A Prediction Method of Passenger Flow upon Resumption of Train Service

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In an event of train service suspension of tens of minutes, railway passengers affected by it have three options:

1. waiting for resumption of service, 2. taking indirect routes to their destination, and 3. cancelling their trips. Passenger flow varies in accordance with the difference of selection rate of these options. Rescheduling the train timetables without considering this change of passenger flow may easily causes over crowded or over capacity of trains. This paper explains our prediction method that calculates passenger flow upon resumption of train service using OD data—the number of passengers between each origin and each destination—on a similar event in terms of the day of the week, time of the occurrence of the train suspension, etc. This paper also introduces the prediction result on a day when train service was actually disrupted.