FINAL YEAR PROJECT REPORT

ON-LINE LOAD MONITORING

AND

CONTROL MANAGEMENT SYSTEM

A PROJECT REPORT

Submitted by

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In partial fulfillment of the requirements for the award of degree of

BACHELOR OF SCIENCE

IN ELECTRICAL ENGINEERING

SCHOOL OF ENGINEERING

UNIVERSITY OF MANAGEMENT AND TECHNOLOGY

January-2015

STATEMENT OF SUBMISSION

A report submitted to the department of electrical engineering

*In partial fulfillment of the requirements for the award of degree of*BACHELOR OF SCIENCE

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January-2015

Director of Project: **Project Advisor:**

_____ _____

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We declare that this project is our own original work, and that all sources have been accurately reported and acknowledged, and that this project has not been previously in its entirety, or in part been submitted at any academic institution in order to obtain an academic qualification.

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The above statement has been signed in front of me, and is correct to the best of my knowledge.

(Signature of advisor & date)

ACKNOWLEDGEMENT:

First of all, we thank to our Almighty ALLAH, who gave us the strength to complete this project to perfection. We owe a great many thanks to a great many people who gave us invaluable help and were influential in shaping our thoughts on how to best organize our final year project.

We express our deepest thanks to Mr. Usman Ali, our Project-Advisor, for guiding and correcting various documents with attention and care. He has taken pain to go through the project and make necessary corrections as and when needed.

We would also like to thank our institution, faculty members and our Project Director without whom this project would have been a distant reality. We also extend our heartfelt thanks to our family, friends and our well-wishers. This project would not have been what it is (and may well not have been at all) without the graceful management, constant encouragement, nearly infinite patience, good humor and healthy criticism of all the people mentioned above.

ABSTRACT:

Load management and energy conservation are currently being considered and adopted by many power utilities around the world. The common situation is the limited capacity of energy resources and increasing demand. Electricity demand is increasing rapidly, as more and more people are getting connected and appreciating the advantages of electrical energy. Load management reduces peak electric demand during the hottest afternoons of the summer. When the demand is increased, it is compulsory to manage the load properly, so different techniques are used to manage the load. In this project, work is done to suggest a way of managing the load according to capacity of grid. In this way load management is efficient and accurate, which is reliable for the grid. Load management using parallel operation of transformers is done in this project. Power load management enables energy utilities to reduce peak loads and thereby save money. Due to the large number of different loads, power load management is a complicated optimization problem. In the project work is done by giving an idea to manage distributed load at grid, using three transformers of same wattage which comes in parallel with respect to load. As load increases the transformers will be connected in parallel to fulfill the demand of load. When there will be less consumption of load then extra transformers will be disconnected automatically. By using this phenomenon we can save the transformers from losses e.g. Eddy-Current losses, Hysteresis losses etc. To make it wireless we are using ZigBee module and all the data will appear on our monitor.

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