Revealable Invisibility Shader

Version 1.3.0

User's manual

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Overview

This asset is a combination of shaders and scripts, allowing you to make materials invisible unless they are in proximity of specific “seer” objects.

Shaders

Universal Renderer Pipeline

Revealable Invisibility / RI-URP-Alpha
This is shader to use by default for anything you want to have conditionnal invisibility.
All classic properties available (Color, Texture, Normal, Occlusion, Smoothness, Metallic) work the same way as they do in Unity's Standard Shader.
The Resistance property modulate the distance at which the material will be revealed.
The Hidable flag invert the shader behavior, making it visible by default and invisible when close to a Seer object with the “Hide” flag.

Revealable Invisibility / RI-URP-AlphaClip
Due to limitation of the Universal Renderer Pipeline on Z-sorting transparent materials, some objects (especially concave one) might display their polygons in the wrong order.
This shader fix this problem at the cost of forbidding actual transparency.

Legacy Pipeline

Revealable Invisibility / RI Standard
This shader is intended to replace “standard”, non-transparent materials.
All classic properties available (Color, Texture, Bumpmap, Smoothness, Metallic) work the same way as they do in Unity's Standard Shader.
The Resistance property modulate the distance at which the material will be revealed.
The Hidable flag invert the shader behavior, making it visible by default and invisible when close to a Seer object with the “Hide” flag.

Revealable Invisibility / RI Transparent
This shader is intended to replace “actually transparent” materials (including for cutout-type of textures).
It otherwise work the same as RI Standard.

Revealable Invisibility / RI Particles
This shader is intended to replace the default particle shaders.
It doesn't take lightning into account, and thus lack all the related properties (Bumpmap, Smoothness & Metallic).
It otherwise work the same as RI Standard.

Scripts

Seer
Add this component any transform to reveal nearby Revealable Invisibility materials.

Shape : determine the shape of the reveal zone.
Sphere – spherical zone centered on the transform.
Cylinder – vertical cylinder centered on the transform.
AABB – axis-aligned rectangle.

Radius : determine the size of the zone for Sphere and Cylinder shapes.

Size : determine the size of the zone for AABB shapes.

Gradient : size of the colored gradient at the exterior of the zone.
A short gradient will result in a sharp and very visible transition.

Gradient Color : color (and transparency) of the gradient.

Hide : if true, this seer will only interact with “Hidable” material, and turn their invisibility on when getting close to them.

Utilization

Use the appropriate RI shader to build the objects, characters or environments that you want to be invisible.
Add a Seer component to any entity that you want to reveal invisibility.
Add a Seer component with the "Hide" flag ON to any entity that you want to hide object.
The same GameObject can carry several Seer components.

Limitations

All shaders provided are transparent shaders and thus have certain limitations :

- They can emit but not receive shadows.
- Lightmapping may interact improperly depending on camera position.
- Ordering problems may appear if they are mixed with other transparent materials.

Changelog

Version 1.3.0

- Added the URP-compatible shaders, and an URP demo.

Version 1.2.0

- Added Heightmap support.

Version 1.1.0

- Added the "hide/hidable" option for Shaders and Seers.

Version 1.0.0

- Initial release.