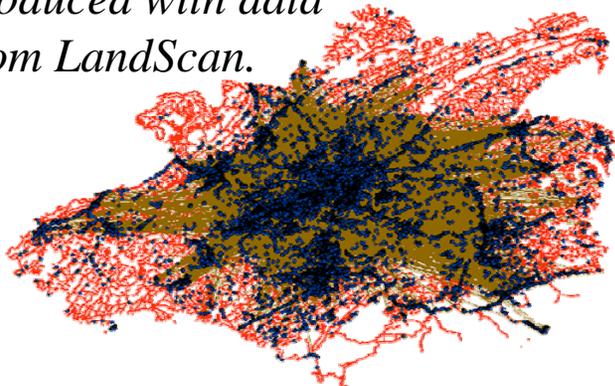


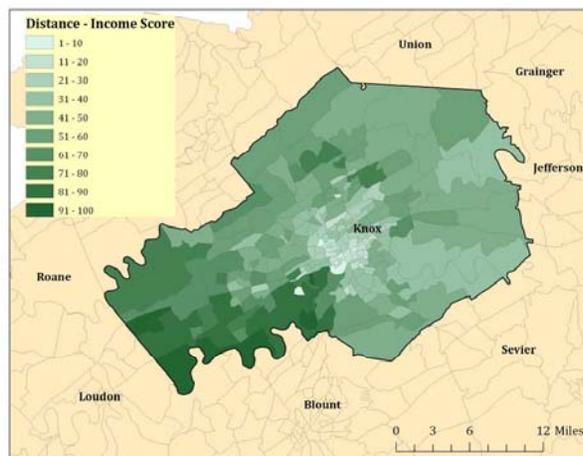
The Oak Ridge Meso-simulator: exploring the link between population and transportation

Modeling & Simulation Group

Work commutes produced with data from LandScan.



Commuting distance by commuters' income.



Problem Statement:

Population and transportation are inextricably linked: their interaction is the cause, and the solution, to many questions about transportation and energy, the environment, and homeland defense.

Technical Approach:

The Oak Ridge Meso-simulator incorporates advanced simulation technology to overcome the two most daunting obstacles to simulating large, complex transportation systems. The first is computing power: the simulator uses sophisticated simulation algorithms designed specifically for execution on multi-core workstations. The second is obtaining data: the simulator works with ORNL's LandScan, TRAGIS, and other state-of-the-art data.

Benefit:

The Oak Ridge Meso-simulator was built to explore fundamental linkages between population and transportation: it is an indispensable aide to understanding the intricacies of their interaction and emergent consequences for the environment, energy, and the safety of our cities' inhabitants.