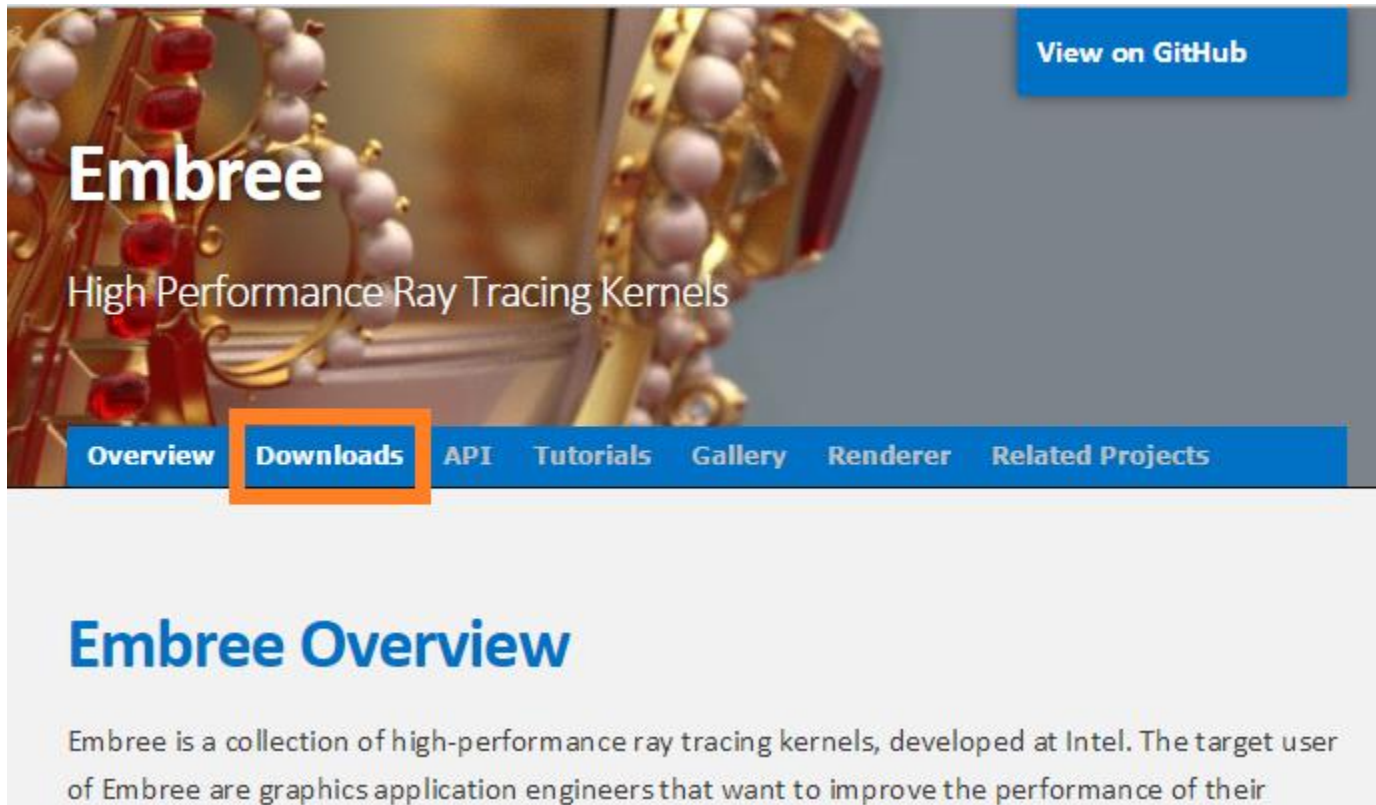# PA1 – Playing with Embree

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/**

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

4

Example : **Windows – 64-bit**

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

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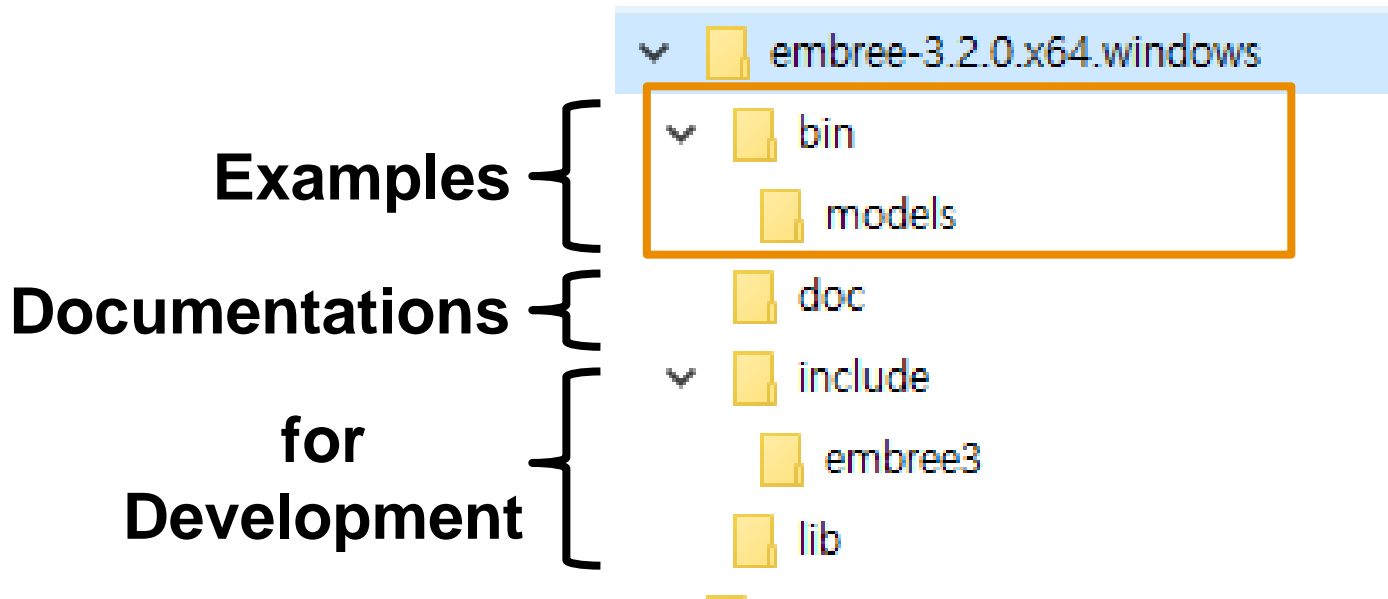
For Linux we provide Embree as RPMs or as a tar.gz file:

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**

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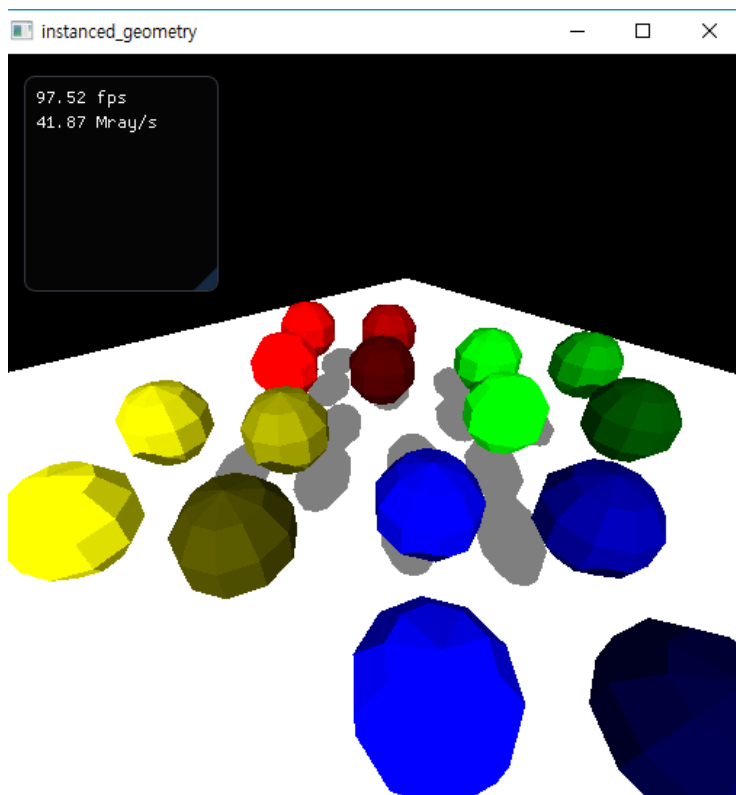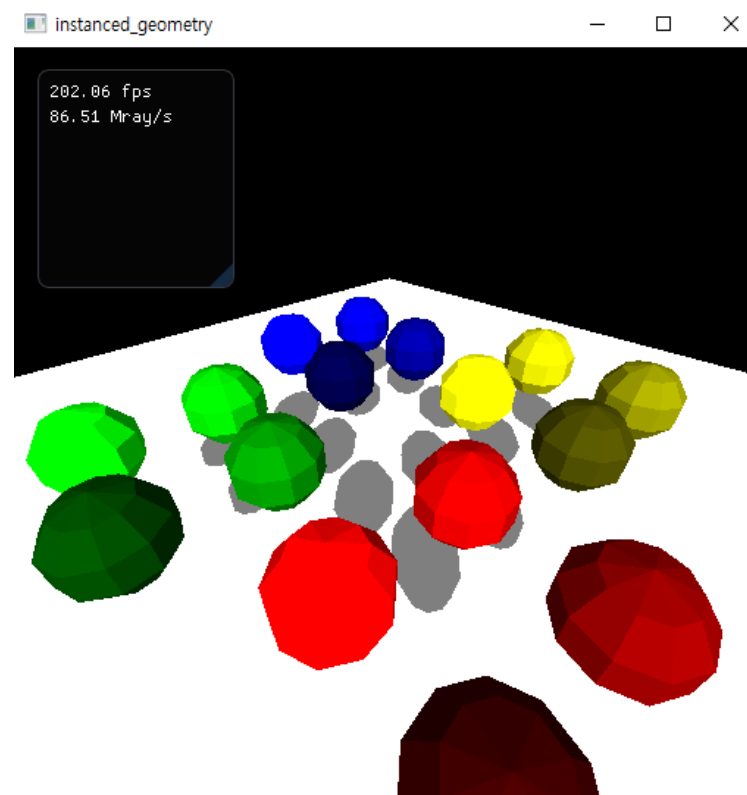
Example : **Windows – 64-bit**

