MOBILE APPLICATION: CAR IGNITION SYSTEM VIA BLUETOOTH TECHNOLOGY

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UNIVERSITI TEKNOLOGI MARA

MOHD HUZAIRI BIN JOHARI

Faculty of Electrical Engineering (Hons)

UNIVERSITI TEKNOLOGI MARA

40450 SHAH ALAM, SELANGOR

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ABSTRACT

Mobile application: car ignition system via Bluetooth technology has been develop and implemented. This project consists hardware and software development. For the hardware parts for this project are Rabbit Core Module (RCM 3100) with prototyping board, EmbeddedBlue506 serial module (eb506), bipolar junction transistor as a switch, car alarm remote and auto starter. The software Dynamic C is used to write and load the program into RCM3100. To start using this application, firstly, the unique address of Bluetooth mobiles for specific persons must be set. This was done during in programming process. It is done by load the program into the RCM3100 memory by using dynamic C. Then the system were let in standby and wait for Bluetooth connection. When Rabbit detected trusted Bluetooth signal, the LED on the car remote will turn on twice. Then, the car engine will get started after a few seconds. Auto Starter must be installed to the existing car alarm system to use this application. This system only ignites the car engine by using mobile phone. The car doors are still locked but the engine will keep running. The advantages of this project it can transmit a Bluetooth signal without need a line of sight and less interference. In heavy rain condition the signal are low and sometimes it can not detected the signal.

Keywords: Bluetooth, RCM3100, WPAN, Mobile Phone, Auto Starter

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CHAPTER 1

INTRODUCTION

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The Bluetooth Special Interest Group (SIG) defines Bluetooth as worldwide specification for small form factor, low cost radio solutions that provide links between mobile computers, mobile phones, other portable devices and connectivity to the Internet. IEEE defined Bluetooth in different approach which is it is a standalone protocol stack that includes all layers required by an application [1]. This means that it encompasses not only wireless communications but also service advertisement, addressing, routing etc.

There are several factors that facilitate the Bluetooth widespread adoption. It is an open specification that is publicly available and free. Second, it has short-range wireless capability that allows communication over a single air interface and without cables. Furthermore, Bluetooth supports both voice and data, so to enable many types of devices to communicate.

A mobile phone is a long-range, portable electronic device for personal telecommunications over long distances. In fewer than twenty years, mobile phones have gone from being rare and expensive pieces of equipment used primarily by the business elite, to a pervasive low-cost personal item. But the most feature that give more advantages to mobile phone is the bluetooth technology. With bluetooth it can transmitted and received data more effective and for free. Bluetooth technology often referred to as a cable replacement, where it is used in camera, computers and majority of the chipsets are included in mobile phones.

Since consumers nowadays are highly dependent on having a mobile phone, Bluetooth technology is spreading because of the general need for mobile phones. Number of useful applications of Bluetooth is increasing and many consumers have already started to use