
PA1 – Playing with Embree

Embree Usage

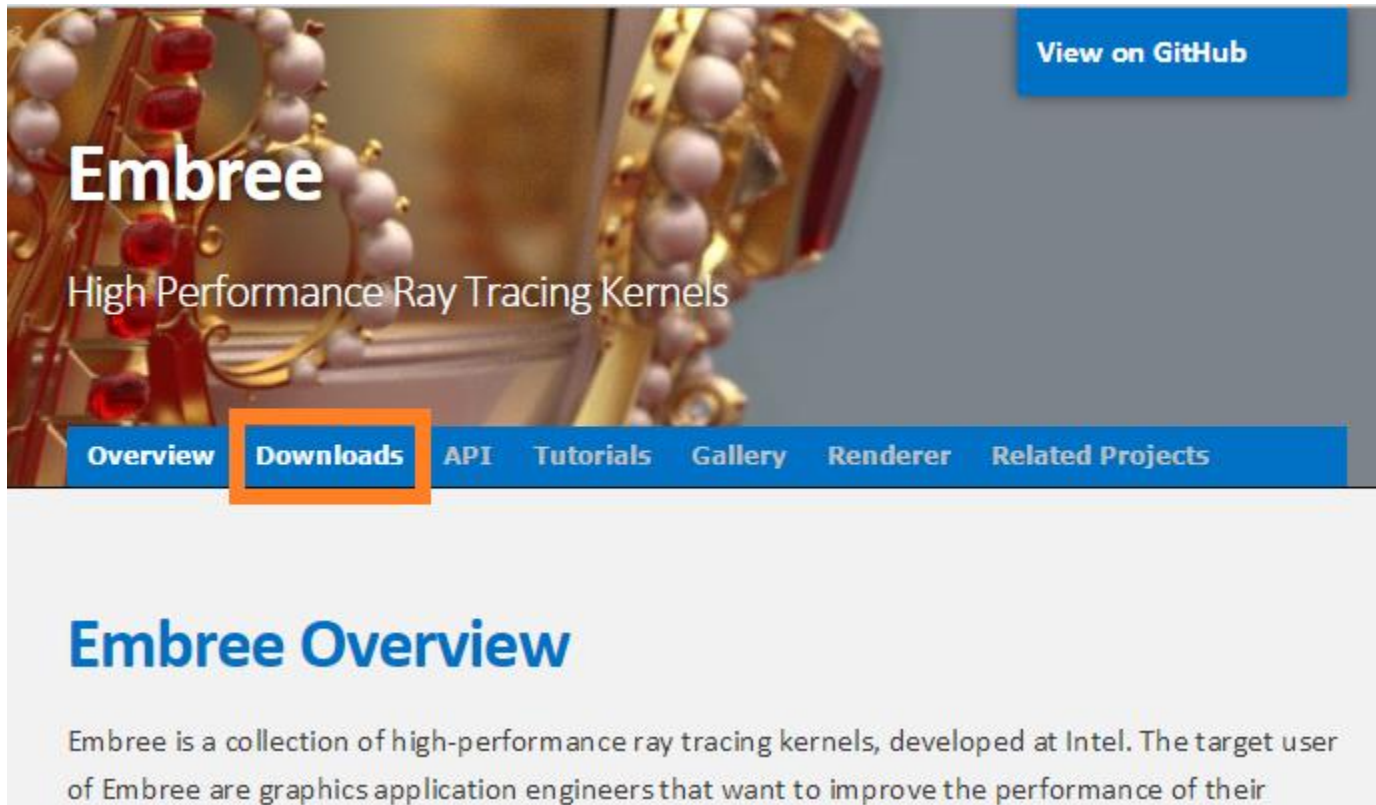
- **High performance ray tracing kernel**
 - Intel's ray tracing kernel optimized for Intel processors
- **Various kind of simulations**
 - Lighting, sound, particles, collision detection, etc.)



