

Automata Engine 1.0

Written by alloplastic

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After dwelling for a time on stability and code organization, we have a [basic engine](#) in place that can now be used as a platform to develop automata/voxel-based games. Performance should be fairly acceptable on most dual-core machines.

The current demo is deliberately processor-intensive in order to get meaningful measurements on different systems. Any game created for the XBox will require a somewhat smaller canvas.

There is no game to speak of in the demo. In fact, the "tumor" is pretty much invincible except in two special cases. However, it's possible to put the whole simulation into a perpetual cycle of growth and decline, which is somewhat cool.

Features of the "Game of Death" engine include:

* **multilayer 3D canvas**, composed of pseudo-voxels

* **voxel-based sprites**, composited via **ink effects**

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* **3D sprite-based lighting**

* **cellular automata rule engine**

* **multiple rendering paths** for optimization

* **multithreading**

* **audio engine**, configurable via externally defined "rules."

* **time-sliced stats module** -- allows sound to be tied to the number of voxels, for instance

* **game levels and level transitions**

* **movers, colliders, streakers** (objects that add cells into the environment)

* **two camera implementations**: simple and "follow"

* **XBox, Windows, and soon Windows Mobile 7**