

Development of Low-cost Train Patrol Support Method Using Smartphone

Hirofumi TANAKA Boyu ZHAO Di SU Tomonori NAGAYAMA

Although regional railway companies are facing a difficult business environment, they need to properly inspect and maintain railway facilities and rolling stock to ensure safe and stable train operations. In this study, we developed a smartphone-based train patrol support application as a low-cost track condition management method that can be introduced even by regional railway companies. We then carried out test measurements using the developed application on a commercial line and investigated the use of the measurement data. The results show that the acceleration data are effective for train vibration management, and that the forward view video data are effective for understanding track conditions during desk review.