ABSTRACT

BTS (Base Transceiver Station) is one of the essential components of the infrastructure supporting mobile telecommunications. BTS is supported by a BTS shelters have a system that runs automatically. Supporting BTS Shelter has several devices that are generally not monitored the performance and condition of the remote, inter alia room temperature, doors, and so forth. Monitoring aims to monitor the performance and condition of the system. When activity monitor is exposed to a variety of complex issues such as accuracy, reliability, speed, as well as the economic value of human labor will be less efficient if used. So we need a system of monitoring of the conditions at the shelter BTS.

Based on these needs, in this thesis made a monitoring system to monitor conditions at the shelter such as base stations and the doors to the room temperature using an RCM 6760 microcontroller based system using PIR sensor and LM35. Tests performed in the BTS device directly in order to get the real conditions in accordance with the expected implementation. In addition to testing in BTS, testing was also done in the lab APTRG to get more data so that the analysis can be more precise.

The results of the tests performed, it was concluded on testing in BTS look at mercury thermometer shows the temperature at 27 degrees Celsius, while the average website monitoring temperature obtained at 27.75 degrees Celsius so that in can rate error of 2.77% and digital thermometer shows the temperature at 26.1 degrees Celsius, while the average website monitoring temperature obtained at 26.025 degrees Celsius so that in can rate error of 0.287%. While at the time of testing in the lab APTRG look at mercury thermometer shows the temperature at 27 degrees Celsius, while the average website monitoring temperature in degrees Celsius can be at 29.90625, 27.65625 degrees centigrade, 27.53125 degrees centigrade, 27.6785 degrees Celsius, so that the level can average error of 3.35%, 2.43%, 1.96%, and 2.51%. And for testing the PIR sensor in get the conclusion that the PIR sensor can detect humans.

Keywords: microcontroller, monitoring, BTS shelter.