Travel demand models use speed–flow equations to accurately predict the speed of traffic on urban roads. However, in urban networks, the correlations can be quite complex because they are affected by rather short road segments and signalized intersections resulting in interrupted traffic flows. In this context, the green timeshare of a traffic signal influences the capacity of a corresponding road segment significantly. This paper investigates the impacts of different green timeshares on the speed–volume relationship using a simulative approach. The impacts of both reductions and extensions of green timeshares with respect to statistically significant changes in speed values in undersaturated and saturated traffic conditions are presented.

Stichworte: speed-volume relationship, green timeshare, microscopic simulation

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