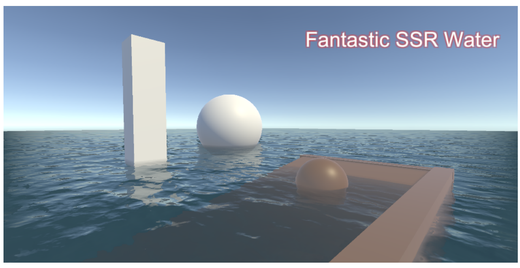
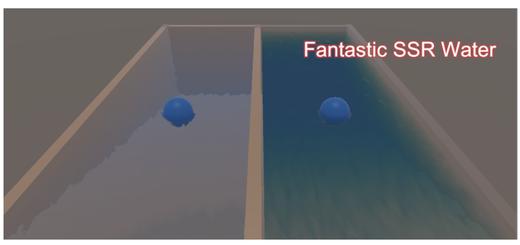
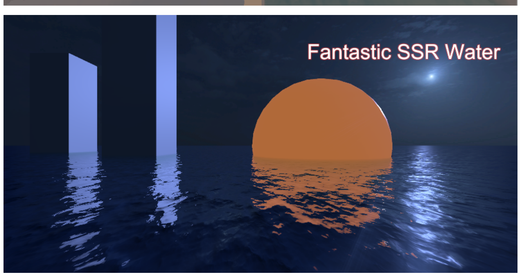
Fantastic SSR Water

Fantastic SSR Water







Youtube

Features

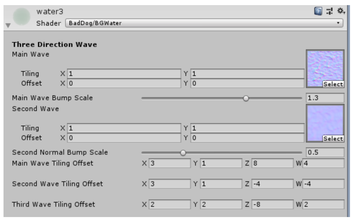
- Realistic three direction waves.
- Customized clean and muddy.
- PBR lighting with screen space reflection.
- Realistic refraction.
- Forward SSR and Mobile ready.

How to use

- SSR water need **camera depth texture**, so you should enable depth mode or just add **"CameraDepthToggle"** component to you r main camera.
- Assign **"BadDog/BGWater"** shader to your water material, then assgin the material to your water plane.
- Adjust material parameters, and that's all.

Shader properties

Wave Section



Two wave map supply three direction waves. You can adjust each wave's **tiling** and **offset**.

Water Base Color

It's computed as **diffuse color**.

Water Muddy and Depth

Water can be **clean** or **muddy**. Clean water is more transparent than muddy water.
Water's transparency is computed by **depth**.
Depth is computed by **muddy scale** and camera's **view direciton**, you can also add a **depth offset** to adjust the final transparency.

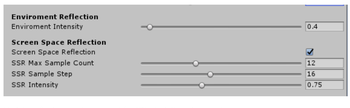
Specular

Specular is computed by **simplified BRDF** formula, specular color is **(0.04, 0.04, 0.04)**, you can adjust it's intensity for some special p urpose.

Refraction

Refaction needs Unity's **grab pass**. GrabTexture's uv is distorted by wave normal, and you can adjust the final **distort scale**.

IBL and SSR



Unity's reflection probe is used for **IBL**, but it's not enough.
If you need a **realistic realtime reflection**, you should enable **screen space reflection**.
IBL and SSR are **mixed** for the final enviroment lighting.

SSR **Sample Count** is performance sensitive. For mobile device, max sample count use 8 and sample step use 20 is good enough.

Final

The final water color is mixed by reflection and refraction.

About the examples

There are three example scenes, show you how to adjust the shader's properties.

- testSSR
  - IBL + SSR + Refraction
- testLighting
  - IBL + SSR + Specular
- testDepthAndMuddy
  - Depth + Muddy

Customer Support:

shenpan998@gmail.com