DEVELOPMENT OF AN AUTOMATIC WHITEBOARD ERASER

RAZIF BIN OMAR
(2001476458)

A final year project report submitted in partial fulfilment of the requirements
for the award of Bachelor Engineering (Hons) (Mechanical)

Faculty of Mechanical Engineering
Universiti Teknologi MARA (UiTM)

MARCH 2004

ACKNOWLEDGEMENT

The author wishes to express his sincere appreciation to the following:

1. Assoc. Prof. Dr. Darius Gnanaraj Solomon, the advisor of this project, for his invaluable advice and guidance throughout this project.
2. The technical staff of the CADEM Laboratory for loaning of equipment.
3. Miss Karimah Wan Zaid, for her brilliant ideas and on preparation of the report.

ABSTRACT

This project involved the development of conceptual ideas and initial designs layouts of a new Automatic Whiteboard Eraser mechanism. The mechanism is developed to be fast, easy to assemble and dissemble, can be install on any existing wall mounted whiteboard, manufacturable and low cost. Two programmes are developed using Microsoft Excel Spreadsheet to select and sizing the mechanism components. A working model of the developed mechanism was constructed to test its effectiveness.

TABLE OF CONTENTS

CONTENTS	PAGE

CHAPTER 1   INTRODUCTION

CHAPTER 2   LITERATURE REVIEW

1.0   INTRODUCTION

1.1   Background Of Project

Generally, a hand-held fabric eraser is usually used to erase characters written on a whiteboard. However manually cleaning of a whiteboard especially the bigger and longer one is very slow and tedious.

In order to overcome these situations, numerous types of auto erasing mechanism have been proposed by students from local institutions (polytechnics, UNITEN, UiTM, etc). Auto erasing mechanism proposed by UNITEN students use Cartesian robot to moves back and forth, horizontally on a whiteboard. Even though it sounds sophisticated, the cost is too high, which is superfluous for erasing a whiteboard.

This project was intended to provide an alternative of the existing automatic whiteboard erasing mechanism.

1.2   Objective Of Project

The aim of this project is to develop a new Automatic Whiteboard Eraser Mechanism that has the following specifications:

- Fast
- Can be install on any existing wall mounted whiteboard
- Easy to assemble and dissemble
- Manufacturable
- Low cost