

Estimation Method of Passenger OD Flow in Railway Station for Refinement Planning of Station

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This study proposes an automatic passenger OD flow estimation method in railway station. The proposed method consists of movie processing applying AI for automatic counting method of cross-sectional flow volume and OD flow estimation model based on cross-sectional flow volume data. This study demonstrates that the developed automatic counting method of cross-sectional flow volume possibly count section flow volume with enough accuracy. Additionally, the developed OD flow estimation model applying Lagrangian relaxation problem can estimate OD flow with enough accuracy. Numerical experiments with use of cross-sectional flow counting data obtained by automatic ticket gate show that the proposed estimation method can be applied to OD estimation survey throughout a day in actual railway stations.