

# SimCity for real

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Social policy makers and town planners will soon be able to play 'SimCity' for real using grid computing and e-Science techniques to test the consequences of their policies on a real, but anonymous, model of the UK population.

Dr Mark Birkin and colleagues, who are developing the model at the University of Leeds, will be demonstrating its potential at the UK e-Science, the world's largest supercomputing conference in Florida, this week.

They are using data recorded at the 2001 census to build a model of the whole UK population, but with personal details omitted so no individual or household can be identified. Their project, Modelling and Simulation for e-Social Science is funded by the UK Economic and Social Research Council National Centre for e-Social Science. "We're building a core model which represents the whole of the UK at the level of (synthetic) individuals and households with many attributes and behaviours," says Dr Birkin.

Data about these attributes - such as car ownership, house prices and use of health, education, transport and leisure facilities - are held by different agencies in different locations and often in different formats. "Historically, people have assembled data on a single PC or workstation. E-Science provides exciting opportunities to access multiple databases from remote, virtual locations, making it possible to develop highly generic simulation models which are easy to update," says Dr Birkin.

The model can be projected into the future to explore the effect of different demographic trends and also to test the consequences of policy decisions. The SC06 demonstration will show how the model could help inform policy for a major UK city under a number of different scenarios. "We can profile populations area by area and forecast attributes such as health status, employment, and car ownership ten or twenty years ahead. In future, we'll be able to project the effects of policy change and help policymakers evaluate the impact of the decisions they take," says Dr Birkin.

Source: Research Councils UK

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