

Traffic Simulation Outline

Abstract: Purpose is to simulate traffic at Illinois's I55-I83 interchange.

Materials & Methods:

- Written in Processing.js with an HTML interface that allows user to make selections that change the traffic simulation.
 - Increase/Decrease Traffic Density
 - Add reckless driver(s)
- Different Types of Traffic Simulations
 - Macroscopic vs microscopic
 - Microscopic: Car Following Models vs Cellular Automata
- Car & Driver Properties
 - Position
 - Speed
 - Cautious vs Reckless
- Equations & Criteria

Results: TBD

Discussion: TBD (no results, thus no discussion—yet!)

Sources:

<http://vwitme011.vkw.tu-dresden.de/~treiber/MicroApplet/IDM.html>

http://en.wikipedia.org/wiki/Intelligent_driver_model

Treiber, Martin. *Traffic Flow Dynamics: Data, Models and Simulation*. New York: Springer, 2013. Print.

Kerner, Boris S. *The Physics of Traffic: Empirical Freeway Pattern Features, Engineering Applications, and Theory*. New York: Springer, 2004. Print.