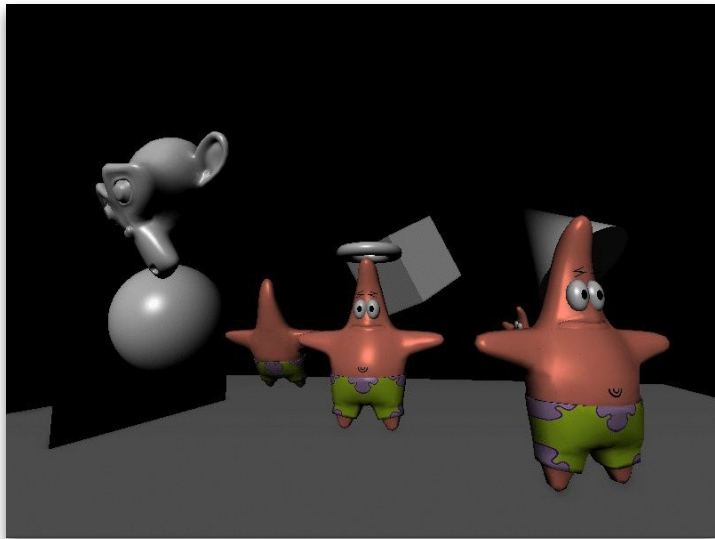


Specular 100%



Environment Mapping

Skybox



CubeMap Texture



THANKS

<https://github.com/SOLID-TEAM/AGP>