Interior Lightning using Skylight and Sun

Hello everyone.
Here is a quick tutorial on how to set up interior lightning
using skylight and sun. This actually is my first Tutorial.So let me know if you have Problems.
Rendertimes are for a Athlon XP 2100+ / 1GB Ram. u3dreal

Lets start right away.

Get the startscene from here ???

Basic Setup:

Open K and load the GI-tutorial_start.xml scene. Hit Render -> black. Ok we haven't set any lights.

Go to scene settings and raise the amount of the Background to 1.
I altready chose the color for you. Make sure you have Sky Color as Background Type.

Hit Render ->hm at least we see the sky now. But we forgot to enable GI.

So go to the render settings and choose
Photonmapping + Finalgathering (SW) under Global Illumination tab.
leave all the settings as they are for now.

You can see the light coming in. But still very dark.
Ok go to Tone Map and select Simple Tone Mapping.
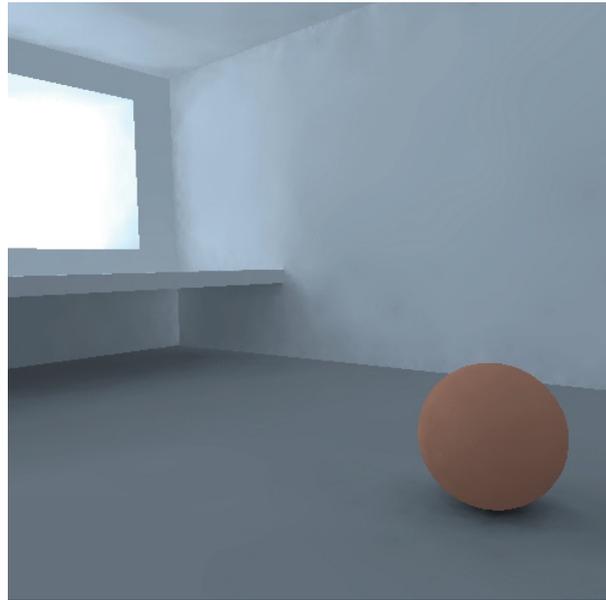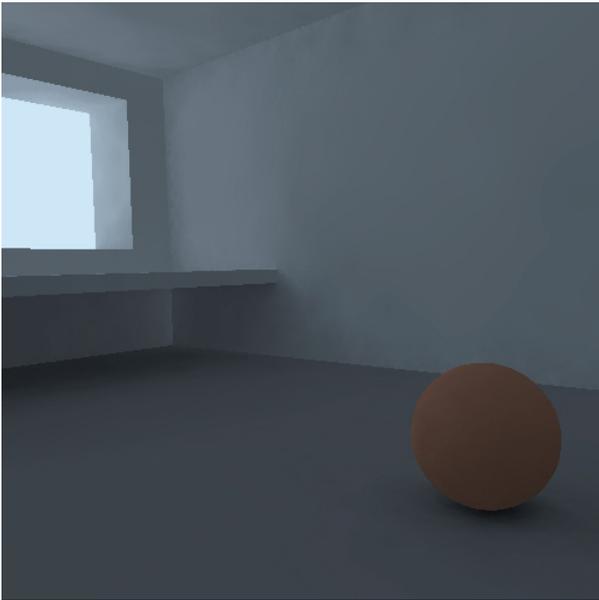**Set the Gamma to 2.2** ->

Voila sweet GI.Rendered in 2.2s.
You can get a fast preview with these settings so you can eassly tweak your materials.

OK now this looks ok but how we will make it better ? Lets tweak it a bit.

To do so lets go into details > hit Render and choose "ballclose" from the Camera Rollout.
Hm this is too dark.Change exposure to 3.   ==> **Now we can easyly see the artefacts !**
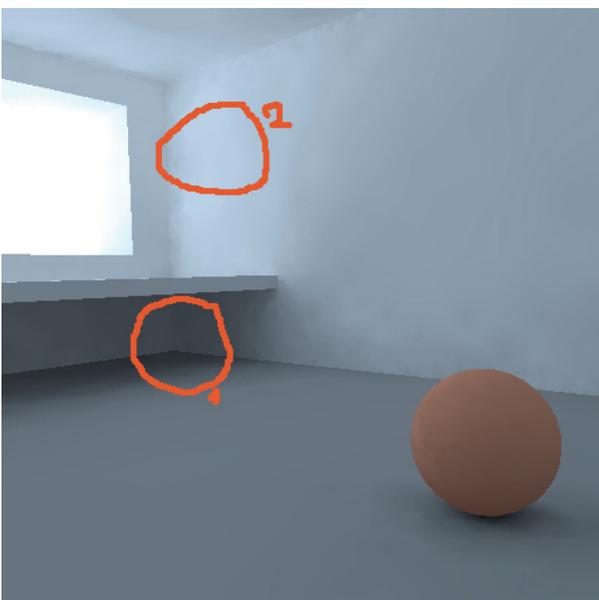

Setting Photons:

Now lets first set the right amount of photons.
Go to Global Illuminatio tab in Render Settings.

