

HIGHER TECHNICAL INSTITUTE

MECHANICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DEVELOPMENT OF A MULTIMEDIA INTERACTIVE COURSEWARE PACKAGE FOR INTERNAL COMBUSTION ENGINES

Project No.: M/884

Student: A. Panayi

Supervisor: P. Demetriou

HIGHER TECHNICAL INSTITUTE	PROJECT NO. 3172
----------------------------------	---------------------

**DEVELOPMENT OF A MULTIMEDIA INTERACTIVE
COURSEWARE PACKAGE FOR INTERNAL
COMBUSTION ENGINES**

by

Andreas Panayi

Project Report

Submitted to

the Department of Mechanical Engineering

of the Higher Technical Institute

Nicosia, Cyprus

in partial fulfilment of the requirements

for the diploma of


TECHNICIAN ENGINEER

in

MECHANICAL ENGINEERING

June 2000

HIGHER TECHNICAL INSTITUTE	PROJECT NO. 3172
----------------------------------	---------------------



*Dedicated to my
parents for their
great support in my
life*

Contents

CONTENTS	1
ACKNOWLEDGEMENTS	2
SUMMARY	3
INTRODUCTION	4
MULTIMEDIA AND EDUCATION	5
1.1 INTRODUCTION.....	5
1.2 WHAT ARE MULTIMEDIA APPLICATIONS?	5
1.3 REQUIREMENTS	6
1.4 VISUAL ELEMENTS.....	6
1.5 SOUND ELEMENTS.....	7
1.6 ORGANIZATIONAL ELEMENTS	8
1.7 MULTIMEDIA APPLICATIONS	8
THE MULTIMEDIA PACKAGE: USER MANUAL	9
2.1 ABOUT THIS MANUAL.....	9
2.2 SYSTEM REQUIREMENTS.....	9
2.3 SOFTWARE SETTINGS	10
THE MULTIMEDIA PACKAGE: RUNNING IT	11
3.1 INSTALLING SOFTWARE	11
3.2 MOVING TO THE MULTIMEDIA PACKAGE ON INTERNAL COMBUSTION ENGINES	14
3.3 INTERNAL COMBUSTION ENGINES.....	15
CONCLUSIONS	18
REFERENCES	19
APPENDIX I: GLOSSARY	21

Acknowledgements

As the author of this book and developer of the multimedia package on Internal Combustion Engines, I would like to express my thanks to the many friends, colleagues and supervisor, Mr P. Demetriou who provided me with suggestions and encouragement in the preparation and development of this project.

Summary

Although much technical literature and many books are available dealing with the design, construction and maintenance of various parts of the motor vehicle, the student seldom has the time to search through several sources for a solution to a problem or question. This project led to the development of a precise and clear description and explanation of the fundamentals on Internal Combustion Engines.

This project escapes from the traditional way of book writing, and makes a step forward in the world information technology. Rather than expressing the ideas on paper, they are expressed in data bits, composing this multimedia package. Consequently, the end user has the ability to interact with the material, since he can leap from one piece of information to another with just a single click on the numerous live hyperlinks. The extensive use of illustrations, animations, videos and voice, alongside with written material makes the multimedia package much more interesting to the end user.

Introduction

Internal Combustion Engines. Everyday life and comfort of the human being, depends to a great extent on this type of engines. As a result every mechanical engineer must know how to tackle with this engines.

The main objective of this project is to design and implement a multimedia interactive courseware package, which is to be used as an additional learning tool for the course of Plant Engineering I.

The multimedia package covers the syllabus on Internal Combustion Engines, fundamentals of combustion, gas turbines, and much more extensively reciprocating engines. These fundamentals are presented in the form of text, illustrations, animations, videos and voice.

In addition the multimedia package can be used as testing tool, since the end user can try and solve, the tutorials accompanying the package.

Moving a step further, the end user is not restricted just to the information presented in the multimedia package, as on-line links are available which help in the escape from the closed system of the personal computer, and guide the user in the endless world of information found on the World Wide Web.