

# Rendering

## CX 7/7.5 - Adaptive sampling - What are the new Adaptive sampling render options?

Adaptive Sampling allows the renderer to cut down the number of samples being used for both GI, light cast shadows and blurry reflections.

If this value is set too high you'll notice noise or grunge appearing. The renderer attempts to cut down samples in darker regions where they may not be noticed, but this will vary from scene to scene.

To control the affect this has on GI, look at the Shadow channel in the Render Dialog. This channel controls raytraced shadowing for spot and point lights. However, the Adaptive Sampling variable also ties into GI shadow areas.

It is recommended that this value stay below 1.0%. Often values below 0.5% will ensure that surface artifacts don't show up. You'll note that the Raydiosity renderer presets set this value to 0.35% for the Better range.

For scenes opened up from 6.2 files or earlier, this value is likely to be set at 2.0. This may be too high (depending on the scene). So just watch for unusually blotchiness in a scene compared to the 6.0 version which had uniform sampling.

There is also a new Adaptive Surface Sampling setting available in the Details channel of the Render Image dialog. It affects global illumination sampling (Raydiosity), blurry reflections and blurry transparency sampling.

It applies to surfaces; and detects when new samples no longer help to refine the image, then stops the sampling at that point. Setting the threshold to 0% causes all of the samples to be taken.

A low setting (2%) ensures that all needed samples are made, but may slow rendering. A higher setting (5-9%) can speed up the rendering substantially. Objects or models lit with global illumination may require a lower setting to produce acceptable quality.

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