**Embree: A Kernel Framework for Efficient CPU Ray Tracing
(SIGGRAPH 2014)**

Installation

- **Installing Embree Binary**
 - Access <https://embree.github.io/>



The screenshot shows the Embree website. The main header features the text "Embree" and "High Performance Ray Tracing Kernels" over a background image of a golden trophy. A blue button labeled "View on GitHub" is in the top right. A navigation bar at the bottom of the header contains links for "Overview", "Downloads", "API", "Tutorials", "Gallery", "Renderer", and "Related Projects". The "Downloads" link is highlighted with an orange border. Below the navigation bar, the "Embree Overview" section is visible, with the text: "Embree is a collection of high-performance ray tracing kernels, developed at Intel. The target user of Embree are graphics application engineers that want to improve the performance of their".

Installation

Downloading Embree

For Windows we provide Embree as MSI installer and ZIP files:

[embree-3.2.0-x64.msi](#)

[embree-3.2.0.x64.windows.zip](#)

For Linux we provide Embree as RPMs or as a tar . gz file:

[embree-3.2.0.x86_64.rpm.tar.gz](#)

[embree-3.2.0.x86_64.linux.tar.gz](#)

For macOS we provide Embree as PKG installer and as a tar . gz file:

[embree-3.2.0.x86_64.pkg](#)

[embree-3.2.0.x86_64.macosx.tar.gz](#)

For the first generation Intel® Xeon Phi™ coprocessor (codenamed Knights Corner) we provide Embree v2.9.0 precompiled for Linux as RPMs or as a tar . gz file:

[embree-knc-2.9.0.x86_64.rpm.tar.gz](#)

[embree-knc-2.9.0.x86_64.linux.tar.gz](#)

The source code of the latest Embree version can be downloaded here:

[embree-3.2.0.zip](#)

[embree-3.2.0.tar.gz](#)

**Binary
for
Win/
Linux/
Mac**

Source

Example : Windows – 64-bit

- **Anything is OK**
 - **In this example, we choose zip one**



The screenshot shows the 'Downloading Embree' section of a website. It lists download options for Windows and Linux. The Windows 64-bit zip file is highlighted with an orange box.

Downloading Embree

For Windows we provide Embree as MSI installer and ZIP files:

- [embree-3.2.0-x64.msi](#)
- [embree-3.2.0.x64.windows.zip](#)

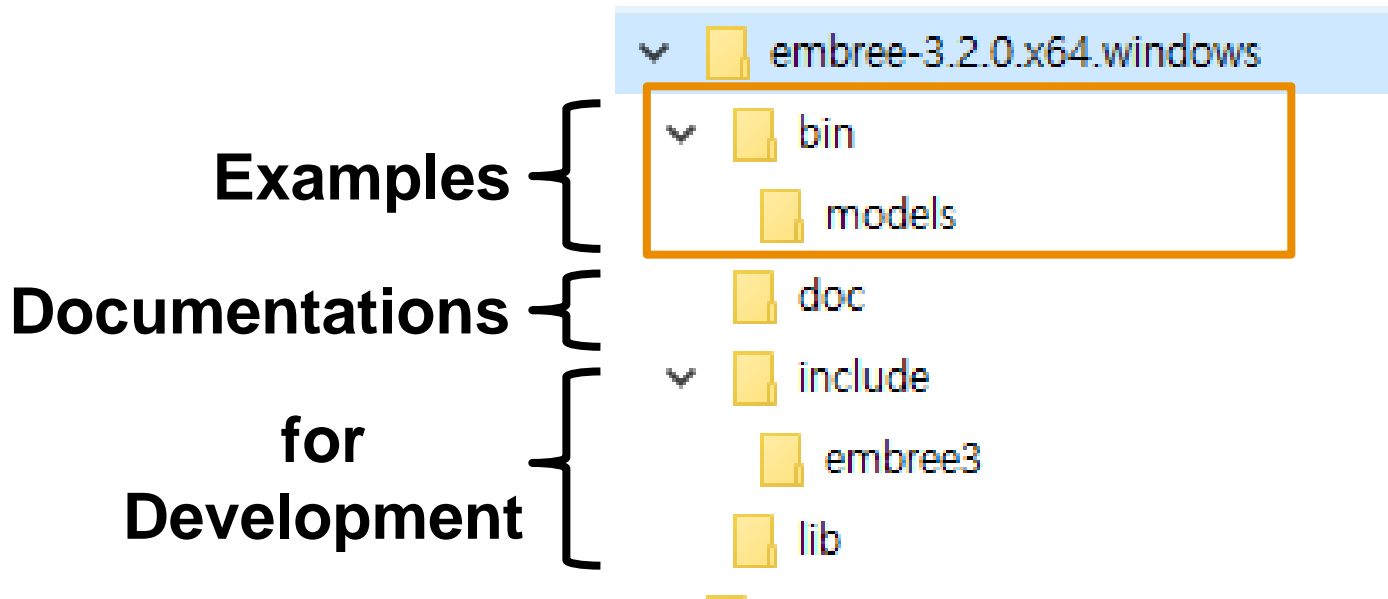
For Linux we provide Embree as RPMs or as a tar . gz file:

