

## ABSTRACT

For most people, work is a priority that can not be abandoned. Usually this happens to employees who work from morning till night so they do not control and see the state of the house. One is when you're hung clothes to dry and then suddenly rain. They can not take the clothes when it rains or before the rain because he was working. Advances in science and technology have been encouraging people to strive to overcome all permasalahan arising in the vicinity, and alleviate the existing jobs. One of the technologies developed at this time is a microcontroller. Along with the microcontroller, the microcontroller is now applied to many instruments - instruments that relate to daily life - today.

So that these conditions inspired to create a tool that is both economical and efficient. Namely Design Canopy Auto Open Sensor Using Temperature and Humidity Sensor Based Microcontroller and SMS Gateway with Modified Fuzzy method which functioned as automatic clothes drying space. When the humidity sensor detects moist air then the roof will be closed and the roof will be open again when the humidity sensor to get a normal air or moisture. The temperature sensor is used to detect the magnitude of the temperature of the environment. When the temperature sensor receives a lower temperature then the roof will be closed and an open roof back when the temperature sensor receives a high enough temperature.

From the test results can be concluded that the function of Automatic Canopy applications and canopy notifications open / closed via SMS can run 100% well. Delay for the average data upload process of 0.676 seconds and SMS notification delay approximately equal to 5-7 seconds. For closed and open canopy delay of 0.2 seconds. Internet network is very influential in the process of downloading data to the platform. SMS providers also rely heavily on how fast the provider processes the SMS.

***Keywords: Microcontroller, Sensors, SMS Gateway, Modified Fuzzy***