

THIS IS A BETA FEATURE.

This feature is still in beta and subject to constant change. We encourage you to use it in test projects and provide your feedback to us.

However, DO NOT use it in production where it creates dependencies! Always back up your projects to make sure that you can go back to a previous version.

- "GI without voxels" mode

- [Feedback](#)

"GI without voxels" mode

This is a very experimental mode introduced in CE 5.2. It is supposed to be used only in very few cases. Mostly it may be useful for small indoor scenes where high resolution and leak free indirect lighting is required.

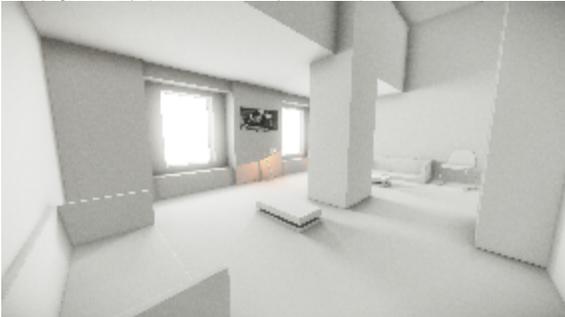
Instead of automatic voxelization, the level designer can construct a simplified proxy scene out of basic analytical shapes like boxes, cylinders and capsules. The engine will use this proxy scene instead of voxels (in the future they will probably work together).

It may sound like more manual work for a level designer but if we look at how many hours designers (using other engines) spend waiting for light map calculations after each object move or parameter change, it may become more efficient for production to just place 20-30 proxy objects into the scene and see the final illumination immediately and have direct real-time control over lighting.

This mode can be activated by Analytical GI checkbox in GI properties. When it's enabled voxel tracing is completely excluded.

In this screenshot all the geometry you see is actually the proxy geometry that will be invisible in final scene.

Proxy geometry (scene made by Enes77)



There are 2 lighting components in the scene:

- A portal is used as area light to simulate primary bounce from the sky with sharp contact shadows.
- AO pass is used to simulate secondary bounces and also to collect bounces from sunlight. It is not very sharp.

Here is the demo level, it's compatible only with CE 5.2: [AGIDemo2.zip](#)

Please note the changes in suffix rules:

Suffix	Description	Supported modes
_TI_AO	Normal occluder for analytical GI (works for portal lighting, AO and light bounces)	Only for analytical GI mode
_TI_AOH	Same as before but produces harder conservative (leak-free) shadow	Only for analytical GI mode
_TI_PO	Post occluder used with average light direction (this is old "_TI_AO" occluder)	Works in all modes

The current limitations are:

- Light bounce works only in mode 0 for now
- Maximum number of occluders on the screen is 48 (but entire level may contain hundreds of them)
- Performance is not final and supposed to be 3-4 times better when we decide to continue the development of this feature

Feedback

As this is a Beta Feature, it is still in development and we would love to hear what you think about it. Please provide us with any feedback you have through the [CRYENGINE Community forum!](#)