- [embree-3.2.0.x86_64.rpm.tar.gz](#)
- [embree-3.2.0.x86_64.linux.tar.gz](#)

- **Extract zip file**
 - **example C:\embree-3.2.0.x64.windows**

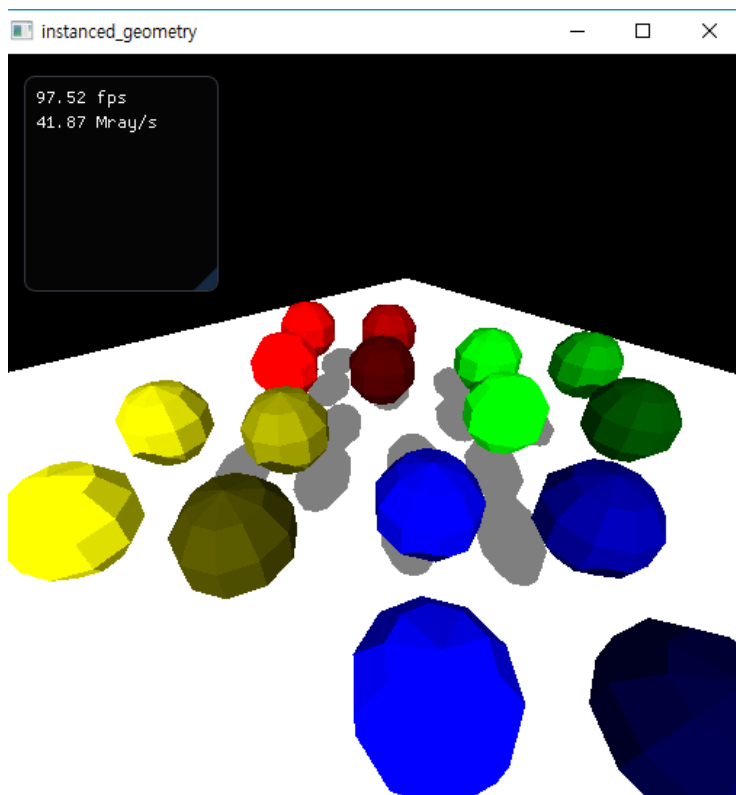
Example : Windows – 64-bit