You have to raise the amount until the corner has no lightleaks. (1) Take a look at prev. Pic.
Focus on the dark areas.

For this scene i ended up at 2000000 Photons.
But there is still some noise in the lit areas. (2)

We need to adjust the Irridiance Map !!

Time 18.7s.

Setting Irridiance Map: (Final Gathering)

Lets set the Irridiance Map right.

Go to Global Illuminatio tab in Render Settings. Set number of rays and quality of Irrmap.

You have to raise the amount of rays until you get no dark artefacts anymore.
Use the Irridiance Cache to speed up the things a little. => Lower quality for Irrmap.

Focus on the lit areas.

As a guideline: **The higher the Rays the lower the Irrmap can be.**
                               The higher the Resolution of the picture the lower the Irrmap can be.

A good value here is 2000 Rays verygood.
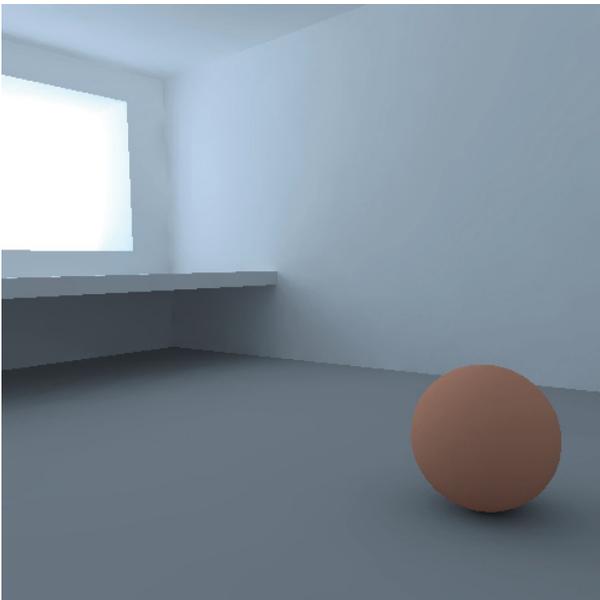
Now that looks nice.   500x500   Time 1min35s.

Final Settings:

Now lets finish this scene.

Go to the Render Settings and

S**et the AA to extra pass and threshhold to 0.005.**
Set the Soft Shadow Accurancy to Higher. Cause we have some softshadows on the sun.

In the Scene Settings got to the light tab and choose sun from the light rollout.
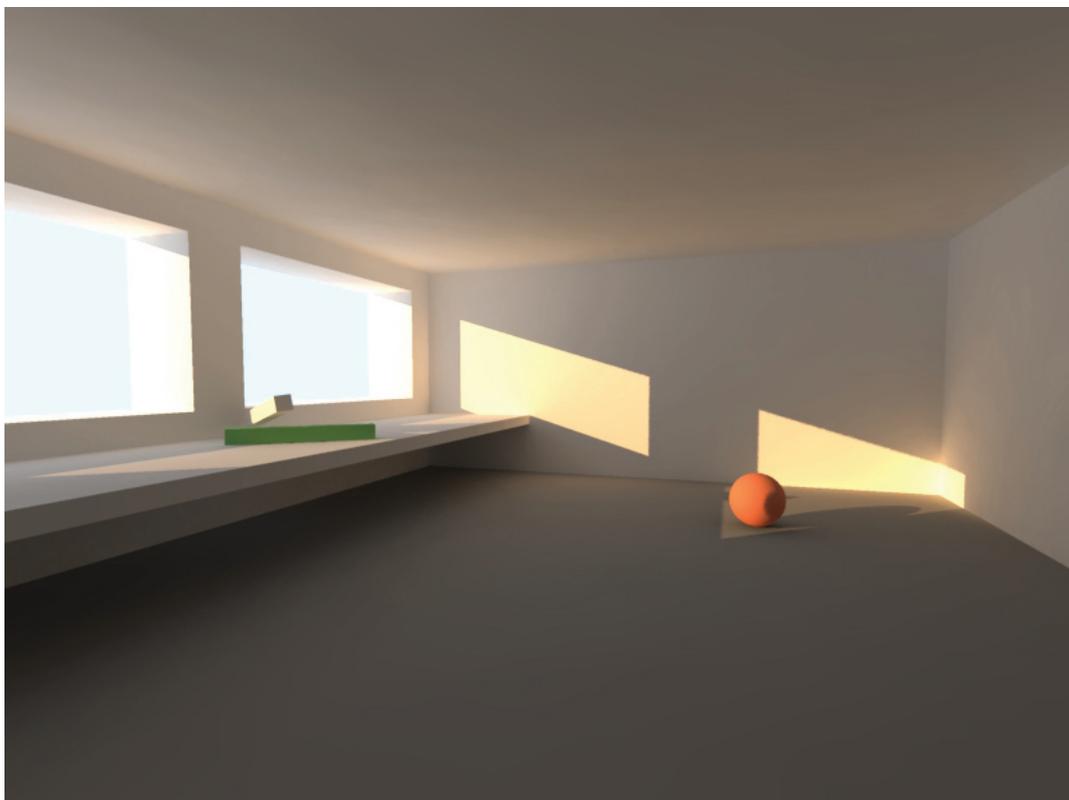**Enable the sun.**

Now Hit Render and choose room from camera rollout and set resolution to 800x600.

