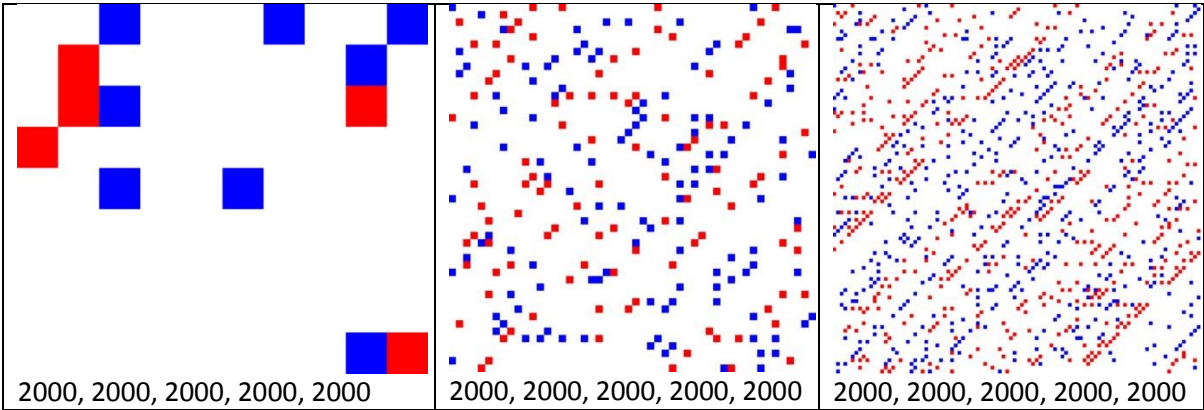


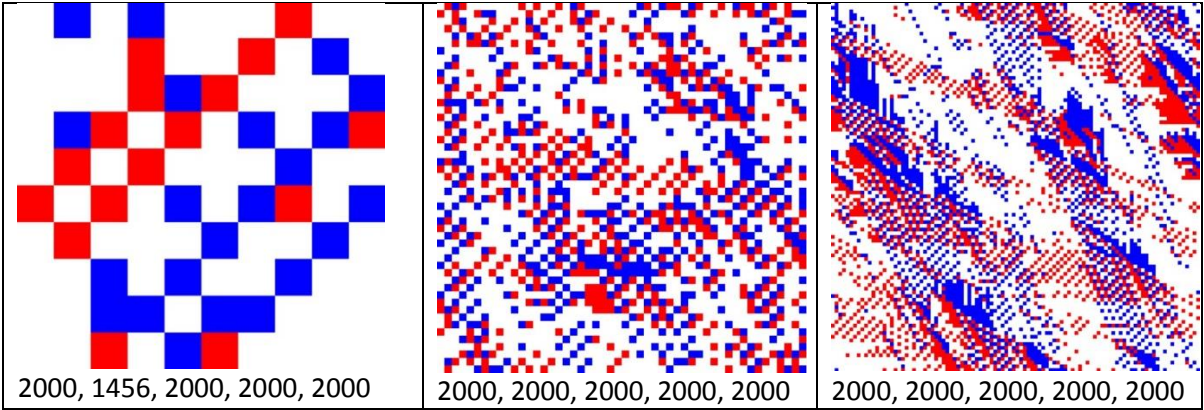
BML Simulation Study Comments

- 1. For what values of p , the density of the grid, did you find free flowing traffic and traffic jams? Did you find any cases of a mixture of jams and free flowing traffic?
- 2. How many simulation steps did you need to run before observing this behavior?

