

### **Development of Train Location Detection Methods for Signalling**

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For the safety in train operation, it is necessary to detect the train location with certainty. Recently, in order to recognize the position more accurately and to reduce cost of ground equipment, systems which calculate the train position on board are in use. However, the existing on-board systems have some problems such as calculation errors caused by wheel spin and slide. So, we have developed a new train location detection method for signalling using inertial sensor and/or a millimeter wave. In this paper, we describe the outline of the method and report the results of the field tests.