

Computer Graphics II

Part II: Rendering
Nicolas Holzschuch

Computer Graphics II

- Part I: Animation (R. Ronfard)
- Part II: Rendering (N. Holzschuch)
- Part III: Modelling (G.-P. Bonneau)

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Rendering

- November 3:
 - GPU programming
 - Realistic material models (BRDF)
- November 10:
 - Colors
 - Textures
 - Shadow mapping
- November 17:
 - Global Illumination
 - Monte-Carlo integration, MCRT
- November 24:
 - Expressive rendering
 - Computational Photography

Course information

- [http://maverick.inria.fr/Members/
Nicolas.Holzschuch/cours/mosig.html](http://maverick.inria.fr/Members/Nicolas.Holzschuch/cours/mosig.html)
- All course information is on this page
- Including bibliography & slides
- ... and practicals

Practicals

- Wait, what?

Practicals

- Yep, practicals
- Computer Graphics is based on experience
- Especially rendering
 - You *must* code to see if you understood
- Strong demand by previous students

Practical information

- Code skeleton given
<http://maverick.inria.fr/Members/Nicolas.Holzschuch/cours/mosig.html>
- Uses Qt5, OpenGL 4.4
- Works in ENSIMAG, E103 & E301
- Could work on your computers
 - no guarantee (especially if laptops/mini PCs)

Can it work on my computer?

- Possibly
- Not going to be faster (configure time is long)
- Fast answer:
 - glxinfo (Linux)
 - OpenGL Extension viewer (Windows/OSX)

OpenGL Extensions Viewer

Intel HD Graphics 5000 Op... Core SGI

Save as text Expand all Renderers OpenGL profile Database More apps

Summary OpenGL Extensions Pixel Formats Display Modes Report Tests Database

Intel HD Graphics 5000 OpenGL Engine
Intel Inc.
★★★

OpenGL version 4.1 INTEL-10.0.86

OpenCL platform OpenCL 1.2 (Sep 20 2014 22:01:02) (FULL_PROFILE)

Processor 1.7 GHz Intel(R) Core(TM) i7-4650U CPU @ 1.70GHz x 4

Video memory 1536 MB

Memory 8192 MB

Software Mac OS X 10.10 (14A389)

Model ID MacBookAir6,2

Submit Update

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Major version must be at least 4

If driver name == Mesa,
then software emulation.
VERY unlikely to work.

Practical information

- Use room E103 or E301 on campus
- Work in small groups (2-3 p)
- One practical per lesson, two weeks
- Use e-mail to ask for information
 - I mean it

Practical information

- Will it be marked?
- Will the marks count?

Practical information

- Will it be marked? **YES**
- Will the marks count?

Practical information

- Will it be marked? **YES**
- Will the marks count? **YES**

Questions?