

Integrating Urban Simulation and 3D Geometric Modeling

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Abstract

During the past decade we have witnessed the rapid development of behavioral urban simulation models and their broadening use for operational planning efforts, and in separate development, the advancement of 3D geometric modeling and visualization of urban landscapes. This paper explores the recent hybridization of 'behavioral' and 'geometric' modeling of urban regions, and the emergence of platforms that bring these innovations together. The paper specifically explores the design and application of urban simulation and 3D modeling of the San Francisco Bay Area, and the 3D design of scenarios and visualization of simulated development patterns in support of the regional sustainable communities strategies process mandated by state climate change legislation. These developments begin to blur the boundary between large scale urban models and sketch planning tools, potentially opening new trajectories for research and practice in this domain, and making them more widely available to researchers and planners..

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