ABSTRACT

The lost pilgrim is such a big problem in the hajj event. Indonesia, as the sender of the largest amount of pilgrims, has a solution to minimize this problem. Using a unique bracelet, completed with the identification of each pilgrim, hopefully will solve the problem. However, as we know, more than 50% of Indonesia’s pilgrims have difficulty on English or Arabian speaking. The low standart educational is the main factor of the loss communication availability. The other serious problem is their minimum of technology knowledge.

In this final project use RFID technology system, a solution to minimize the lost pilgrims in Holy Land, without communication skill requirement. Using this system, the lost pilgrim have to put their RFID card in front of the node employed at eye-catching points around the Hajj area. The identification data and the location area of the pilgrim will be read by the server and send to the group head simultaneously. Next, the position of the lost pilgrim will be found soon.

Based on the analysis of measurement results can be concluded that type of obstacle material affects the radius of the reading RFID reader. To obtain the maximum reading distance, use horizontal position of the RFID tag to the surface of the RFID reader. RFID reader output is digital signals that have been coding. Delay value is not affected by the number of ID when the process of multiplexing cause the message will sent every twenty seconds after the first ID saved. Delay of lost and confirmation sending message to the sector officer, group and kloker head is approach another. There is a difference value cause influence of the operators traffic used at the time.

Key word: RFID, microcontroller, and SMS gateway