Principles of traffic macrosimulation.

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ABSTRACT:

We will explain the basic framework to model traffic simulation on networks (usually cities or highways), using a macro simulation point of view. These methodologies are adopted by many commercial simulation software and traffic engineering researches. The two main problems are:

1) Traffic assignment: given a OD matrix (how many cars go from and to a prescribed set of origins and destinations), which paths do drivers take?

2) Given a sample of traffic flows (real data), how to estimate its related OD matrix. These problems can be seen as discrete versions of some mass transportation problems.