



Verification of wireless environment network simulation and reliability

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ABSTRACT

The aim of this paper is to prepare grounds for embodiment of a smart water treatment plant through acquisition of data such as flow, pressure, water level, and water temperature in vertical water treatment facility and real-time monitoring under wireless environment. Zigbee-based sensor node, in the 2.45 GHz band, and gateway were manufactured for this. Data obtained from the sensor was transmitted to the data processing device, and monitoring of the processed data could be performed on operation PC and mobile device. In addition, propagation environment and transfer rate were conducted to analyze applicability and reliability test of wireless data. This study intends to construct a ubiquitous sensor network-based distributed water supply system at low cost and high efficiency by creating a remote monitoring system using communication network analysis and mobile device.

Keywords: Wireless; Gateway; Sensor node; USN; Water treatment plant

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