Implementing Conway’s Game of ’Life” with MPI

I. Read the following reference material,
◦ the article in Scientific American, 1970, describing Conway’s game of ’Life’;
◦ MPI tutorials at ANL and elsewhere, see the external links at the blackboard;
◦ prototype codes in matlab for the game;
◦ program examples in C using MPI;
◦ notes based on the discussion in classroom.

II. Provide the following in the finished project,
1. description of the assumed topologies of multiple processes;
   • cps196.1, a 1D topology with arbitrarily many processes is the minimal;
   • cps296.1, a 2D topology is the minimal, which includes 1D as a special case;
   • extra credits for additional and alternative topology.
2. description of data or task partition, concurrency and dependency in individually
designed parallel algorithm(s);
3. demonstration of correct implementation and performance profile.

* Assignment duration : Sept. 12 to Sept. 30, 2008