● **Contents of zip file**

Examples

Documentations

for
Development

Playing with Embree
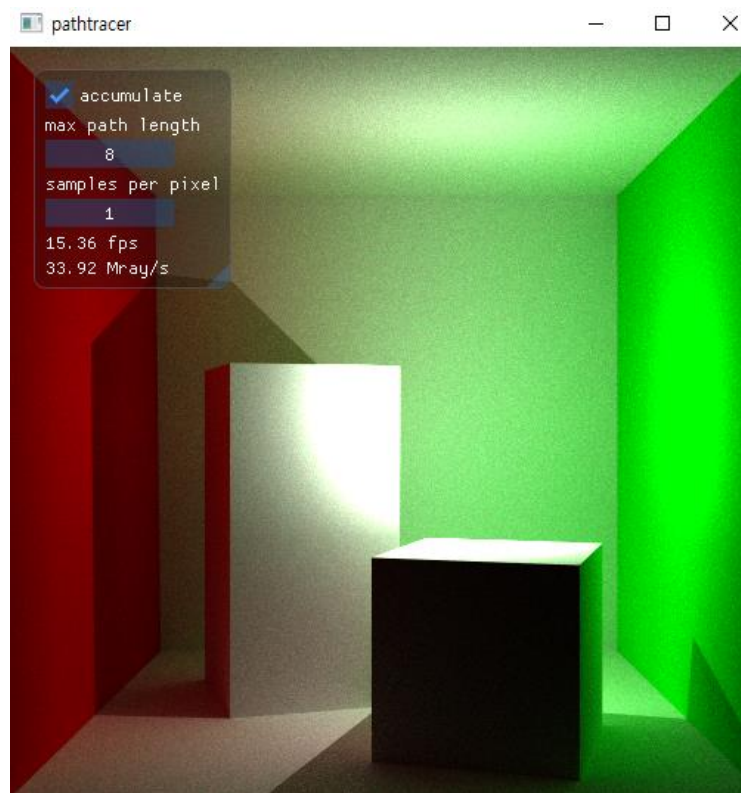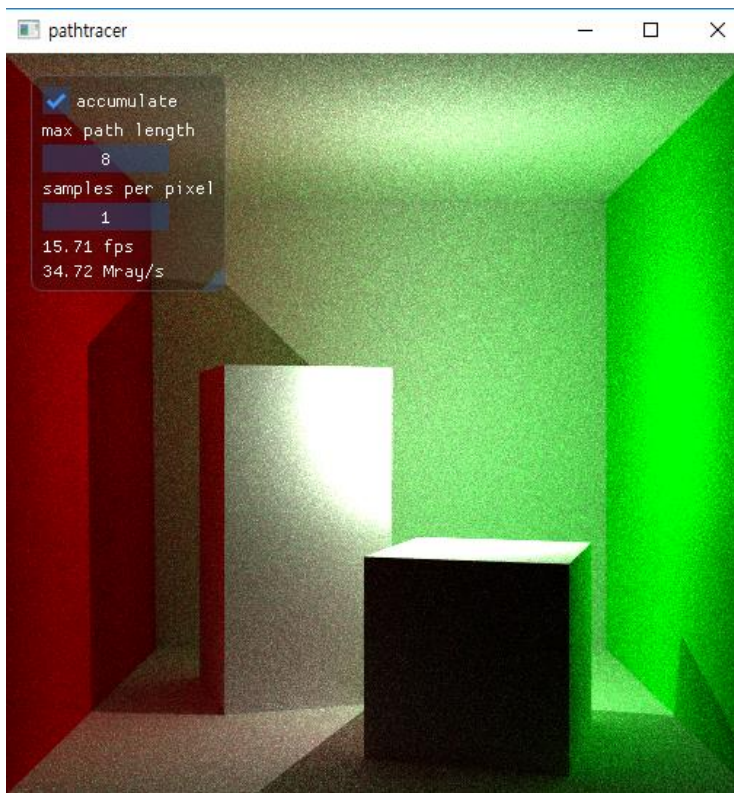
● **Play with some examples**

