Development of Train Operation Power Simulator Reproducing Commercial Operation

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In recent years, railway companies have been introducing energy-saving technologies. This trend results in the need for a method to accurately estimate the energy-saving effect when adopting each technology. To this end, we developed a method to estimate train operation energy consumption using the Train Operation Power Simulator reproducing commercial operation. Since there is dispersion of energy consumption on the commercial operation, it is important to faithfully reproduce commercial operation. Therefore, we developed a method to reproduce commercial operation utilizing commercial running data obtained from a train data collection device. Moreover, we achieved practical calculation time to estimate the energy-saving effect.