A Train Operation Simulation System Based on a Detailed Model of Train Running Performance

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The aim of this research is developing a simulation system that can estimate train operations more accurately. For this purpose, this simulation system needs to be equipped with three functions: (1) increasing dwell time caused from passengers' congestion, (2) calculating running time under actual running conditions including signal changes, (3) simulating various driving ways. We explain functions and features of the developed simulation system and overview of the calculation method for running time. In addition, we introduce results of some case studies and an energy consumption calculation method using the results.