EB GUIDE tutorial

Using image-based lighting

Version 6.7.1.149092

1. Tutorial: Using image-based lighting

NOTE

Default window layout

All instructions and screenshots of this user's guide use the default window layout. If you want to follow the instructions, we recommend to set the EB GUIDE Studio window to default layout by selecting **Layout** > **Reset to default layout**.

The following instructions guide you through the process of using image-based lighting for scene graphs in EB GUIDE Studio.

Approximate duration: 10 minutes.

Accessing IBLGenerator help instructions

In the following steps, you start IBLGenerator.

Step 1
With the help of command line, navigate to the directory that contains the executable `IBLGenerator.exe`.

For example, `C:/Program Files/Elektrobit/EB GUIDE Studio 6.7/platform/win32`

Step 2
Enter `IBLGenerator.exe -h`.

All options of the IBLGenerator are listed.

Generating an `.ebibl` file

Prerequisite:

- You completed the previous instruction.
- You have a `.pfm` file as input data.

Step 1
Enter a command with your desired parameters according to the IBLGenerator help.

For example:

```
IBLGenerator.exe -i "MyInputPath\MyInputFile.pfm" -o
                        "MyOutputPath\MyOutputFile.ebibl" -p cube -q 3
```

This command executes the IBLGenerator with the input file `MyInputFile.pfm` which stores its data in cube parameterization. The quality level is set to 3 and the result is stored in `MyOutputFile.ebibl` .

Applying image-based lighting

Prerequisite:

- You completed the previous instruction.
- The `.ebibl` file is generated by using the IBLGenerator.
- The `.ebibl` file is placed within the resources directory of the current project.
- A project is opened in EB GUIDE Studio.
- A view state is added.
- A scene graph is added and a 3D file is imported.

Step 1
Add an image-based light to a scene graph node of the imported scene graph.

Step 2
Go to the **Properties** component.

Step 3
From the `ibl` drop-down box, select `MyOutputFile.ebibl` as input.

Step 4
For best results, adapt the properties of the image-based light and use PBR GGX material or PBR Phong material.

To only illuminate the scene with image-based lighting, disable all other light sources.

If more than one image-based light is added to a scene graph, only the first one in the hierarchy influences the scene.

NOTE

Image-based lighting in OpenGL ES 2.0

To use image-based lighting, the OpenGL ES 2.0 driver has to support the OpenGL extensions `GL_EXT_shader_texture_lod`, `GL_EXT_texture_rg`, `GL_OES_texture_float`, and `GL_OES_texture_half_float` if you use the OpenGL renderer.

If you use the DirectX renderer and OpenGL 3 renderer, image-based lighting is always supported.