Procedural Modelling of Cities implemented as a Blender Plug-In

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1 Previous Short Term Objectives

1.1 Road Generation Test Platform

The major short term objective for this week was the creation of a Road Network Generation platform as a Blender Script. Specficially the aim was to create a script that would generate a simple plane and then generate a farily simple network of splines on that plain such that they represent a road network.
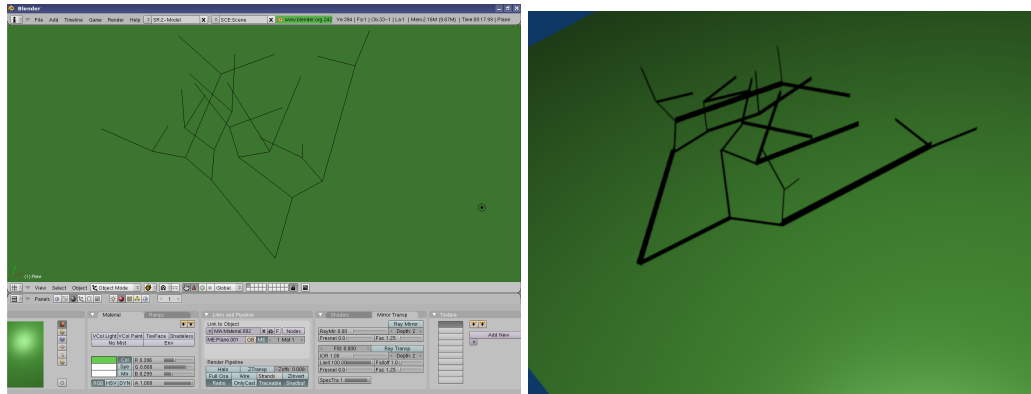
1.2 Proposal Presentation

A presentation was to be given to the Computer Science department concerning the topic and nature of this project. Specifically a 15 minute presentation was required which outlined the various aspects of this project based roughly on the Project Proposal submitted.

2 Progress

2.1 Road Generation Test Platform

The development of a test platform has gone somewhat slowly due a lack of understanding of the finer points of Blender scripting. Specifically I have succeeded in creating a script which sets up a simple green plain meant to imitate ground level. The script then goes on to generate a tree of lines from the origin by creating two new line segments from the end point of the previous line. One segment is restricted to being between 0 and 90 degrees and the other between 90 and 180. Thus this creates an upward funnel. At this point however the lines do not look particularly impressive as they are simple curves which have been extruded to a depth of 0.1 in order to allow the camera to view the lines. A better method of road generation will need to be implemented soon to allow for an effective view of the generated lines.

2.2 Proposal Presentation

The presentation was successfully created and delivered, a copy of the Power-Point Slides is also up on the project web page.

3 Objectives for Next Week

3.1 Road Generation Algorithms

The objective for this week is simply an extension of last weeks, specifically to further develop the test platform for Road Generation mechanisms. This will include adapting the platform to allow for raised terrain and thus will plot the road segments accordingly. Further to this an attempt will be made at implementing separate generation methods for highway or main roads and for the smaller roads in between. A final aim will be to implement some of the mathematical equations used in [?] as a method for generating less uniform road segments.