

Toolbox for Urban Mobility Simulations

Disclosure Number

201503530

Technology Summary

The invention relates to big data and urban planning. With increasing availability and quality of traditional and crowdsourced data, Oak Ridge National Laboratory has utilized the OpenStreetMap roads network, and has integrated high resolution population data with traffic simulation to create a Toolbox for Urban Mobility Simulations (TUMS) at global scale. Consistent data and simulation platform allows quick adaption to various geographic areas that has been demonstrated for multiple cities across the world. The major features of the TUMS are: megacity level large-scale microscopic traffic simulation; flexibility for rapid local adoptions; open-source based platform; service oriented architecture; vehicle and link based visualization; extensibility to multiple applications.

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