

**On-board Train Positioning and Train Integrity Management System by
Combination of Tachometer Generators and Inertial Sensors**

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In order to detect the train position and existence area in the radio train control system, the on-board train positioning and train integrity system by the combination of inertial sensors and tachometer generators have been developed. In this system, curves and ramp excursions which are registered as track distinctive point on-board database are used for detecting the train position and calculating the train length. Additionally, the occurrence of train split can be detected by the difference of the acceleration between the head vehicle and the tail vehicle. The running test using fail-safe processors equipped with these functions shows the feasibility of this system.