

## ABSTRACT

BTS (Base Tranceiver Station) is an element of cellular communication system that connects MS (Mobile Station) and BSC (Base Station Control). BTS is generally placed in a room called BTS's shelter. BTS's shelter conditions must be eligible for the operation of BTS, such as temperature, voltage, etc.. During this state BTS's shelter can only known by direct inspection. Because the number of BTS so numerous and widespread, it cause difficult to monitoring the conditions of BTS's shelter.

In this final project will be focused to intregated multiple sensor that purposes to monitor the conditions of BTS's shelter using PIC 18F67J60. The main parameters in BTS's shelter will be monitored are temperature, doors, water sensor and the fuel indicator. The condition's of parameters are monitored and sent to the user's computer using LAN network.

The designed device has performance parameter percentage about 80% with 1,2% packet loss and 1,6ms delay. Sensing block that is used consists of four sensors with accuracy and performace value, Temperature Sensor = 90%, 0%, Doors Sensor = 83,333%, 100%, Flood Sensor = 86,667%, 100%, and Fuel Sensor = 86,667%; 100%. So with this system was good enough in terms of performace and accuracy in monitoring stations.

Keywords : Power Monitoring System, BTS, BTS's shelter