Abstract for CABDyN workshop: Agent-based modelling of a transport mode choice with the Minority Game

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This study on a transport choice is based on the real survey data collected in the summer of 2003 and about a proposed Road-User Charging scheme in the Upper Derwent Valley, in the Peak District National Park. The Minority Game will be occurred in parking areas after the scheme is implemented in the Valley. This study develops an agent-based simulation model to analyse the effect of Road User Charging at the Valley on congestion levels at parking areas and the mode choice of visitors, simultaneously. In addition, the agent-based model is compared with an econometric analysis.

The results show the Road User Charging scheme will reduce the level of car demand in the Upper Derwent Valley and will ensure that the reduction ease concerns about congestion at parking areas. The reduction on car demand and parking congestion is effective especially when overcrowding occurs, for example on August Bank Holiday.

Key references

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