Abstract

Human temperature is one of important parameter in medical world to determine health condition. Body temperature affected by several factor, like nutrient, organ malfunction, and another factor. Because of that, periodic monitoring of body temperature is done to know the health status of a person. For example, a periodic three hour monitoring of baby body's temperature is done by nurse or assigned doctor and they adjust incubator condition to make temperature stays in range from 36.5 degree to 37.5 degree Celsius [1]. With manual monitoring, it is still hard to know precise variable change in baby's temperature, there still a risk of an extreme change of temperature between periodic monitoring cycle.

In this final project, is hoped that patient can be monitored every time by doctor or nurse. This is done by implementing a remote data transmission monitoring system with Zigbee. Monitoring will be more easier and flexible, nurse can see patient condition any time. Not only that, this system also have a SMS gateway to tell doctor when an extreme change in temperate is occurred (hyper/hyportermy).

From test it shows that temperature precision is about -+0.5 degree Celsius with by comparison with existing digital thermometer. Scenario for performance test is data transfer between node, like RSSI that affected by range interval and obstacle.

Key words : temperature, Zigbee, RSSI, precision.