Visualisierung 1
Übungsteil
2016W, VU, 2.0h, 3.0EC 186.827

Tobias Klein
Andreas Gogel

Institute of Computer Graphics and Algorithms (ICGA), VUT Austria
Introduction

- **Practical implementation** of theoretical concepts presented in the lecture

- Three available **topics**
  - Volume rendering
  - Flow visualization
  - Analysis of multivariate data (InfoVis)

- **Data files** provided for every topic
Groups of 2 students

- Form groups online (Abgabesystem) https://lva.cg.tuwien.ac.at/vis1/
- Deadline for group forming: 02.11.2016

Choose topic

Implementation

- C++ (and OpenGL, if necessary)
- Source code available to start project
Programming Task

- **Minimum requirement** for every topic which has to be implemented
- Additional tasks can be implemented to improve the grade
- **Description** of tasks can be found online:
  https://www.cg.tuwien.ac.at/courses/Visualisierung1/VU.html
Programming Task

- Not allowed to use existing frameworks
- **To get a positive grade**, you have to
  - Implement the tasks yourself
  - Understand the theoretical background
  - Be able to explain the source code during the *submission talk*
Framework

- **Not mandatory** to use the framework
- Simple **C++ framework** to start project
  - Can start simple Qt GUI
  - Can load all data files provided for the lecture
- Possible to use **Visual Studio 2013**, or just the source files
- Available online: https://www.cg.tuwien.ac.at/courses/Visualisierung1/framework/download.html

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Framework

File LOADED [D:/Teaching/Visualisierung/source/data/hurricane_time_10_500x500.pf] - Type: VECTORFIELD

Loaded VECTORFIELD with dimensions 314 x 538
Loaded VOLUME with dimensions 277 x 277 x 104
Loaded MULTIVARIATE with 7 dimensions and 496 elements
Loaded VOLUME with dimensions 128 x 128 x 74
Loaded MULTIVARIATE with 16 dimensions and 10 elements
Loaded VECTORFIELD with dimensions 500 x 500
Supervision

- **Persons**
  - Tobias Klein (Übungsleitung)
  - Andreas Gogel (Tutor)

- **Platform**
  - Informatikforum
OpenLabs

Institute of Computer Graphics, Favoritenstraße 9-11, 5th Floor, VisLab

Dates:
- 06.10.2016, 15:00 - 16:00
- 20.10.2016, 15:00 - 16:00
- 03.11.2016, 15:00 - 16:00
- 17.11.2016, 15:00 - 16:00
- 01.12.2016, 15:00 - 16:00
Supervision

- Computers available in the **VisLab**, if students do not have access to appropriate hardware (please contact Tobias Klein)
Submit your source code online

- Abgabesystem
  [https://lva.cg.tuwien.ac.at/vis1/](https://lva.cg.tuwien.ac.at/vis1/)
- ZIP-File, should contain all necessary source files and project files (no data files)

Possible to submit programming task up to 2 days later (minus 4 points)
Programming task will be **graded** during the Abgabegespräch

- One *Abgabegespräch* per group
- Register online (one person per group) [https://lva.cg.tuwien.ac.at/anmeldung/choose_termin.php?lva_id=40](https://lva.cg.tuwien.ac.at/anmeldung/choose_termin.php?lva_id=40)
- Discussion about implementation, source code details, technical background
Three available topics

- Volume rendering
- Flow visualization
- Analysis of multivariate data
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- **Flow visualization**
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