

Development of a Method for Diagnosing Deterioration of Railside Facilities using Train Forward Images

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Railside facilities are installed at stations and at various locations between them. Therefore, facility management operations, such as identifying locations and types and carrying out individual inspections, are labor-intensive and require labor savings. To reduce the labor required for facility management, we have developed a system that enables the facility inspector to check the condition of the rail side facilities remotely using a video camera to capture images in front of the train. The developed system can estimate kilometers travelled, recognize equipment automatically, and estimate the degree of deterioration of the signal equipment boxes. This paper describes an overview of the system, evaluates its accuracy, and outlines the prospects for monitoring the deterioration of facilities.