Development of Driver Advisory System Using Speed Estimation for Freight Train

Tomoyuki OGAWA Toshihide YOKOUCHI Yoko TAKEUCHI

In this study, we have developed a driver advisory system for freight trains using a speed estimation technique aiming to improve energy-saving and punctuality. The driver advisory system focuses on the maneuvering of freight trains in cruising mode, with the aim of passing through stations on time. The driver advisory system proposes a recommended driving operation for each passing station. We have developed a method for assigning driving operations using the speed estimation, which switches between constant-speed and saw-toothed driving operations depending on speed and load characteristics. Then, we present a trial result with regard to energy consumption. We confirm the energy-saving effect by comparing the energy consumption with and without the developed driver advisory system.