Image-based lighting

From Wikipedia, the free encyclopedia

This article **does not cite any references or sources**. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed. *(August 2013)*

Image-based lighting (**IBL**) is a 3D rendering technique which involves capturing an omni-directional representation of real-world light information as an image, typically using a specialised camera. This image is then projected onto a dome or sphere analogously to environment mapping, and this is used to simulate the lighting for the objects in the scene. This allows highly detailed real-world lighting to be used to light a scene, instead of trying to accurately model illumination using an existing rendering technique.

Image-based lighting often uses high dynamic range imaging for greater realism, though this is not universal. Almost all modern rendering software offers some type of image-based lighting, though the exact terminology used in the system may vary.

Image-based lighting is also starting to show up in video games as video game consoles and personal computers start to have the computational resources to render scenes in real time using this technique. This technique is used in *Forza Motorsport 4* and *Crash Time 5: Undercover*, by the Chameleon engine used in *Need for Speed: Hot Pursuit*, and in the *CryEngine 3* middleware.

References [edit]

- Tutorial

See also [edit]

- Ambient occlusion
- Relighting

External links [edit]

- Real-Time HDR Image-Based Lighting Demo
- Lighting models: Image-based lighting

Categories: Global illumination algorithms

Wikipedia
The Free Encyclopedia

Main page
Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikipedia store

Interaction
Help
About Wikipedia
Community portal
Recent changes
Contact page

Tools
What links here
Related changes
Upload file
Special pages
Permanent link
Page information
Wikidata item
Cite this page

Print/export
Create a book
Download as PDF
Printable version

Languages
中文
Edit links