

ABSTRACT

The development of knowledge and technology in this day are very rapidly. Along with the technology development, people want the system that is fast, secure, and efficient. The development technology finally reached to a network technology. With this network technology, users are able to use an information simultaneously. The other side of excellence network system is about distance. As long as we are connected to central of computer network, we can access all the data in the centre from the place where we are. However the currently network system most still use cable transmission lines that was complicated and convoluted. In the end, people will prefer network system using wireless transmission. One of the wireless technologies that already exist today is ZigBee.

In this thesis will discuss about wireless fingerprint attendance system based on microcontroller. The wireless method that used is ZigBee. Data firstly readed by fingerprint reader. Then the data from fingerprint module will be processed by microcontroller and then transmitted to a database computer using wireless. The process of transmitting data using ZigBee. Next step computer will check and comparison data that is received with data that is saved before and then be sent back to microcontroller as a final process that data correctly (using half duplex communication system). Microcontroller will use LCD as a viewer that the data there is or not in the computer database.

Finally the results of this Final Project, the data obtained fingerprint attendance system user recorded and stored in database. Data stored includes the user name, date, and time of log in. The longest distance that can be archieved by ZigBee to communicate is about 20m. The overall system can operate with a response time about 5 seconds. Then, It can be concluded that the tool is working as it should be designed.

Keyword :Fingerprint, Microcontroller, ZigBee