User Guide

The contents of this project are the materials that comprise my Masters Project for the MSc in Computer Animation and Visual Effects. This thesis is being presented as a portfolio of work, comprised of three projects. It contains an exploration of *SIMD programming,* advanced topics of *deferred rendering* and a *cloth simulation.* The printed version of my thesis joins all three papers into one. For electronic versions however they can be found separately.

There are 4 different code bases.

- SIMD Deformer Case Study Application
- SIMD Tests
- Deferred Renderer
- Cloth Simulation

Except for the SIMD tests, each has a corresponding documentation page, the easiest way to get to these is through index.html.

SIMD Code

To run the SIMD deformer application the following dependencies are required:

- Qt Creator
- Boost
- NGL
- OpenGL 3.x
- OpenEXR Imath Lib
- Intel ISPC

To run the SIMD tests, that output to a CSV folder simply unzip the "SimdTests_csv.zip" file and follow the README. These tests are for running on the command line and generated data presented in the thesis.

Deferred Renderer

The paper and code presented are considered an extension of previous work. *In no way is previously assessed work being submitted.* All the work for the new version is considered advanced areas of study.

The renderer has only been tested on Windows. It has the following dependencies:

- Qt Creator
- Boost
- NGL
- OpenGL 3.x

Cloth Sim

The cloth simulation is simply a QT project and a short paper. The dependencies are:

- Qt Creator
- Boost
- NGL
- OpenGL 3.x