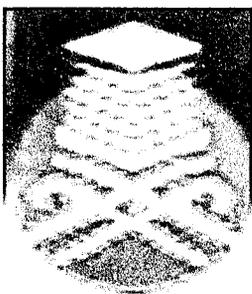


**DESIGN AND SOFTWARE DEVELOPMENT OF A CASE STUDY AND POWER
QUALITY MONITORING DATABASE**

This project report is presented in partial fulfillment for the award of the
Bachelor of Electrical Engineering (Honors)

UNIVERSITI TEKNOLOGI MARA



**MOHD SAUFIE BIN JAAFAR
B.ENG (Hons.) ELECTRICAL
Faculty of Electrical Engineering
UNIVERSITY TEKNOLOGI MARA
40450 SHAH ALAM,
SELANGOR DARUL EHSAN**

MAY 2007

ACKNOWLEDGEMENT

In the name of Allah, the Beneficent and Merciful who has give the strength and ability to complete the final project as well.

First and foremost, I would like to take this opportunity to express my sincerely gratitude and appreciation to Dr. Zuhaina Zakaria as my project supervisor whose patience, ideas, suggestion, guidance and their dedication have helped me to successfully complete my project.

I express my deepest thanks and appreciation to my family for their moral support and encouragement. They really believe that I can deliver the best work that I could.

Last but not least, I would like to extend my sincere thanks to all lecturers, Faculty of Electrical Engineering, staff of Tenaga Nasional Berhad especially Encik Mohamad Hadi B. Sohod, and my friends for the continuous assistance in every aspect either directly or indirectly through complete this project. Thank you.

MOHD SAUFIE JAAFAR
Faculty of Electrical Engineering
University Teknologi MARA
40450 Shah Alam
Selangor Darul Ehsan.

ABSTRACT

Power quality monitoring system is the management and integration of the resulting database which involves a lot of data. The objective of the project is to develop a power quality data management and analysis software which is designed to store data, analyze large quantities of power quality related disturbances and to produce report for further action.

This power quality monitoring system will store the database site characteristics and event information, provide the means to automate both the loading of new data and generate summary and reports which include the MS IEC 6100-4-11 & 6100-4-34. This database monitoring system enable users to view the data easily and it also can be use by anyone even they are new in Microsoft®Access.

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CHAPTER 1

INTRODUCTION

1.1 Overview

In Malaysia, power quality problem are not the new issues. These issues are consequences to the increasing devices that contain microprocessor-based controls and power electronic devices that are sensitive to many types of the disturbances. The increasing emphasis on overall power system efficiency has resulted in devices such as high-efficiency; adjustable speed-motor drives and shunt capacitors for power factor correction are the other reason.

There are many causes of power quality problem or disturbances such as voltage sag/swell, harmonics, transient, fast impulses, neutral to ground, flicker, noise etc. Voltages dips (or voltage sag), transient, and voltage swell are the major power quality disturbances. Power quality problems can cause system equipment malfunction like relaying equipment or computer data loss and sensitive equipment such as computer or machine. However the major reason of the power quality concern is the economic impact on utilities, consumers and suppliers of load equipment.

The investigations of power quality monitoring are required to identify the cause or exact problem and then to verify the solutions. There are various types of power quality monitoring instruments where use in the investigation, such as flicker meters, harmonic analyzers, disturbances analyzers monitors etc. The consumer's complaints data should be analyze to solving the problems.

Power quality monitoring system is the key to store all the consumer's complaint data should be analyze and for the future development. At present, all this