

ABSTRACT

In the current era of technology, it has a major influence on aspects of life in today's society. Monitoring (monitoring) is the process of observing the development and distance of the child. The loss of children often occurs as a result of being separated from their families. The purpose of using a monitoring system is to control, supervise, and check a number of activities that have been carried out. In this study, the Esp8266 was used by utilizing the value of the Received Signal Strength Indicator (RSSI). By using the RSSI value on the Esp8266, the distance and proximity of the child to the Access Point can be estimated on the Esp8266.

The author makes an Android-based application with a notification system that can give warnings when children start to move away from a safe distance from their parents. By using the value of the Received Signal Strength Indicator (RSSI) on the Esp8266, the distance and proximity of the child to the Access Point can be estimated on the Esp8266. The Esp8266 makes this system usable anywhere without an internet connection. The estimated distance between the Access Point and the Esp8266 can be determined after obtaining the RSSI value and determining the pathloss index (n) with the results of calculating the estimated distance that is close to the actual distance. The notification system that works on this application will be active in the form of vibration at an estimated distance of 5 meters to 10 meters and if the estimated distance of the child has exceeded the 10 meter distance limit, it will be active in the form of vibration along with an alarm sound. The results of the quality of service testing analysis were carried out 6 times with the parameters tested being throughput and delay. In testing the throughput parameters from 6 tests the average results were very good, and in the delay testing from 6 tests the average results were very good. The results of throughput and delay testing are in accordance with ITU-T-G.1010 standards.

Keywords : Children, Parents, RSSI, Distance Limiting, anti-loss, Esp8266.