

Development and Application of Urban Land Use Planning Support System Using MAS



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Chen Ping

Principal Supervisor : Mitsuhiko Kawakami

Most regional city in Japan is experiencing decline in its commercial center. More and more large-scale shopping malls shifting to out-of-city location is commonly cited as the reason for the decline of city centers. Local governments efforts to promote the regeneration of central commerce have focused on regulating the location of large-scale shopping mall through issuing a series planning policies and regulations. There is an emerging need of a decision-making supporting tool to exhibit the effects of different planning policy scenarios on the regeneration of central commerce. Considering urban development is a complex process which involve s many stakeholders, conditions and factors, MAS, which has been shown powerful in better understanding the processes of urban development and growth, is supposed to be a promising tool for policy analysis. The aim of this research is to develop a spatial decision support system for Japan local city land use planning especially on large-scale shop location decision-making using multi-agent technology. The conceptual structure of the MAS model and one example of simulation outcome are shown in Figure 1.

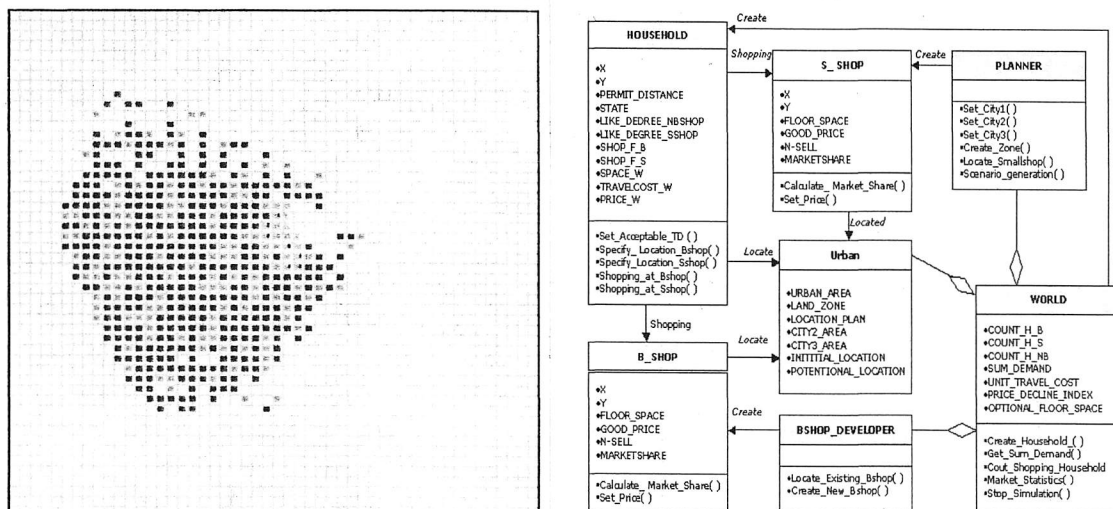


Figure 1 The image of simulation and conceptual structure of multi-agent system

Related Publications

1. Zhenjiang Shen, Mitsuhiko Kawakami and Ping Chen, 2006, Study on Decision Support System for Land Use Planning of Large-Scale Shopping Centre Location Using Multi-agent System, The 8th International Conference on Design & Decision Support Systems in Architecture and Urban Planning, 2006.