INFORM DEPARTURE AND ARRIVING OF BUSSES USING BLUETOOTH

By

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APPROVAL AND DECLARATION SHEET

This project report titled Inform Departure and Arriving of Busses Using Bluetooth was prepared and submitted by Mohd Suhkri bin Yasri (Matrix Number: 031080290) and has been found satisfactory in terms of scope, quality and presentation as partial fulfilment of the requirement for the Bachelor of Engineering (Communication Engineering) in Universiti Malaysia Perlis (UniMAP).

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I declare that this thesis is the result of my own research except some quotations of which i have cited the sources in the refference section. I furthermore declare that this thesis is not concurrently being submitted for any other degrees.

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ABSTRAK

Bluetooth ialah satu teknologi baru dalam bidang komunikasi tanpa wayar. Keupayaan Bluetooth berfungsi pada punca kuasa yang kecil tetapi pada jarak yang jauh telah berjaya menambat hati pengguna alatan mudah alih seperti telefon bimbit dan computer peribadi menggunakan teknologi ini.

Dalam era teknologi moden, pengguna lebih cenderung mengunakan teknologi yang mudah dan tidak memerlukan wayar untuk mendapatkan sesuatu maklumat. Kebanyakkan daripada kita cenderung menggunakan aplikasi tanpa wayar dalam kehidupan kita.

Projek ini akan membincangkan bagaimana untuk mendapatkan maklumat tentang ketibaan dan pelepasan bas menggunakan teknologi Bluetooth. Pengguna akan berupaya mendapatkan maklumat tentang perjalanan mereka menggunakan telefon mudah alih yang mempunyai teknologi Bluetooth daripada satu server yang berfungsi menyimpan dan menyalurkan maklumat terperinci tentang perjalanan penumpang.

Maklumat yang tersimpan pada server hanya akan disalurkan kepada pengguna yang ingin mendapatkan maklumat tersebut untuk menjamin keselesaan kepada pengguna lain yang tidak menggunakan aplikasi ini. Keseluruhan perjalanan projek dan cara membangunkan sistem ini akan di terangkan lebih lanjut dalam tesis ini.

ABSTRACT

Bluetooth is a new technology in the wireless communication system. Bluetooth become the best technology that work in short range and using low power comsumption to work. Because of its low power consumption and ability, the mobile device user is preferred to use this technology.

Nowaday, wireless technology is popular among the users. Most of us use this kind of technologies in our day time. The application of wireless technology can be used to send and receive a file without need us to connect to the application provider.

This project will discuss about an application to inform passenger the departure and arriving of busses using Bluetooth connections. Passenger will able to receive a notification about their journey detail from a server using the mobile phone. The server itself will keep the data information about the journey details.

The information about the journey details only available on request. This will keep the others Bluetooth user that not using this application from receiving the data from server. The detail about the process to design and develop this system will be explained in this thesis.

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MHz	Mega Hertz
GHz	Giga Hertz
Kbps	kilo byte per seconds
m	meter

LIST OF ABBREVATIONS

PA	Public Address
GUI	Graphical User Interface
J2ME	Java 2 Micro Edition
IDE	Integrated Development Environment
PC	Personal Computer
PDA	Personal Digital Assistant
HCI	Host Controller Interface
ISM	Industrial, Scientific and Medical
IEEE	Institute of Electrical and Electronics Engineers
FHSS	Frequency Hopping Spread Spectrum
AFH	Adaptive Frequency Hopping
NIC	Network Interface Cards
SCO	Synchronous Connection Oriented
ACL	Asynchronous ConnectionLess
QoS	Quality of Service
L2CAP	Logical Link Control and Adaptation Protocol
IAC	Inquiry Access Code
GIAC	General Inquiry Access Code
LIAC	Limited Inquiry Access Code
SDP	Service Discovery Protocol
UWB	Ultra Wide Band
J2SE	Java 2 Standard Edition
API	Application Programming Interface
GAP	Generic Access Profile
CLI	Command Line Interface
URL	Uniform Resource Locators
UDP	User Datagram Protocol
SDDB	Service Discovery Database

MIDP	Mobile Information Device Profile
JTWI	Java Technology for the Wireless Industry
MSA	Mobile Service Architecture
CLDC	Connected Limited Device Configuration
SMS	Short Messaging System
LCD	Liquid Crystal Display