

GENERATING TRANSITION RULES OF CELLULAR AUTOMATA FOR URBAN GROWTH PREDICTION

FINAL YEAR PROJECT THESIS

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ABSTRACT

Urban growth prediction can be simulated using digital maps. The growth of a non-built area can be detected through the change of pixels in a temporal imagery data. A built area usually affects the growth of its surrounding area as similar to Cellular Automata theory. This project is mainly about obtaining a set of transition rules to detect the pattern of urban growth for neighbourhood cells. As a case study, five satellite images of Subang Jaya district are used. In order to generate the transition rules, a unique pattern or surrounding cells are identified. The transition rules are implemented using a testing engine to test the accuracy. The better accuracy leads to better monitoring system to cater future leavings.

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