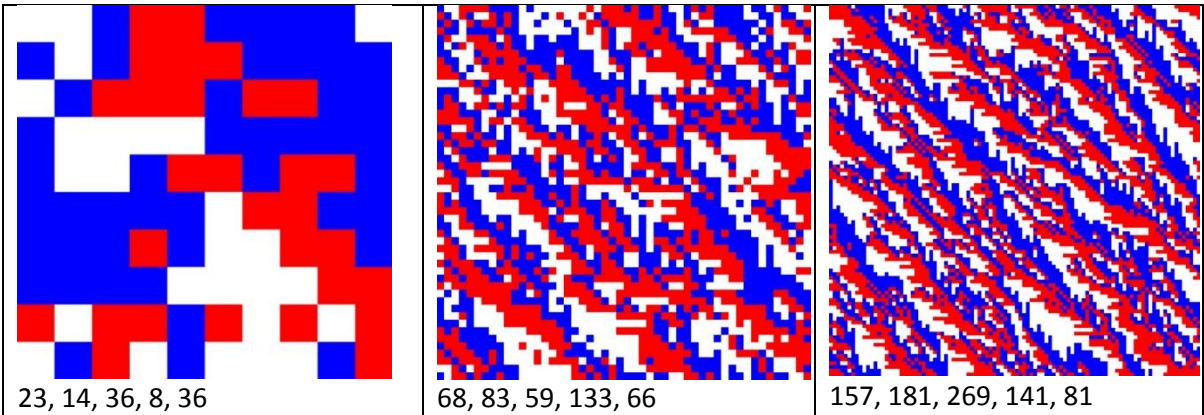
All the systems with densities of 0.1, regardless of their sizes, are still free-flowing for 2000 iterations for all 5 tests.



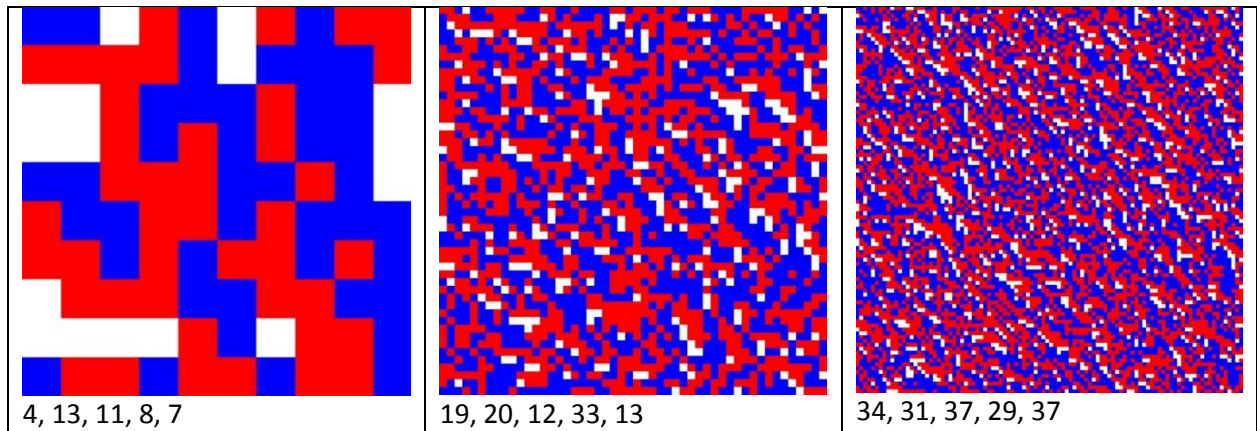
For systems with densities of 0.4, the one with size 50 by 50 and 100 by 100 had a mix of free-flowing and jam traffic for 2000 iterations all 5 times tested. On the other hand, for the 10 by 10 system, it had a mix of free-flowing and jam traffic for 2000 iterations 4 out of 5 times and gridlock at 1456th iteration.



For systems with densities of 0.6, regardless of their sizes, there are gridlocks before 2000 iterations all 5 times.



For systems with densities of 0.9, regardless of their sizes, there are gridlocks before 2000 iterations all 5 times.



3. Does the transition depend on the size or shape of the grid?
Yes, the transition depends on the size and shape of the grid. The bigger the size of the system, the less likely it will reach gridlock.