VOICE SYNTHESIZER
(HARDWARE DEVELOPMENT)

Thesis is presented in partial fulfilment for the award of the
Advanced Diploma in Electrical Engineering of
INSTITUT TEKNOLOGI MARA

MOHD ANUAR BIN ZAKARIA
Department of Electrical Engineering
INSTITUT TEKNOLOGI MARA
40450 Shah Alam
JUN 1996

ACKNOWLEDGEMENT

ABSTRACT

This paper is concerned with the development of a microcomputer controlled security system. The system incorporates automatic dialling and message transmission through a telephone line. The scope of study involves the development of a voice synthesizing circuit that can produce messages in a Malay Language, which will then be transmitted to authorised personnel or organisation in the event of an emergency or breach of security.

This project covers two parts namely software (Onsaku Software) and hardware. The software is used for editing raw speech recordings. This includes amplitude amplification and attenuation, cutting, copying and insertion of selected excerpts.

VOICE SYNTHESIZER

(HARDWARE DEVELOPMENT)

CONTENTS   Page No.

<div align="center">**CHAPTER 1**</div>

1.0 INTRODUCTION

1.1 General

Speech has been used for tens of thousands of years as the primary means of providing information, instruction and amusement to people, and so it is natural that speech should be used as an output from information technology machines. Speech output can be integrated inexpensively into devices that are quite small and lightweight, devices such as calculators, pocket dictionaries and toys. Both-text-to-speech and stored speech can be implemented with a few integrated circuits small a small power source. [2]

Texas Instruments "Speak-and-Spell" in 1978 was the first speaking toys based on digital technology to be produced for the consumer market. Since that time, the market has seen talking calculators that speak their results and repeat each digit as it's entered, hand-held dictionaries and language translators that pronounce words entered on a keyboard, elevators that announce floors as they are approached and talking vending machines and appliances. [4]

Speech synthesis is the latest and most appealing technique which has been added to the array of microcomputer interfacing facilities. A small number of ICs generate the audio signals which are used to drive a loudspeaker. In so doing, words and sentences can be generated.

<div align="center">1</div>