Transcript for video "Using IBL v7.1" part 1/2

This is the IBL tab in Bryce 7.0 and all the controls were covered in «Using IBL Part 1».

There are a few IBL related videos available already. They cover IBL for Bryce 7.0. The most important of them to watch is Part 1 of «Using IBL» which explains all controls. There are more in Bryce 7.1 Pro and this tutorial foots on that first part. Here, we will cover the new options only.

And here is the IBL tab in Bryce 7.1 Pro. «Export Image» is moved left below «Background DOF» and «Ton-map HDRI» as well — and it works now. Between the «Intensity» and «HDRI Effect» controls a new «Specularity» control is inserted and the «Compat Specularity» just above «Light From Inside» belong together. The «Transparency» control that was idle in 7.0 works also. Then, there are three arrows, a white one next to «Use as a backdrop», and a black one each right of «Intensity» and «HDRI Effect».

Let’s go through two of these three new and altered features in more detail. The third new feature will be covered in the second part.

We have a simple scene with a mirror ball at left and a sphere with the default grey at right.

This sphere has some Specularity set and the Specular Halo at 204. We can’t see anything of this Specularity yet, but we will later on.

The HDRI is one with a cloudless sky which is good because we will add Bryce clouds to it in the second part.

We have Intensity set to 50 for a nice backdrop, the IB light is Applied to Light Source, so it contributes to the light emitted and hence HDRI Effect is set low to 4.5. We could also set Falloff to Linear, raise HDRI Effect to 450 and Radius to 450 to get about the same light. Apply to Light Source is the compatibility setting for Bryce 6.1 to 7.0.

When Apply to Light Source is disabled, we need to move up HDRI Effect to 450 or have to switch off Linear Falloff to have enough light. We switch Apply to Light Source and Linear Falloff back on.

The HDRI is high contrast and oversaturated and doesn’t look very natural. So we Tone-map it. Wow, not an improvement everything is burned out. At least, we can make the sphere black by applying negative HDRI Effect but that’s not an option here and we go back to 450.

Obviously, the background is too bright and we reduce Intensity to 8. Now, the sphere is too dark because Intensity contributes much less light to HDRI Effect. We set Falloff to None to compensate for that. Now the sphere is too bright. We can now either untick Apply to Light Source – or reduce HDRI Effect to 175.

Once the HDRI is tone-mapped, the Tone map button can be toggled. Now if you export the HDRI, there is this to consider: If you export as an HDRI, it doesn’t matter whether the HDRI was tone-mapped or not. It will retain the full dynamic range either way. If you export as LDRI, however, the tone-mapped variant looks much better than the none tone-mapped one.

Above exported as BMP non-tone-mapped, below, also exported as BMP but tone-mapped.

There is still that black arrow next to HDRI Effect. The options have only an effect if rendered with TA. True ambience optimization makes the render engine see large light sources instead of point light sources and this is much better for TA.

Ignore tone mapping means that the original HDRI is used to create the lights and not the tone mapped one.

Rendering with True Ambience is not covered here. There are special render options to use this feature – which can be set at two different places.

Now let's move on to Specularity.

We set Specularity at 500 and enable Compat Specularity and we see the bright blurry spot. In order to better show what's going on, we set Specularity at minus 500 so we get a black spot. Now we go back to the initial setting: No tone-mapping, Intensity 50 and this light is applied to the light source, HDRI Effect back to 4.5. If we toggle Compat Specularity, we see a small change.

Now we disable apply to light source and move up HDRI Effect to 450 to compensate. Toggling Compat Specularity has an obvious effect.

Now we tone-map the HDRI and reduce Intensity to 8. Toggling Compat Specularity shows what's happening.

Finally, we enable apply to light source again and compensate the additional light by reducing HDRI Effect to 175. Again, toggling Compat Specularity shows an effect.

Now we enable the sun and we see the specularity from the sun. We set specularity to -200 and get a black spot which we can make appear and disappear if the sun is enabled or disabled.

This wraps up the first part. The second part will cover the Blend HDRI with Sky feature.