INDOOR AIR QUALITY MONITORING SYSTEM CONTROL

This thesis is represented in partial of fulfillment for the award of the

Bachelor (Hons.) in Electrical Engineering

Universiti Teknologi MARA Malaysia

(MAY 2011)



DAISY UBONG LAWAI (2008281684) Faculty of Electrical Engineering Universiti Teknologi MARA 40450 Shah Alam, Malaysia

ACKNOWLEDGEMENT

First of all, I would like to express my most gratitude to my supervisor, Dr Fuziah Sulaiman for the guidance, concerned, kindness, advice, comment, idea and helped to make sure of the successful for this project.

I would also like to thank En.Azizi Muhammad Rahmat for his assistance in providing me the experiment laboratory and equipment.

Nevertheless, my great appreciate is dedicated to all lecturers in Faculty of Electrical Engineering UiTM Shah Alam.

Last but not least, I also would like to thanks to all my families, friends and colleagues for their support, advice and comments.

ABSTRACT

In this project report, sensitivity detection of various smells in the room is discussed by using air sensor MQ-2. People do not perform well on their job when they are uncomfortable. Suitable air sensor circuit is which to detect the smells will be presents on this paper. In order to display the output results from the sensor, screen monitor was used. Programmable Interface Controller (PIC) 16F877A was used as the intelligent system that connected between the air sensor circuit and screen monitor which present the output of the room's conditions. Visual Basic is used to display the three different colors. Red, yellow and green were the chosen colors to indicate danger, warning and safe conditions. Serial port communication is used to interface with PIC16F877A.The hardware and software is implemented in this system modeling and experimental results are presented.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

"Indoor Environmental Quality," as the name implies, simply refers to the quality of the air in an office or other building environments. One reason for this concern is that their respiratory symptoms often get better when they are not in the building. While research has shown that some respiratory symptoms and illnesses can be associated with damp buildings, it is still unclear what measurements of indoor contaminants show that workers are at risk for disease.

One of the greatest concerns of today's facility managers is the health and safety of the occupants of their building. Indoor Air Quality is a key factor. Technology now exists to allow continuous monitoring to help control the air quality of a facility. Air quality sensors can be placed in individual rooms and in air ducts and can send data to the building management system [1].

Indoor environments are highly complex and building occupants may be exposed to a variety of pollutants from office machines, cleaning products, construction activities, carpets and furnishings, perfumes, cigarette smoke, water-damaged building materials, microbial, insects, and outdoor pollutants. Other factors such as indoor temperatures, relative humidity, and ventilation levels can also affect how individuals respond to the indoor environment [2].

Improving IAQ can help:

- Reduce absenteeism
- Improve people concentration
- Improve people productivity and performance