RealSpace3D Audio - Occluder Component

RealSpace3D Audio has now added a new component to our Unity plugin, the RS3D_Occluder.

The RS3D Occluder is quite simple to use. Occluders can be added to your scene via the Unity menu /GameObject/RealSpace3D/Occluder or from the Unity Editor Hierarchy/Create/RealSpace3D/Occluder menu. Occluders can be rotated and scaled.

Once the occluder is in your scene you will know it by its checkerboard pattern. The occluder when in open space or a virtual room w/ no reflections will totally block any RS3D AudioSource in its path. In RS3D Virtual Rooms with material reflections on the ceiling, floor, and walls will occlude but you will still hear audio at a lower volume because the reflections in the room can still be heard.

Users can adjust the “Max Reflection Order” and/or the “Reverb Length” on the RS3D Virtual Room component the occluder(s) reside in to affect how much dampening they desire. Also, the RS3D Occluder component has a “Percent Absorbed” slider that goes from 0 - 100 percent in 25% increments where 0 = no absorption and 100 = totally absorbed.

The RS3D Occluder comes with a default checkerboard texture and allows you to identify the occluder by color if you like. The checkerboard and color are merely to aid in editing and seeing the occluder when the user is designing their scene. If you already have an object and it is textured or not you can deselect the “Reveal Occluder” check box and the occluder will not be visible in your scene but it will still occlude/obstruct. You may also add your own texture to the occluder by changing the material in the Mesh Renderer associated with the RS3D Occluder and leave the occluder visible…the choice is yours.

Occluders can be moveable or non-moveable. Select the “Moveable” check box to turn on/off. Occluders in RS3D Virtual Rooms that are moveable incur less calculations and cpu than moveable occluders outside of RS3D Virtual Rooms in either case the overhead is very minimal. If you know the occluder will not be moveable it is advised to uncheck the default “Moveable” option to conserve on processing and unneeded calculations. Also, moveable occluders add a collider so it it isn’t moving a collider will not be added.

Currently the RS3D Occluder is a four point plane. In a future release we will allow for arbitrary planner shapes.

So you see the occluders are quite simple to use, merely drop them into your scene and position them where you like and they should do their job.

This is the first implementation of the RS3D Occluder in production so please contact support@visisonics.com to report any problems or even features you believe the occlude should incorporate. Please make sure to read our ReleaseNotes.txt file for known issues with the RS3D Occluder.

Special Note: The RS3D Occluder currently does not work with RS3D AudioSources running in Fast Spatialization mode.

Check out www.realspace3daudio.com/community/forum for help with issues from other developers as well.