VU Design and Implementation of a Rendering Engine

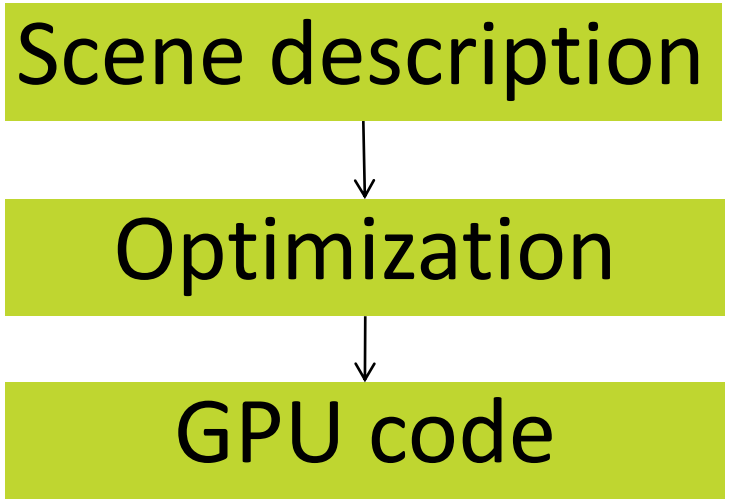
Content: Rendering engine ***internals***

Challenges

- Architectural: how to structure reusable **software modules**
- Technical: how to use hardware **efficiently**
- Dealing with tradeoffs: **usability** vs **performance**

Topics

- Graphics APIs **Insights** (OpenGL, Direct3D, Vulkan,..)
- Scene representation, **domain specific languages**
- performance **optimization** and **data structures**
- Systematic performance evaluation



More information

see also:
https://www.cg.tuwien.ac.at/courses/RendEng/

Organization

- 3 ECTS ~ half lecture, half exercise (see TISS):
  - rendering engine component, optimization technique,…
- Monday, 16:15 (s.t.)-17:45, Seminarraum 186
- First lecture: **06.03.2023**

Background

- Lecturers bring together academic and industry experience
- The lecture combines:
  - State of the art rendering engine architecture and implementation
  - Years of rendering engine development experience (in research and industry)