ABSTRACT

Smart Home system is integrated information and technology based on hardware and software with focus to maximize the comfort of home owner. Lighting is one factor that affects the comfort of a home, The difference in every human activity in the house requires a certain light intensity. In accordance with the Indonesian National Standard, several references to the light intensity needed by the living room, dining room and workspace are 120 ~ 250 lux, of course it will be different from the drawing room which requires 750 lux light intensity. with appropriate lighting, the activities performed in the house to be optimal. To create a home with good lighting, a lighting parameter is needed, one of the light sensors that can be used as a parameter is the LDR (Light Dependent Resistor) sensor, but the LDR sensor has a fluctuating sensor, fluctuating data tends not to be good in the system measurement and will make it difficult for smart home system users. therefore it is necessary to use Kalman filter, an algorithm that can predict values so that more stable data can be obtained, this study shows that the Kalman filter is able to estimate, so that fluctuations in measurement can be muted. In this study the measuring instrument produced an error of 8.32%, accuracy of 83.33%, and precision of 92.17%.

Keywords: Smart Home, Light Intensity, Kalman Filter