Uups this was a little too bright....But no worries.

In Tone Mapping set Exposure to 1.42 and Gamma to 1.6.

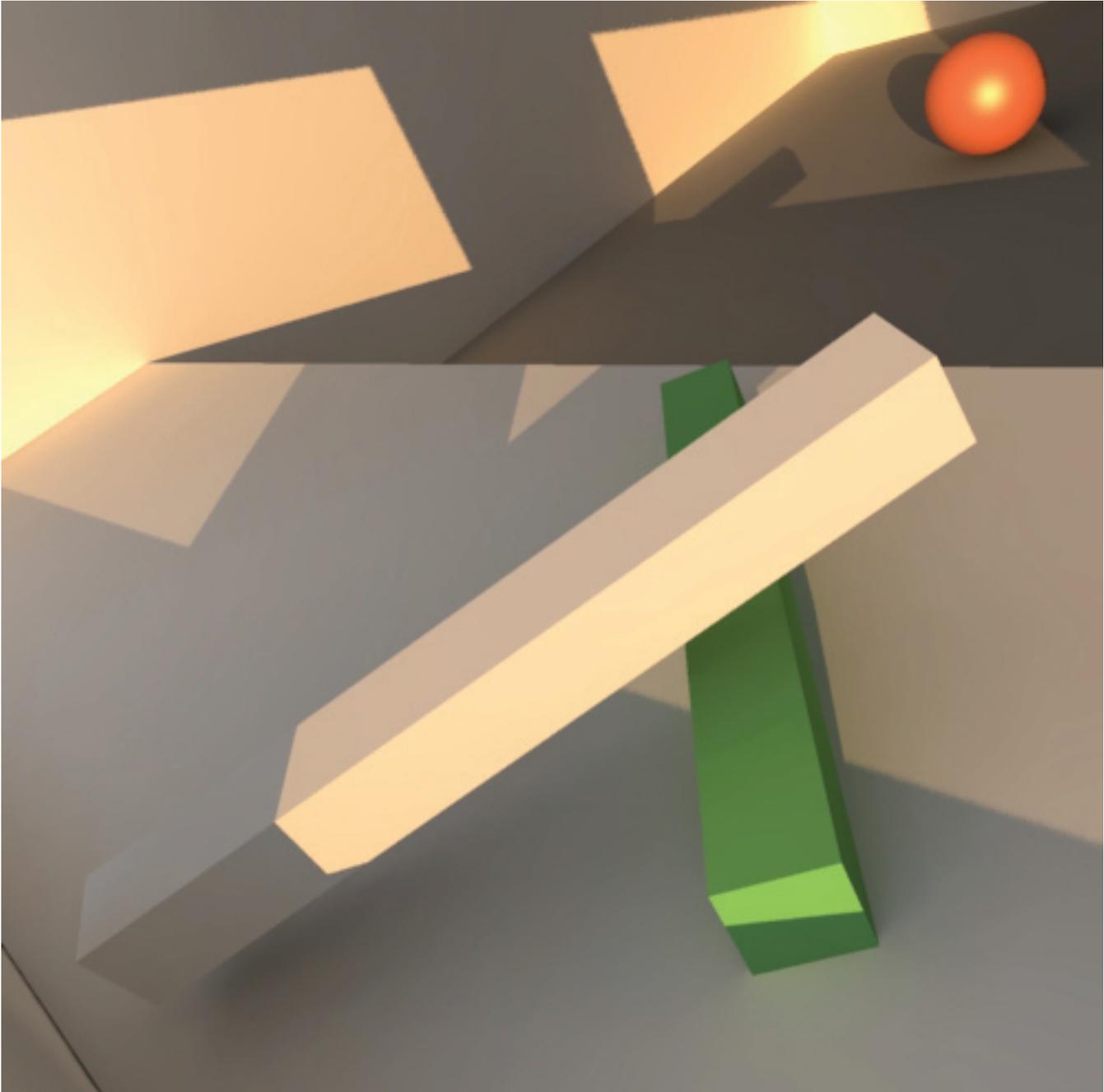Look at the nice glow in the corner and from lit faces !

800x600   Time 3min35s.

So basically the Exposure will control the bright areas whereas the Gamma will more control the dark areas. Try to find your settings.

Tips:

1.   AVOID INTERSECTIONS !!!!!

You can't get rid of the artifacts ??? check your modelling.

and then you can get clean edges like this with those settings.

500x500   Time 2min13s.

**2.   The more reflective and refractive materials you add
the longer it will take to render.**

Have Fun.
Hey its actually fun writing a tutorial.
So give me l lots of feedback and maybe I'll do another one.   U3DReAl