Mathematisch-Naturwissenschaftliche Fakultät

Computergrafik

Bachelorarbeit

Realistic MVS dataset

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Selbstständigkeitserklärung

Hiermit versichere ich, dass ich die vorliegende Bachelorarbeit selbständig und nur mit den angegebenen Hilfsmitteln angefertigt habe und dass alle Stellen, die dem Wortlaut oder dem Sinne nach anderen Werken entnommen sind, durch Angaben von Quellen als Entlehnung kenntlich gemacht worden sind. Diese Bachelorarbeit wurde in gleicher oder ähnlicher Form in keinem anderen Studiengang als Prüfungsleistung vorgelegt.

Peter Trost (Matrikelnummer 4039682), April 18, 2019

Abstract

Template

Acknowledgments

If you have someone to Acknowledge ;)

Contents

1. Introduction

What is this all about?

Cite like this: [AFS+11]

2. Related Work

2.1. Synthetically rendered datasets

2.1.1. A naturalistic open source movie for optical flow evaluation

[BWSB12]

Overview

In this paper the authors provide a dataset for optical flow estimation derived from the open source 3D animated short film Sintel **TODO: cite Sintel: https://durian.blender.org/**. The dataset contains long sequences, large motions, specular reflections, motion blur, defocus blur, atmospheric effects and more. Its scenes are rendered in varying complexity through the source graphics data provided by the authors of the film. Because of this aforementioned variety the dataset can be used to improve optical flow methods.

Render passes

As mentioned above the dataset contains scenes rendered in the following variying complexity:

- Albedo Pass: Flat and unshaded. Surfaces exhibit constant albedo over time
- Clean Pass: Illumination including smooth shading and specular reflections adds realism
- Final Pass: Full rendering with all effects including blur due to camera depth of field and motion, and atmospheric effects.

Main aspects

2.1.2. Playing for data: Ground truth from computer games

[RVRK16]

2.1.3. The synthia dataset: A large collection of synthetic images for semantic segmentation of urban scenes

[RSM+16]

2.1.4. SyB3R: A Realistic Synthetic Benchmark for 3D Reconstruction from Images

[LH]

2.2. Problem Statement

TODO: what you have to do here :)

3. Conclusion

To conclude...

A. Blub

Bibliography

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