

ABSTRACT

Dumpster is a place to temporarily accommodate garbage. Some public places such as parks, markets, and complexes have garbage can be found on the sidewalk. The development of internet in the life of society today becomes something that can not be separated until the birth of the concept of Internet of Things (IoT). With the concept of IoT garbage officers can monitor the trash easily.

In this final project can monitor the capacity of trash through internet network connected with firebase. The hardware used in this final project is ultrasonic sensor, GSM and GPS module and Arduino UNO. Ultrasonic sensor, GSM module and GPS are connected with Arduino UNO as microcontroller. Ultrasonic sensors measure the height of waste that serves to determine the capacity of waste. GSM and GPS modules work to send garbage capacity data and coordinate the trash to the database. The database used in this work is firebase.

The results obtained in this final project, with the concept of IoT trash can provide capacity data and the coordinates of the trash. In the distance data measurement, ultrasonic sensors send the garbage height data through Arduino UNO which is 98%. GPS accuracy on the tool 90%, because the coordinates changed but the place on google maps has not changed. . The average delay of sending the garbage height data to firebase is 21.6 seconds, out of 9 experiments.

Keywords: IoT, GSM, GPS, Monitoring, Trash