

Abstract

Pet cats are among the most widely preserved pets. To overcome the occurrence of a lost cat, a tool is needed to detect the position of the pet cat. In this research, it will be built a pet cat position detection tool based on WiFi and GPS using the Floyd-Warshall algorithm. WiFi and GPS are used to reach the position of pet cats in the indoor and outdoor areas of the house. The RSSI method is used to measure the signal strength that WiFi receives in the indoor area of the house, so that the cat position can be found accurately. While Floyd-Warshall is an algorithm used to find the shortest route based on measurements from the distance and time taken to locate the pet cat position in the outdoor area of the house to make the search more effective and efficient. From the results of testing in the indoor area of the house on the LOS line and the line is obstacle obtained the smallest RMSE value is in the LOS line with a value of 0.1575 and RSSI signal quality at the farthest distance is 26 meters is included in the category of good level-69 dB for LOS and-70 dB lines for the path there is obstacles. While in the outdoor area of the house from the test results on 5 different paths in a graph from the start node to end node produces the shortest route on path 1 with the reconstruction path that is the start node - end node with a distance of 201.5 meters.

Keywords: : *pet cat, detector device, WiFi, GPS, RSSI, floyd-warshall*