

Developing an Urban Simulation System for a Major West African City

Initiative: Modellierung und Simulation komplexer Systeme (beendet)

Ausschreibung: Fellowships "Computational Sciences"

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Laufzeit: 3 Jahre

Rapid growth of urban areas in the developing world are resulting in the need to develop quantitative models for describing land use and transportation dynamics. This fellowship proposes to improve upon an existing urban simulation system of Accra, Ghana, and introduce an integrated transport model for the Ghanaian capital city. Unified operational models that favour a microscopic approach, such as the simulation platforms UrbanSim and MATSim, have gained significant interest in both the land use and transport communities. Still, in their current forms, these models require further development within the context of a major West African city. The goal of this project is to address the modeling and computational issues of integrating modern mobility simulations with the latest micro-simulation land use models. On the modelling side, the main challenges are: to synthetically generate household, person and jobs tables for the Greater Accra population; to develop residential mobility and job choice rates within the discrete choice modeling frameworks; and the development of a comprehensive transportation model.

Projektbeteiligte

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