- Contents of zip file

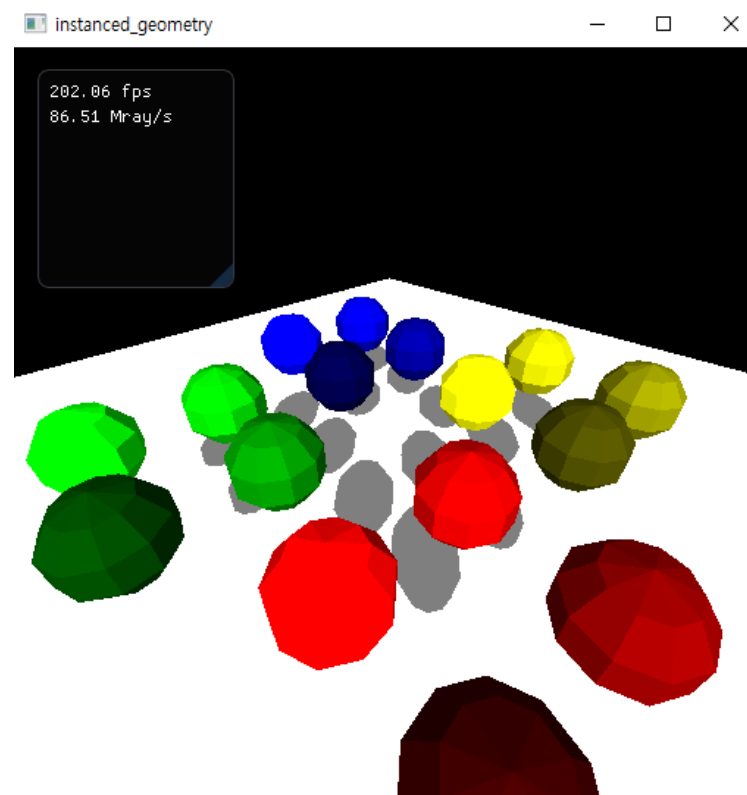


Playing with Embree

- Play with some examples



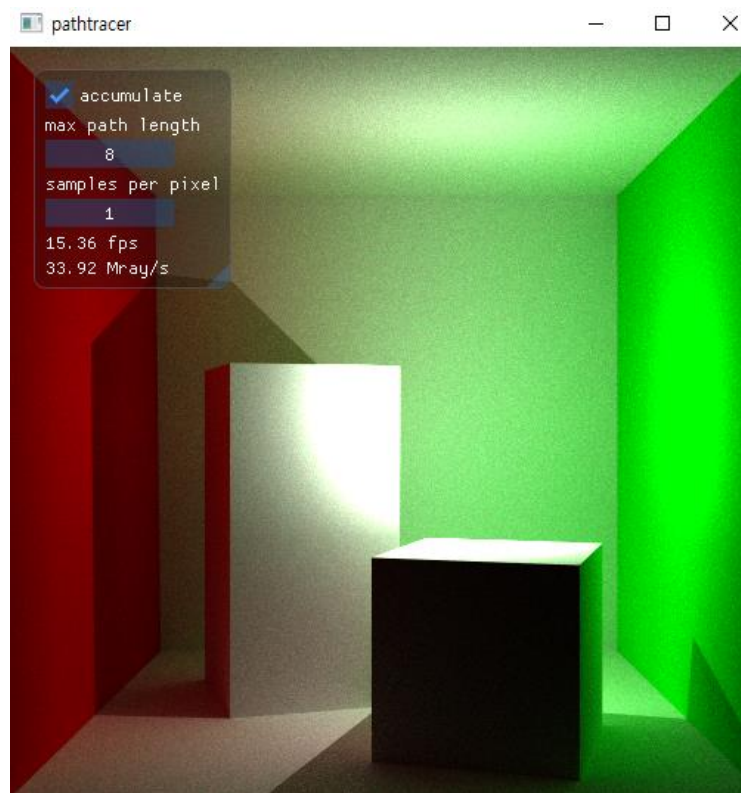
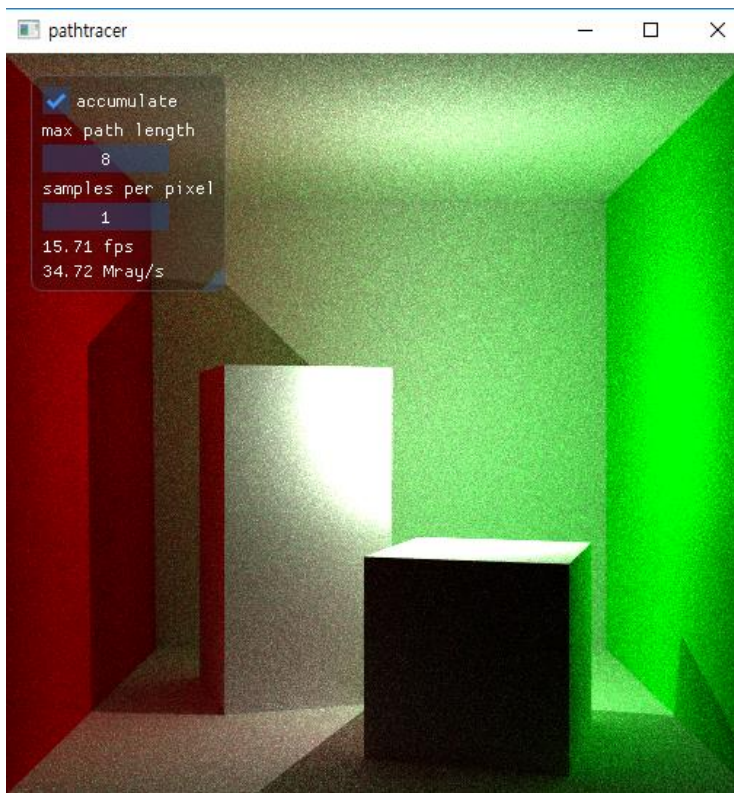
Instance_geometry



