## DESIGN AND DEVELOPMENT OF IOT-BASED FOREST FIRE DETECTION SYSTEM PROTOTYPE

## Annisa Novia Dwiyanti

Electrical Engineering Study Program, Faculty of Science & Technology University of Technology Yogyakarta Jl. Ringroad Utara Jombor Sleman Yogyakarta E-mail : <u>email.mahasiswa@gmail.com</u>

## ABSTRACT

Fire is one of the tragedies that cannot be predicted. The main problem in overcoming forest fires is how to identify potential fires and find the source of the fire as soon as possible so that the fire is easily extinguished. Therefore, to overcome this problem, a forest fire detection system is needed to receive information quickly. This system uses 2 MQ-2 smoke sensors so that the readings are more focused because of the multi sensors and the NodeMCU ESP 8266 as a microcontroller. This research method is IoT based so that smoke and fire locations can be detected quickly through the blynk application. The results of the MQ-2 sensor test carried out using 3 smoke conditions got an accuracy value of 90% which means the system can work well.

Keywords: Internet of Things (IoT), MQ-2 Sensor, NodeMCU ESP8266.