

Development of a Method for Measuring Platform Height and Gap Using Forward-View Train Images

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This study proposes a method for measuring platform height and gap using forward-facing images captured by commercial trains. The method employs ground markers to identify coplanar regions in the image depth direction. An algorithm was developed to automatically estimate platform height and gap from these images. Field tests were then conducted on a commercial railway line to evaluate its accuracy and practical applicability. The results indicated that while gap errors remained within 10 mm at five of the seven locations, height errors exceeded 10 mm at five. The sources of these errors were analyzed, and potential strategies for improvement are also proposed.