Density, flow

Define: density k of a road segment is the number of cars per km per two lanes

Flow: number cars passed the end of road segment during a measure period time T

Road segment length: L km (Kai model used road segment length L = 10.000 cells \* 7.5m = 75 km)

Number of cars on road segment = k \* L

Density

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| length of segment in km | 75 |  |  |  |  |
|  |  |  |  |  |  |
| density (num cars per km per two lanes) | 40 | 80 | 120 | 160 | 200 |
| num cars on segment | 3000 | 6000 | 9000 | 12000 | 15000 |

generateRoadSituation(density): given a density, generate road situation and save it to file

getRoadSituation(density): given a density, load road situation from a file

listDensities = [40, 80, 120, 160, 200]

For hasBrokenCar in [Yes, No]

For hasSlowCars in [Yes, No]

For density in listDensities

generateRoadSituation

For hasBrokenCar in [Yes, No]

For hasSlowCars in [Yes, No]

For density in listDensities

For model in [Kai, ourModel]

getRoadSituation

Run model with I = 3600 iterations (1 hour)

Get flow

Save flow + model ID + density to file

Statistical analysis