

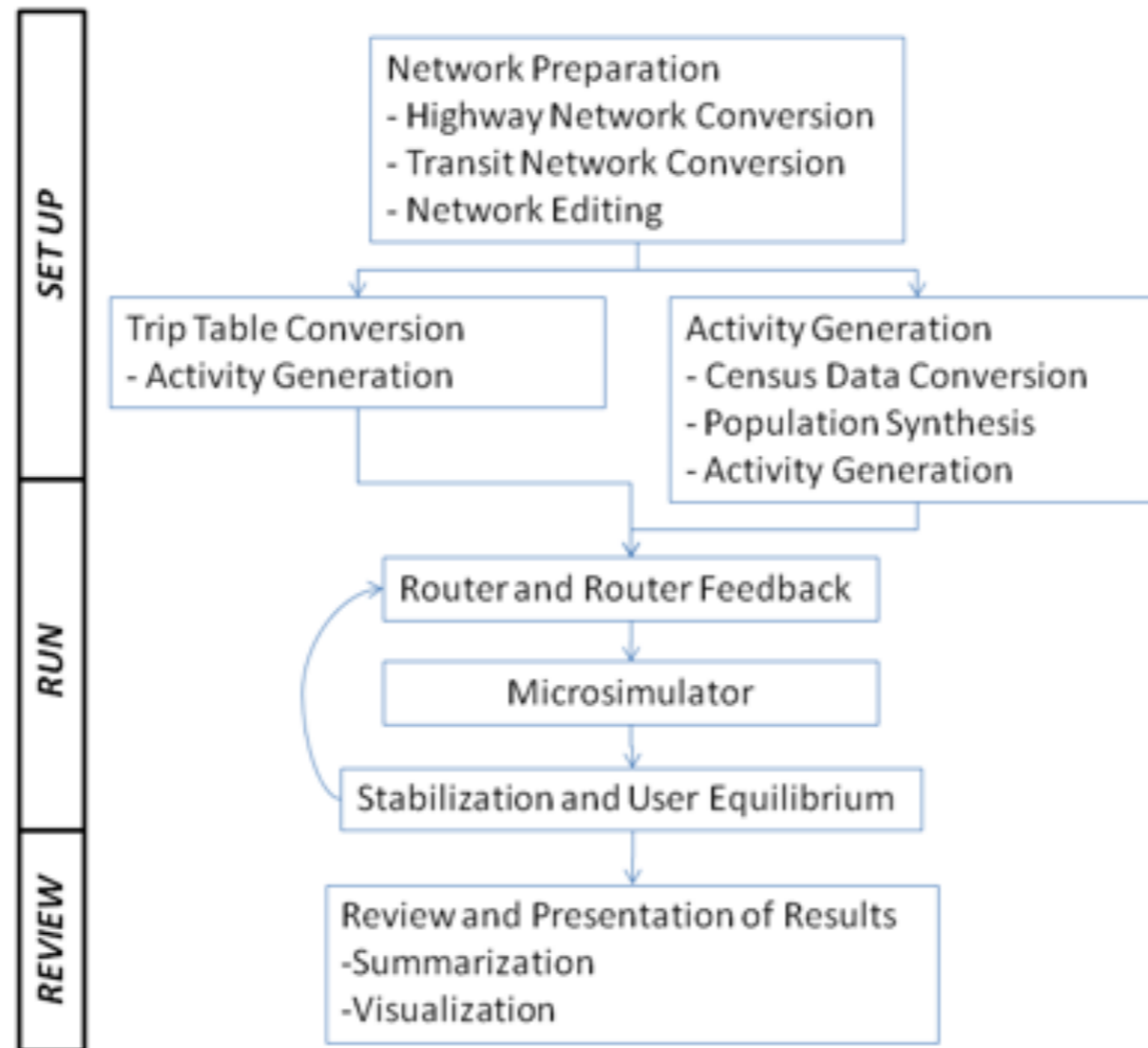
Traffic simulation on HPC platform

Victor TIAN

