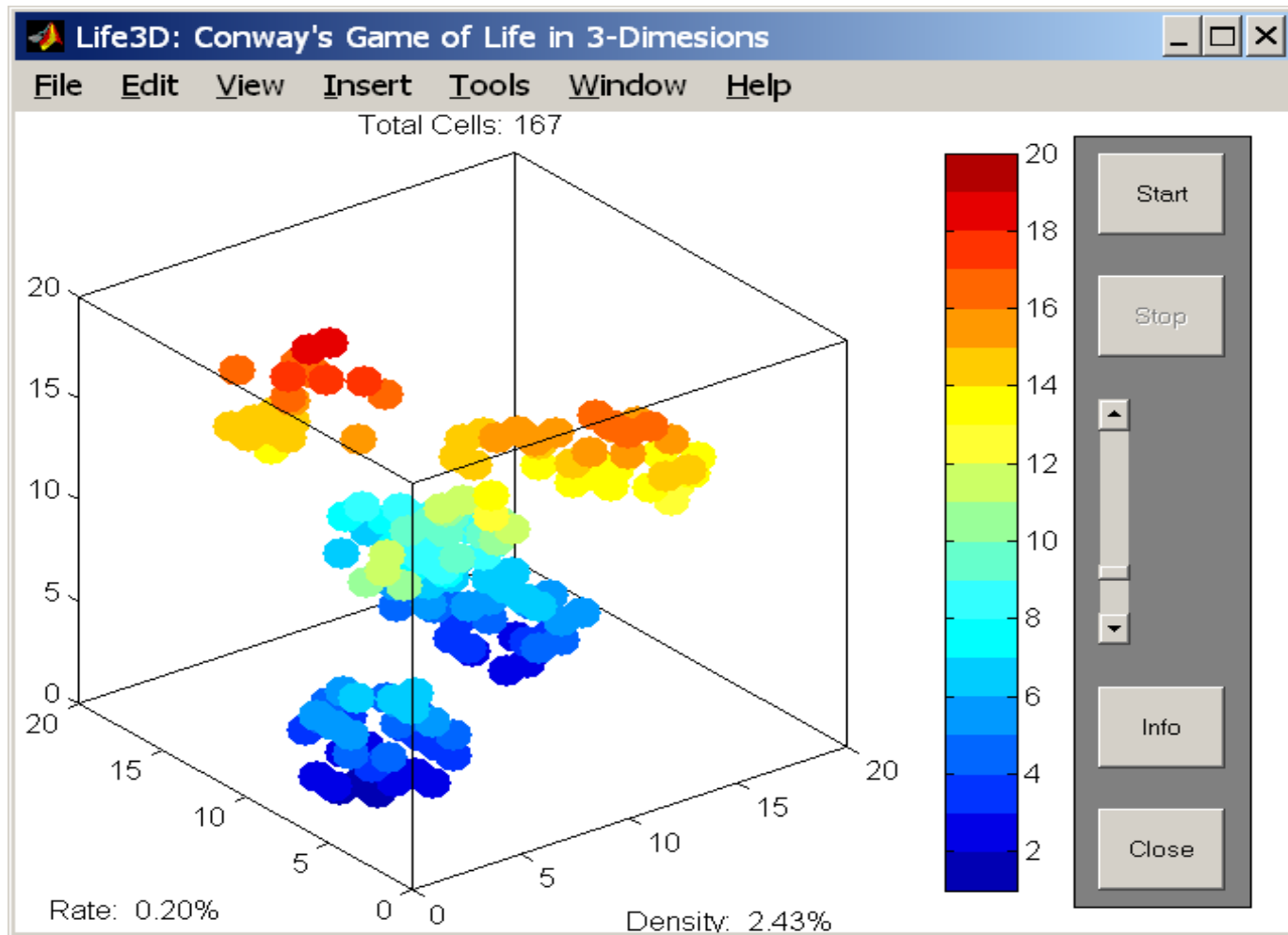# Game of Life in 3D

Description

- Description
  - Cells living or dying depending on how many neighbouring cells they have
  - Done in 3D space
- Goal
  - To design a prototype of an embedded system capable of animating game of life in 3D
  - Combining Software and Hardware
- Components
  - Software
    - 3D graphics
  - Hardware
    - Custom VGA controller
      - 50hz frequency, 640x480 resolution, much smaller virtual resolution
    - PS/2 keyboard controller
      - Interrupt based
    - Memory, BRAM
  - Development environment
    - Nexys 2 (Spartan 3E)
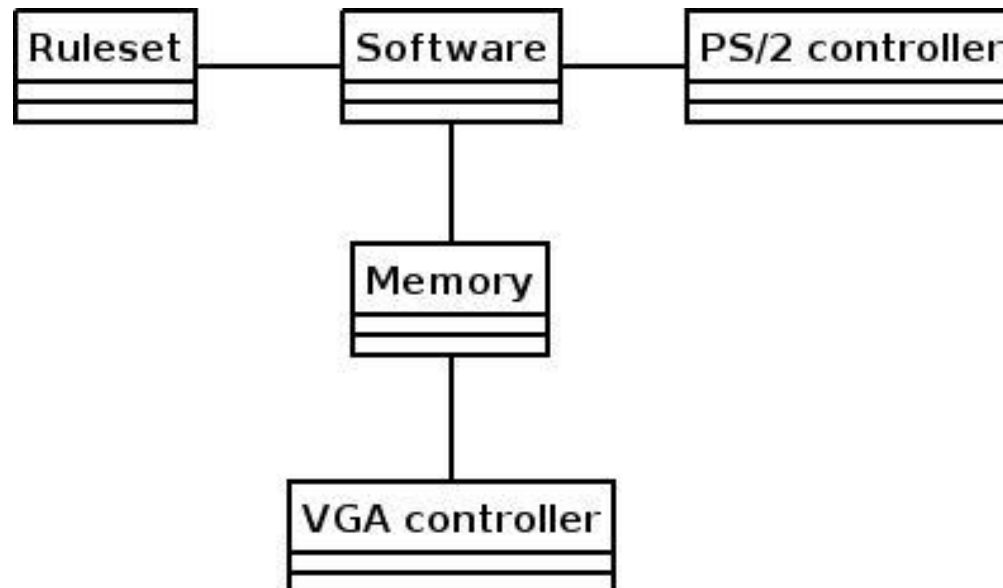
Implementation

VHDL (hardware)
- The rules, PS/2 keyboard controller and VGA controller

C (software)
- Image rendering and processing of keyboard inputs

Specialized VGA that is connected to the memory.

Rendering in C back to front with an dynamic camera operated via the keyboard.

Time schedule

- V2 : Proposal presentation
- V3 : Final proposal + start implementation
- V4 : VGA, PS/2, 3D Software
- V5 : Same as V4
- V6 : Testing and finalizing
- V7 : Testing + presentation

Report goes in parallel throughout the weeks.