# FacelookCA - The next generation of Cellular Automata - Specification

Benjamin Chung

March 23, 2012

The FacelookCA framework is designed to be fast, flexible, and extendable. Towards these objectives, it has 3 features that go above and beyond a simple CA framework.

## 0.1   Speed

FacelookCA uses two kinds of runners, a simple single-threaded runner, and a multithreaded one. The determination as to which to use is left up to the Rule author. In addition, future plans include the construction of a GPGPU runner to allow certian types of rule to be executed on the GPU.

## 0.2   Flexibillity

FacelookCA is highly flexible in terms of the kind of rules that one can create. As the board system it uses uses 32 bit integer values for storage, a signifigant amount of state data can be stored in each cell. Langdon's ant and wireworld CA systems are trivial and multithreadable thanks to this.

## 0.3   Extendable

FacelookCA is extremely extendable, as almost everything can be altered or added by the client. Rules and Renderers are plugin modifyable, and the framework can use them like ones created internally.