

Development of Hybrid Measurement System for Railway Infrastructure by Utilizing IoT Technology

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ABSTRACT

Recently, advanced sensors like fiber optic sensors have been developed and replaced with conventional resistance type sensors due to their many advantages such as long-distance capability, EMI immunity, multiplexing easiness, and etc. However, it was hard to commercialize fiber optic sensors in railroad applications so far since their types are limited and are not cost effective to construct a measurement site. In order to overcome these problems, the authors developed a hybrid measurement system which integrates the commercial electrical sensors and optical sensors with IoT-based wireless communication technology in this study.