

Abstract

Irrigation system is an activity to get water to facilitate agricultural activities. The activity is to drain and provide water regularly to the land and then use it for land needs. This irrigation system has been implemented by BPSDA Serayu Citanduy, Central Java by using river water. Intelligent control system using Sugeno fuzzy algorithm in this study can determine the proper scheduling. The stages in the Sugeno fuzzy method are to form Fuzzy sets and then implement the implication function, the next process is Defuzzification. An intelligent control system prototype for scheduling soil irrigation using LoRa as a telemetry medium. Sugeno fuzzy algorithm application is to measure the discharge in river water and then compare it with the area of agricultural land. In this study using 50 hectares of land area and 38.18 L/sec water discharge resulted in 74 minutes.

Keywords: Fuzzy Sugeno Algorithm, Intelligent Control System, Irrigation System, Agriculture, Telemetry