

Structures of cities and municipalities (Analytical Study of the Cities and Municipalities in the Kingdom of Saudi Arabia)

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Abstract

An urban cellular automata model has been designed, developed and tested for the city of Riyadh in Saudi Arabia as a research project. The model uses fuzzy set theory to capture the uncertainty associated with the transition rules and employs two automated methods of calibration: a genetic algorithm and simulated annealing. This paper describes the results of the calibration process for three time periods: 3; :963; ;9."3; ;964227"and 3; :964227."which are characterised by different patterns of urban development.

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