

Project / Thesis / Study appleseed Open Source Production Rendering



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Introduction

Computer generated imagery (CGI) is a core part of the modern movie- and filmindustry. To create realistic virtual images, (physical based) renderers are used.

One such renderer is the appleseed project¹, an open source renderer. It already has plugins for blender, Maya and 3ds Max, enabling the user to completely rely on open source during the whole creation process. The renderer aims for small visual effects (VFX) companies.



Figure 1: One image created with the appleseed renderer, showing the cornell box filled with water

In this work, you are supposed to implement new features into the appleseed project. In contrast to many other university projects, this one is very practical. Also, in contrast to many other projects, your result will be used in the real world instead of disappearing in a drawer.

¹<https://appleseedhq.net/>



Figure 2: Another image created with the appleseed renderer, showing a marble statue.

Assignments

The appleseed renderer is in constant development. The range of projects is very wide and diverse. You can work on the rendering engine, the plugins (blender, 3ds max, Maya), the infrastructure (e.g. the continuous integration) or other elements of the appleseed project (e.g. "appleseed.studio" or "appleseed.bench"). To get an overview of the current tasks, please check the appleseed Github page:

<https://github.com/appleseedhq/appleseed>

Your own ideas are explicitly welcome!

Work Type

We are flexible in the type of project, thesis (bachelor / master) or independent study, depending on your situation and needs.

Requirements

The implementation will be in C++. Thus, basic C++ knowledge is desired. You should be interested in graphics and rendering.

Work Load

- 20% Theory
- 70% Implementation
- 10% Test

Supervision

- Prof. Dr. Renato Pajarola
- Lars Zawallich

Contact

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Figure 3: A third image created by the appleseed renderer, showing a jar filled with glass marbles.