

Sproing 2.0.1

NSApplicationIcon.tiff "

Readme

Soft-Body Simulator

Intro

Sproing is a soft body simulator, you make bouncy objects on the screen and throw them around like blobs of jelly. This is a draft of the readme designed to explain how the program works right now.

New in 0.2.1

- Adjustable gravity
- Fixed "save" glitch
- Stiffness/damping now sliders

Usage

First try opening one of the files found in the Examples folder. When open, click on the "Preview" button in the toolbar. You should see the object fall to the ground. Click and drag on one of the nodes to move it around - the object should react semi-realistically.

This should give you a sense of what the software can do. To make your own object, follow the instructions below:

Make a triangle:

1. Open a new document.
2. Click on the "Add Node" tool.
3. Click to create 3 nodes on the screen at different positions to create a triangle.
4. If you want to move one of these nodes, click on the "Select" tool, and then drag the created nodes. (You can select multiple items by Shift+clicking, or drawing a selection box).
5. Click on the "Add Spring" tool.
6. Click and drag from one node to another to create springs
7. When complete, click on "Preview".

Make a ball:

1. Open a new document.
2. Add nodes like in the previous example, only make ~10 in the shape of a circle.
3. Click on the "Inspector" button in the toolbar.
4. Use the "Select" tool and drag a selection box around all the nodes.
5. The Inspector should respond by giving you tools to manipulate the selected nodes.

6. Click on "Connect Nodes" -- this will connect all the nodes to each other.

7. Draw a selection box around all the nodes and newly created springs.

8. In the inspector, click on "Set Stiffness" (this will set the stiffness of the selected springs)

9. Enter a value of around 0.05 (pretty saggy).

10. Click "Preview"

11. To leave preview mode, click on the "Select" tool. Play around with the stiffness and the other examples to see what the program can do.

Features Coming Soon

- 3D Simulation (almost working!)
- Collision detection (almost working!)
- Node charges (to simulate charged particles)
- Inter-node gravitation
- Breakable springs
- Animation

Bugs

If you make the spring tension too high ($> \sim 0.8$), objects may behave unpredictably. Very fixable, i simply haven't gotten around to it.