Game of Life Arcpy/Modelbuilder.

For those experienced in python programming this assignment might be more challenging than the previous introduced buffer assignments.

Implement Conway's Game of Life in Arcpy.
(http://en.wikipedia.org/wiki/Conway%27s_Game_of_Life)

The Conway's Game of Life is a raster based zero-player game, where each cell presents an alive or a dead cell. From a certain start situation, each raster-cell can die or come to life depending on their surroundings.

Read the Wikipedia reference carefully to filter the methodology steps needed.

Main divers are as follows:

- Any live cell with fewer than two live neighbours dies, as if caused by under-population.
- Any live cell with two or three live neighbours lives on to the next generation.
- Any live cell with more than three live neighbours dies, as if by overcrowding.
- Any dead cell with exactly three live neighbours becomes a live cell, as if by reproduction.

In ArcGIS these can be implemented using focal statistics.

OutRas = FocalStatistics(InRas1, NbrIrregular (kernel.txt), "SUM", "")
NB: You should define an appropriate kernel file to be used as a filter.

- Build a model that implement the four drivers given above.
- Export the model to a python script and perform at least 20 iterations, storing the raster outcome of each iteration in a geodatabase.
- Visualize and check if the patterns listed in the Wikipedia reference do become visible in your raster outcomes.

As initial state the supplied ***startgrid.asc*** raster can be used.

Model examples: