

**A Psychological Model of Passengers' Dissatisfaction
for Evaluating Train-rescheduling Plans on Metropolitan Rail Lines**

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A disruption of train traffic can cause dissatisfaction of passengers with train transport services especially on metropolitan commuter rail lines. It is necessary for train dispatchers to make a train-rescheduling plan to restore the train traffic as soon as possible. At present, there is no established evaluation method for a train-rescheduling plan because there are too many aspects to be considered such as the size of disruption and the number of passengers affected. In this paper, we have focused on the most important aspect, that is, passengers' dissatisfaction to evaluate a train-rescheduling plan. We have modelled psychological aspects of passengers and built the model into a simulation system to estimate the passengers' dissatisfaction for evaluating a train-rescheduling plan.