Instance_geometry_ispc

Playing with Embree

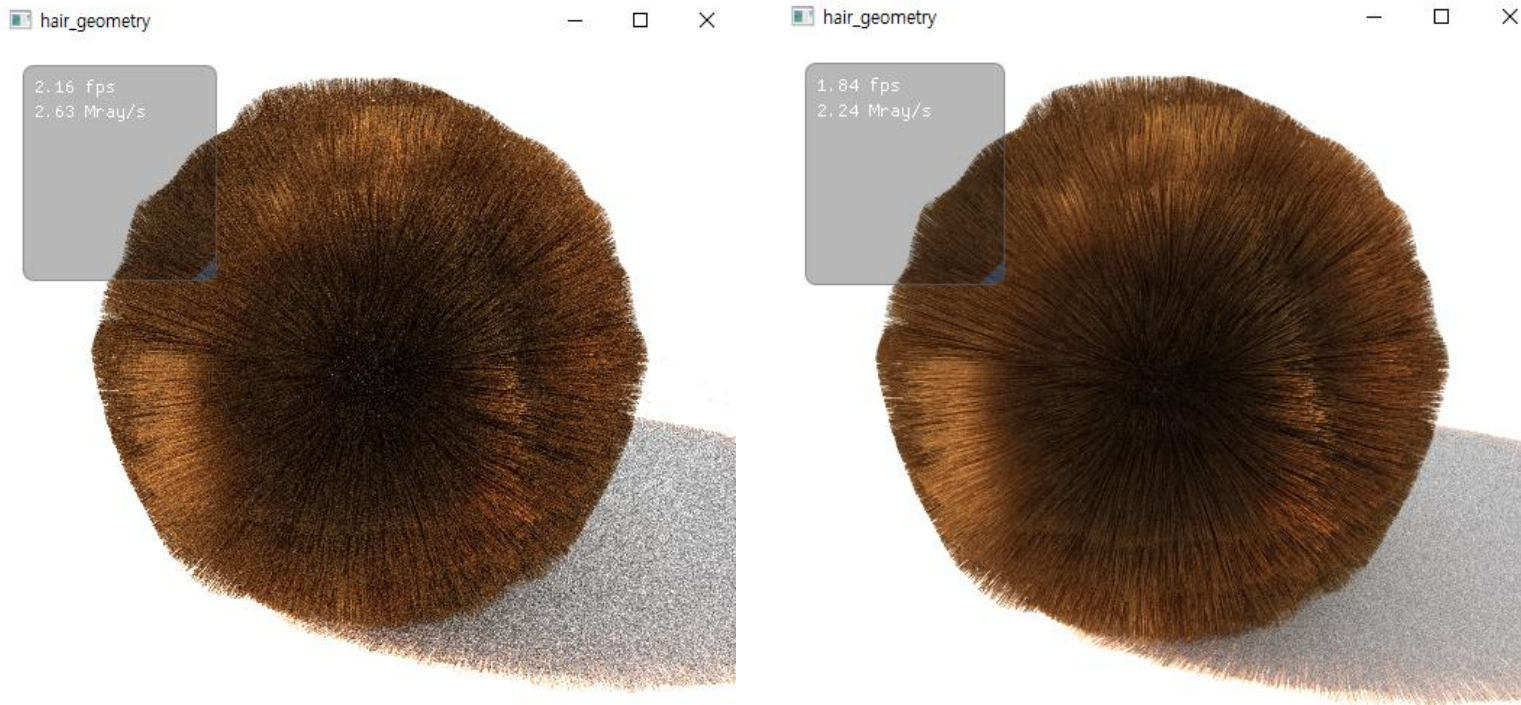
- Play with some examples



path_tracer; how the scene changes when time passes?

Playing with Embree

- Play with some examples



hair_geometry; how the scene changes when time passes?

Playing with Embree

- **See how it changes when time passes**
- **Interact with the scene**
 - **Drag mouse ...**

Playing with Embree

- **For details...**
 - **Write a topic to the KLMS board**
 - **Send an e-mail**
 - **doheonlee@kaist.ac.kr**