

# **POWER QUALITY MONITORING AND ANALYSIS**

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## **ABSTRACT**

In recent years electrification has proceeded a pace in our society. Computer, photocopiers, televisions, advanced medical equipment and a host of other devices are enriching our lives as never before.

Many of these new devices are far more demanding than the equipment of an earlier and required a high level of power quality, in the sense that the power is delivered evenly without peak or static build-up.

This imposes new demands on electrical distribution system when equipment was more tolerant of small peaks in the electrical supply.

This project has been tailored to monitor and analysing all type of disturbances which might be available in the selected location in Institut Teknologi Mara. This data is hopefully will be benefited by the next group of student project in finding the source of disturbance and finally proposing an improvement plan for the system.

It is hope that with all the records and compiled data bases, utility engineer and maintenance department can now be able to control the quality of power system effectively.

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# CHAPTER 1 AN INTRODUCTION

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## 1.0 OVERVIEW

Power Quality issue is becoming increasingly important because of the proliferation of sensitive load at home and industries. Since 1980s, the term *power quality* has become the most popular buzzword in the power industry.

Ever since then, the electric utilities need to offer more than just *reliable* service but “*dirty*” power or it is not possible to offer “*clean*” but unreliable service. The issue has become more critical because of the increase in the number of loads sensitive of *power disturbance*, and as the loads themselves become major causes of the degradation of power quality.

For the Utility, the goal of providing adequate power quality has been moving on because of the changes in user equipment and requirements. For the users' standpoint, problems stemming from the sensitivity of new equipment to service quality have come as rude surprises.

In tackling power quality problems, both the utility and customers must play their roles. Therefore, it is not sensible that power quality be considered on an individual basis whose requirements could also vary.