

ABSTRACT

Dumpster is a place to temporarily accommodate garbage. Some public places such as parks, markets, and complexes have dumpster that can be found on the side of the road. If the height of the bin is full and not transported immediately can cause unpleasant odors, this can make the environment becomes uncomfortable.

In this final project is made Smart Garbage application that serves to monitor the level of garbage height and location of the trash through the internet network connected to realtime database. Data that has been sent by the bin and stored in firebase is accepted by the application to be processed by time and altitude. The data that has been obtained is used as a condition boundary to provide transportation notice. While the received location data is used to mark the map.

The test of results show the software is already integrated with the device trash. Smartphones can monitoring the dumpster by showing the capacity, location and time limit. The minimum distance between the dumpster so that the markers on the map do not overlap is three meters. Monitoring the height level of the dumpster can run with the average delay from dumpster through apps using the EDGE network of 4.57 seconds, using HSPA + networks of 4.52 and using LTE networks of 3.85 seconds when altitude changes occur. The average data consumption used for software usage is 90.16 KB per hour in idle condition.

Keywords: *IoT, Dumpster, Monitoring*