Instance_geometry

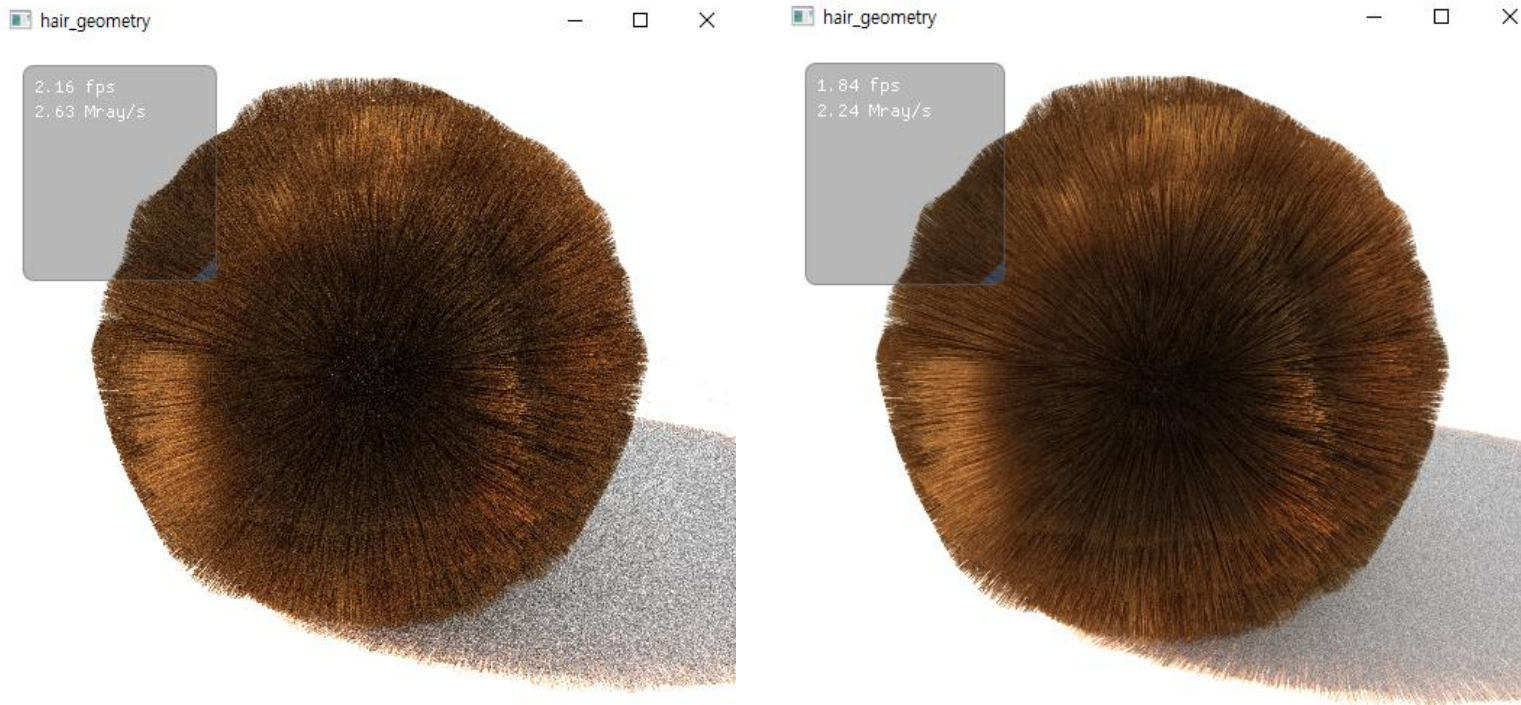**Instance_geometry_ispc**

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?

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Playing with Embree

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

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Playing with Embree

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

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