Project Management and Software Development

Dyna-Eye: A dynamic 2D-3D Stereo Viewer

Intermediate Presentation – 07.12.2017

Project Supervisor: Benjamin Busam

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Recap

- Stereo viewer with crossed eyes

YouTube: “3D without glasses, Cross-Eye HD” (07.11.2017)

Donald Simanek: “How to view 3D without glasses”. (05.11.2017)
Encountered obstacles

- Libraries Configuration
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  1. Upstream pre-built PCL incompatible with VTK
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• Libraries Configuration
  1. Upstream pre-built PCL incompatible with self-built VTK
  2. Don’t need OpenCV at all...
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- Libraries Configuration
  1. Upstream pre-built PCL incompatible with self-built VTK
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- Unfamiliar Libraries and Building Tool
Encountered obstacles

- Libraries Configuration
  1. Upstream pre-built PCL incompatible with self-built VTK
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- Unfamiliar Libraries and Building Tool

- Unexpected errors when porting and running reference code on Linux
Progress

- All aforementioned problems solved
- Development environment configured and installed
- Gained knowledge of PCL and CMake
- Reference code ported, successfully compiled and running

Future Work

- Implement the math model
- Further discussion with the supervisor
- Choose appropriate 3D models
- Documentation
UML Diagram

User:
- Ask_3D_Model_Path
- Input_Path: String
- Ask_Parameters
  - Input_Parameters: Float [ ]
- Show_Object_3D: Image
- Scene_Update: Image

Stereo Viewer:
- Request_Load_File
  - Return_File: PointCloud<PointType>
  - Description
    - Start rendering the 3D object, and keep updating the display

Operating System:

Description:
- Starting his/her own work, and look at the screen once in a while
Thank you for your attention.

Question?