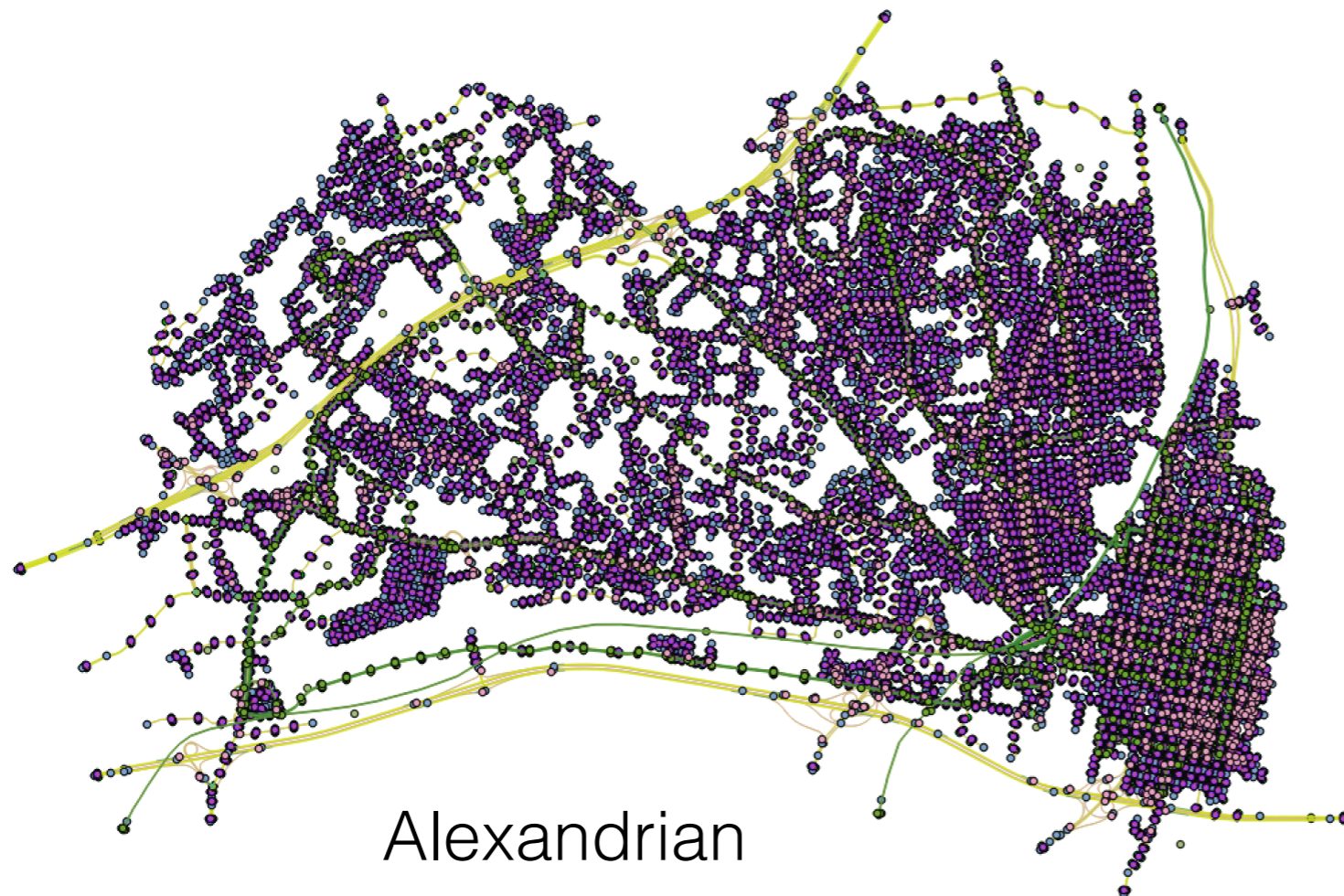
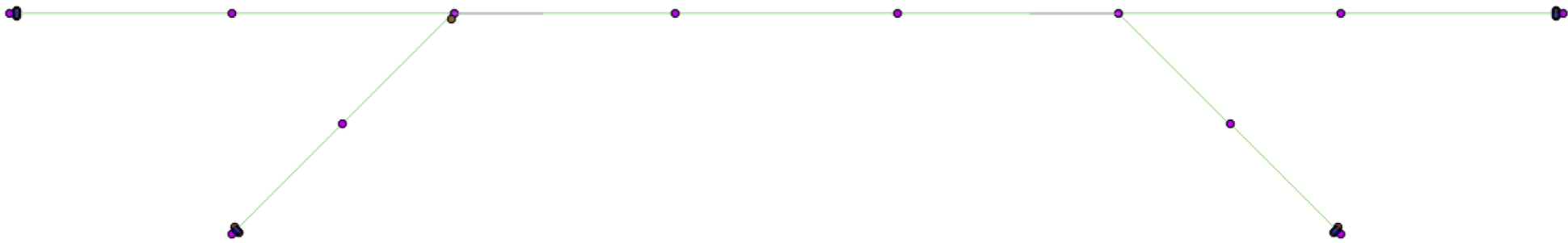
TRANSIMS

