Transcript for video "USING IBL Part 2"

Looking at artworks found in forums and galleries gives the impression that image based light is hardly used. This is surprising because IBL is the easiest way to give a scene the light it needs to make it look more than just yet another render.

An often heard statement is that an IBL lit scene needs much longer to render then a conventionally lit one. This is rubbish.

An IBL lit scene can indeed make the render to come to a crawl if soft shadows are used. This is, of course, also true for radials or the Bryce sun. There are options that need a lot of time to properly render.

So let's put that myth aside and do some real work. There are 4 pictures on the screen. They were rendered as 800 by 500 pixels. Top left rendered in just under 15 minutes, top right in 6 1/2 minutes and bottom right in half a minute. Bottom left is special. Rendered without shadows from the HDRI in 36 seconds, with HDRI shadows in a bit over 6 minutes and with soft shadows in 3 hours. So that's the reality.

Scene 1
This, and the following two scenes are almost identical. There is an object modelled in Wings3D.

There is very few grey diffusion, full metallicity and a bit of bump. It is fully reflective and the refraction is set to 120.

Within this object is an elongated sphere with a glass material.

There is a bit more Diffusion than for the surrounding object, a bit of bump with a high frequency sand texture, it is 80% transparent and 20% Reflective.

And then, there is a flower out of the library put on the inside to give a bit of colour.

In the Sky Lab, nothing is enabled in the Sun and Moon Tab except the Intensity of the Sun/Moon Shadows is set to maximum. This is the master shadow control for all light sources in Bryce. If it is set at 0, there are no shadows, no matter how the shadows are set in the Light Lab or for IBL.

There are no clouds and all atmospheric features are disabled, there is no Sun Light.

The HDRI is rotated to 75 degrees. Colour saturation is a bit high so it is lowered to 75. The backdrop is left rather dark and the light quite low. This scene is rendered with DOF ...

... as we can see. Doubling the Rays per Pixel will also about double the render time.

Because the scene is rendered with DOF, the setting of Background DOF is taken into account.

Scene 2

For this setup, a Specular Map was used. Not much difference can be seen on the reflections of the object because of its material and bump, but the background is very much blurred. It gives an interesting background that does not pull the attention to it. This is a good setting for still life or lighting an object.

Initially, there was the same HDRI used as for the previous example, but a Specular Map was created. We cannot see the settings that were used (Exponent 100) because the HDRI is now replaced with the Specular Map but the original name is still noted as HDRI-Name.

Note that Intensity was reduced to about a fourth for the backdrop and HDRI-Effect compensates this with a 4-fold increase. This scene was rendered with regular settings in 6-1/2 minutes. If Cast Shadows is deselected — a good idea because there are no visible shadows cast — it renders in 14 seconds.

You can create a specular map from this one as well, and it gets even more blurred.

Now, what do you think what happens if we stop the process?

We get an incomplete Specular Map. Is this bad? I say: All power to the artist!

We roll the HDRI by 90 degrees and render.

Not the same anymore, but what the heck — who cares if it gives you a cool backdrop?

Scene 3

Here comes our render hog with 3 hours render time. The preview already takes ages. Same scene, same HDRI, same rotation; Intensity and HDRI-Effect slightly adjusted. We have the Light From Inside and do not use the HDRI as backdrop. But we have a large sphere surrounding the object and have Cast Shadows with a bit of Softness.

The material is set to a bit of grey diffusion and full reflection.

The light is within the object and lights the surrounding sphere. The pattern of the object casts soft shadows. Because the sphere is a mirror, the red flower is reflected on the object. We don't see it as a flower because of the distortions, but the red is here.

Scene 4

Finally, let's have a look at that 34 second render of a landscape.

The same HDRI but rotated to 108 degrees and tilted to -55 degrees. This positions the sun in the HDRI at the same place as the Bryce sun, which is enabled. Saturation was lowered to a third in order the HDRI colour hue does not interfere with the sky and haze.

The sun is visible and is set to the default Intensity of 100.

Haze is used and Blended with the Sun and Color Perspective is also enabled.

Just to show that the brightest part of the HDRI is at the same position as the Bryce sun, we switch the backdrop on.

Obviously, the HDRI cannot be used as backdrop, the sky is a mess. But what if we use a Specular Map?

Scene 4a

Not one change to the previous example, except that a Specular Map with an Exponent of 100 was created and the HDRI used as backdrop. Looks even better with the bright round window as sun.

IBL is easy to use. IBL gives extraordinary results. IBL is NOT a render hog if you know how to set it up. If you have still doubts, use preset IBL scenes and look how they were done. I'm looking forward to seeing your artwork in the galleries.