A Specification for

Soft Object Modelling & Rendering
-Project-
Computer Graphics

Philipp Fonteyn (MS11F010)
Paul Pellegrini (CS11F001)

Master of Technology
Computer Science & Engineering, IIT Madras

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1 Introduction

In modern computer science the field of computer graphics has gained much impulse due to faster performing devices, better and quicker memory access times and of course more efficient methods of algorithmic computation. Thus more and more realistic and complex scenes can be rendered by computational means and finally displayed on digital devices. This project will give a small overview over the technique of "soft modeling".

2 Modeling Soft Objects

When modling the world solid objects such as e.g. a cube have clearly defined static shapes and appearance in the threedimensional space. So called "soft objects" on the other hand are more flexible and can take various shapes and forms. Storing softer objects and their interaction with their surroundings needs therefore more thought as the solids.

There have been several models developed for modeling soft objects such as the [] model or the [] method. The following paper will focus on the spring model approach described by [] and [].

3 Project Outlook

The project will cover several aspects such as:

Description of wireframe model - As the basic concept for threedimensinal display the wireframe model will be explained and why we still need it for soft obects.

Description of spring domain - The underlying theory behind the whole spring model will be explained in detail.

Implementation of springs - The basic concept of a simple spring will be implemented.

Implementation of ocjects - Various soft objects such as a rope, a flag or a jelly will be created to present the softness. Animation and the influence of further forces such as gravity, wind or collisions will enhance the viewing experience.

Improvement to natural scene - With additional power provided by the OpenGL engine we will add texture, lightning and other renders to create the impression of a realistic scene.

References

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