- Developed by Argonne National Laboratory
- Famous software in 2010
- NO update now
- Serial software code
- Agent-based simulation

Structure of TRANSIMS



created by manual, for analysis



- Node
- entry/exit point
- signal nodes
- Link

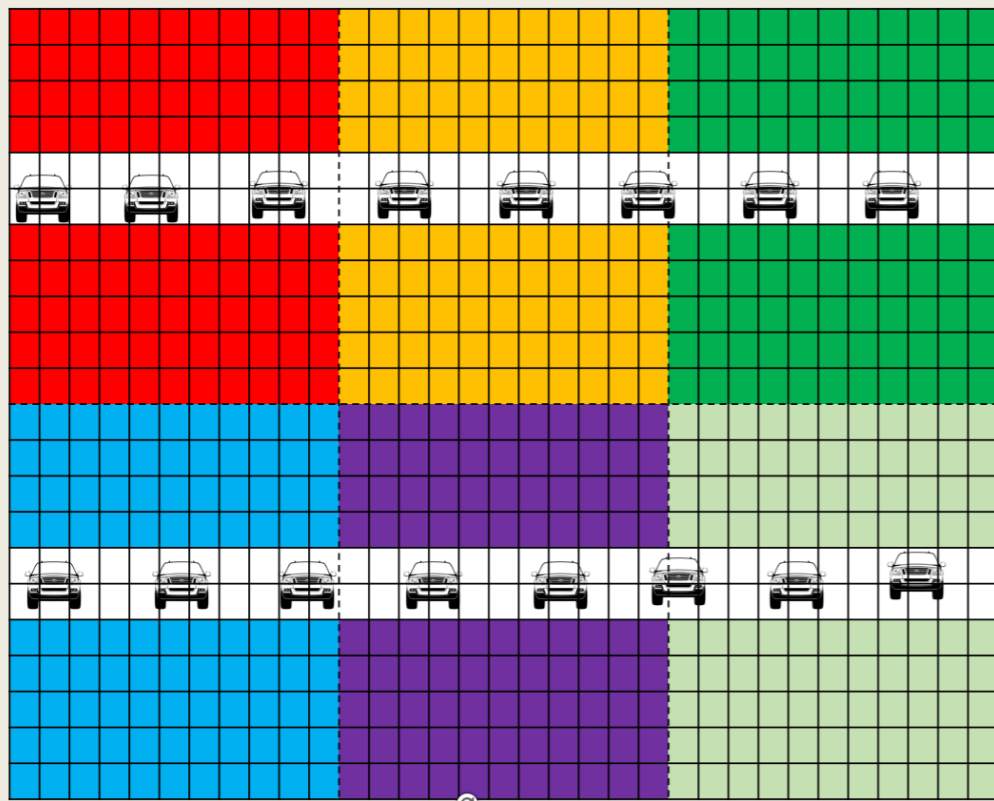
Output data

- Delay, for feedback
- Table, including position and time
 - Can be converted to animation
 - <http://tums.ornl.gov/tums/index.html>

RepastHPC

- Developed by Argonne National Laboratory
- Agent-based simulation platform
- We only need to design the model.
- No need for control sending/receiving message

Idea



- Each process control one area.
- Buffer area
- Each vehicle is a individual agent, move from left to right

Key

- Just a prototype
- Output data will be a table, describe the position and time
- Visualisation