

Snowballs: An experiment in Winter frivolity

Midterm Update

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January 23, 2006

Computer Graphics II

4005-762

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<http://www.scompt.com/school/classes/computer-graphics-2/snowballs>

Project Objectives

Create a reasonable height field.

Three height field generation methods have been created:

- A simple `flatField(x,y,h)` that returns a height field that is x by y in size and with a height of h . This is basically just a test method that reduces the visual complexity of the image while debugging other parts of the code.
- A Perlin noise height field generated using the noise function from `cgkit [cgk]`. Also has x , y , and h parameters.
- A more complicated method that essentially enforces a max gradient between two adjacent cells.

Place a simple object in the snow to see the deformation work.

A cube has been put into the snow so far. The contour algorithm took longer than expected and it is still a pretty imperfect implementation. It is expected to be in a semi-finished state by the end of the week. After that, snow that has been displaced will need to be eroded to create a soft slope. This will probably take the next week.

Animate a simple object being placed in the snow.

No work done. The bulk of the work is in the previous step. Creating this animation should be a matter of moving the cube over time in the snow. This should happen reasonably soon after the previous step is completed.

Animate an object moving across the snow.

No work done. Hopefully this won't be too much harder than the previous step. Somehow, more snow will have to be pushed in front of the object than in behind. This will likely take a week or two.

Create shader to improve realism of snow.

No work done. This may be tied in with my Renderman assignment.

References

[cgk] The python computer graphics kit. <http://cgkit.sourceforge.net/>.