CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

In this modern world full with vast growing technology, information is being transfer and convey into many form. Each of the information were conveyed by its specific need, like a computer server that store massive data that can be excess throughout the world in. Voice or speech recognition is the ability of a machine or program to receive and interpret dictation, or to understand and carry out spoken commands. As for this device, the information is being visually transmitted from the dot matrix display straight to the viewers by using voice recognition.

The necessary design and the creation of the remote programming device for LED display using an android OS system interface which includes the following component: Smart phone, LED display, Bluetooth module, arduino microcontroller and a basic circuit. The project is aimed to be used as an alternative way to program the LED display to ease the user the trouble to bring the display panel down from its usually high positioned place to the point that the LED display can be program from afar as the Bluetooth range can support.
The aim for this project is to design a working LED display that can be use and be program by any smart phone user using an android interface with an application specifically develop to use the Bluetooth capability of the phone and communicate with another Bluetooth module thus remotely program the LED display using a voice to sent the messages.

1.2 PROBLEM STATEMENT

The most common problem using the LED display comes when to reprogramming it. But these off-the-shelf units are somewhat inflexible in terms of updating the message instantly. If the user wants to change the message it needs to be done using a computer and the person needs to be present at the location of the display board. Furthermore, all voice-recognition systems or programs make errors. Screaming children, barking dogs, and loud external conversations can produce false input. There is also a problem with words that sound alike but are spelled differently and have different meanings.

1.3 OBJECTIVE

In this research, the objective is to design the mean to wireless transfer serial data from an android phone to send new voice message for the dot-matrix to display.

(i) To design and implement an arduino based led matrix scrolling display.

(ii) To integrate an android application that able to access the bluetooth capabilities in the phone.

(iii) To implement speech to text to convey the message.


1.4 SCOPE OF STUDY

In this research, the following works are to be completed

(i) Develop an application for android using (programming) software

(ii) Identify and study the component required to establish the Bluetooth connection and voice recognition.

(iii) Analyze the possible method of coding that enable the remote programming to be done.

1.5 OVERVIEW OF THESIS

This thesis consist of five chapters. The objectives, scope and problem statement is the topic being discuss in chapter 1. In chapter 2, there are the explanation of the method being conducted and what areas are tested in previous project. Furthermore, in chapter 3 is the methodology of the project including both hardware and software are presented. The result and the outcome of the project are documented in chapter 4. The last chapter which is chapter 5 contain the conclusion and future recommendation regarding of the project.