

NSF/ESRC Agenda Setting Workshop on Agent-Based Modeling of Complex Spatial Systems: April 14-16, 2007

Infusing geodemographics into agent-based models of social systems

Paul Longley, University College London

I am something of an interloper at this meeting, in that although I co-supervise two Ph.D. students with core interests in agent based modelling (Christian Castle and Andrew Crooks), my research is focused more around understanding and modelling socioeconomic distributions. I am a co-PI with Mike Batty of the UCL GeoVUE (Geographic Virtual Environments) Node of the UK National Center for E Social Science, and have worked with Richard Milton on the display of various geodemographic representations using the Google Map Creator. Christian's work is focusing upon the development of a pedestrian evacuation model for London's King's Cross station (the new terminal for the international Eurostar service) using Repast. The work investigates a range of scenarios, and breaks new ground in the representation of the socioeconomic characteristics of users of the transit system at different times of the day and week. Some differentiation is achieved through representation of different mobility characteristics (e.g. week-end travellers with luggage versus weekday commuters) overlain with different demographic characteristics and variable familiarity with the internal structure and configuration of the underground structure.