

Spatial Trees

4-1-2011

Opening Discussion

- Minute essay comment:
 - Things to talk more about:
 - Self-balancing Trees
 - Program Hierarchy Design
 - RegEx
 - Streams
 - Recursion
 - GA for building game AI

Spatial Data Structure Review

- Grids
- Quadtree/Octree
- kD-Tree

Other Options

- There are lots of options for these.
- Point based trees keep data in all nodes and split on points.
- BSP-trees used in games/graphics. (Binary Space Partition) Like kD-trees, but split can be an arbitrary plane.
- Etc.

Writing a kD-Tree

- Let's take a bit of time to write a kD-tree.

Minute Essay

- Do you have any questions about how our kD-tree works?