SMART KEYTRACKER MOBILE APPLICATION VIA BLUETOOTH AND GPS

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This report is submitted in partial fulfillment of the requirements for the
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DECLARATION

I hereby declare that this project report entitled

SMART KEYTRACKER MOBILE APPLICATION VIA BLUETOOTH AND GPS

is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT : _____ Date : _____
(MUHAMMAD HASIF BIN HAMDAN)

I hereby declare that I have read this project report and found this project report is sufficient in term of the scope and quality for the award of Bachelor of Computer Science (Computer Networking) With Honours.

SUPERVISOR : _____ Date : _____ (EN. ARIFF BIN IDRIS)

DEDICATION

Securing File Sharing in Mobile Application Using Steganography Approach are dedicated to my parent Mr. Hamdan bin Hashim and Madam Rosnani bte Abdul. My deepest dedication also goes to my final year project supervisor, Mr. Ariff bin Idris. Finally, I would like to dedicate this system to the entire lecturer of Faculty Information and Communication Technology whose teach me from zero to what I am capable of and to my classmate that support me and give some idea in developing the project.

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In the name of Allah, the Most Gracious and the Most Merciful.

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Bearing in mind, I am using this opportunity to express my deepest gratitude and special thanks to my parent and family members because always give me a word of encouragement and taking part arranged all facilities to make my work easier.

Finally, I would like to give a special thanks to my classmate for their cooperation and always helping me to develop the system and writing this report. I will strive to use gained skills and knowledge in developing this final year project in the best feasible way.

ABSTRACT

"Keychain Tracker" is mobile application for tracking misplace things that combining two methods and will give two types of service. First method will use GPS to get the longitude and latitude and the last method is Bluetooth. Tracking will be using signal strength from Bluetooth ang GPS provide latitude and longitude. This combination will give function to track for the long distance and the short distance. This application was built because of people always forgot where put their things and no specific tools can search by using GPS and Bluetooth. The methodology consist of the Object-Oriented Analysis and Design (OOAD) approach to software development, the used of the Unified Modelling Language (UML), which supports the approach and life cycle model to structure the development process. This project is limit to the android based operating system and version of android are used. This project make people more care about their important things and it will make tracking function more easily and effective.

ABSTRAK

"Keychain Tracker" adalah aplikasi mudah alih bagi mengesan barangan yang hilang dengan menggabungkan dua kaedah dan akan memberikan dua jenis perkhidmatan. Kaedah pertama akan menggunakan GPS untuk mendapatkan longitud dan latitud dan kaedah terakhir adalah Bluetooth. Penjejakan akan menggunakan kekuatan isyarat daripada Bluetooth, manakala GPS mendapat lokasi latitud dan longitud. Kombinasi ini akan memberikan fungsi untuk mengesan jarak jauh dan jarak pendek. Aplikasi ini dibina kerana orang selalu terlupa di mana meletakkan barangan penting mereka dan tiada alat yang boleh mencari dengan menggunakan GPS dan Bluetooth. Projek ini menggunakan kaedah pendekatan Object-Oriented analisis dan reka bentuk (OOAD) pembangunan perisian, yang digunakan untuk disatukan pemodelan Bahasa (PUM), yang menyokong pendekatan dan model kitar hayat untuk struktur proses pembangunan. Projek ini adalah had sistem operasi berasaskan android dan versi android digunakan. Projek ini membuat orang semakin berhati-hati tentang barangan penting mereka dan ia akan membuat penjejakan fungsi lebih mudah dan berkesan.

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INTRODUCTION

1.1 Background Study

The tracking system is an electronic device(hardware) and combination with mobile application(software) that tracks the location. Most of the tracking systems use GPS module to locate the vehicle's position (A. EI-Rabbany, 2006). Many structures also combine verbal exchange components together with satellite TV for pc transmitters to communicate the hardware's area to a far-flung user. Google maps are used to view the hardware's vicinity. This mission will focus on two service to perform the tracking utility. First is GPS and second is Bluetooth.

The Global Positioning System was conceived in 1960 under the monitoring of the U.S. Air Force, but in 1974 the other party of the U.S. military have co-joined the

effort. The first satellites were launched into space in year 1978. The System been declared fully operational in April 1995. The Global Positioning System include of 24 satellites, that circle the earth once every 12 hours, to give information of worldwide position, time and velocity information. GPS makes it possible to correctly identify locations on the earth by measuring distance from the satellites. GPS allow you to file or create places from places on this planet and help you navigate to and from the any locations. The device become originally designed only for navy usage and it wasn't until the 1980's that it become civilian used technology.

GPS divided into 3 segments:

The Space segment: the space section includes 24 satellites circling the earth at 12,000 miles in altitude. This high altitude lets in the indicators to cover a more location. The satellites are arranged of their orbits so a GPS receiver on the earth can constantly obtain a sign from as a minimum 4 satellites at any given time. each satellite tv for pc transmits low radio indicators with a unique code on unique frequencies, allowing the GPS receiver to discover the alerts. the principle purpose of these coded signals is to permit for calculating journey time from the satellite to the GPS receiver. The journey time expanded through the velocity of mild equals the gap from the satellite to the GPS receiver. due to the fact, these are low strength signals and receiver's journey thru strong gadgets, it is crucial to have a clean view of the sky. (A. EI-Rabbany, 2006).

The Control segment: The manage segment tracks the satellites after which gives them with corrected orbital and time statistics. The manipulate section consists of four unmanned manipulate stations and one master control station. The four unmanned stations get hold of statistics from the satellites and then ship that statistics to the grasp control station in which it is corrected and despatcher lower back to the GPS satellites.

The User segment: The user section includes the customers and their GPS receivers. The range of simultaneous customers is countless.

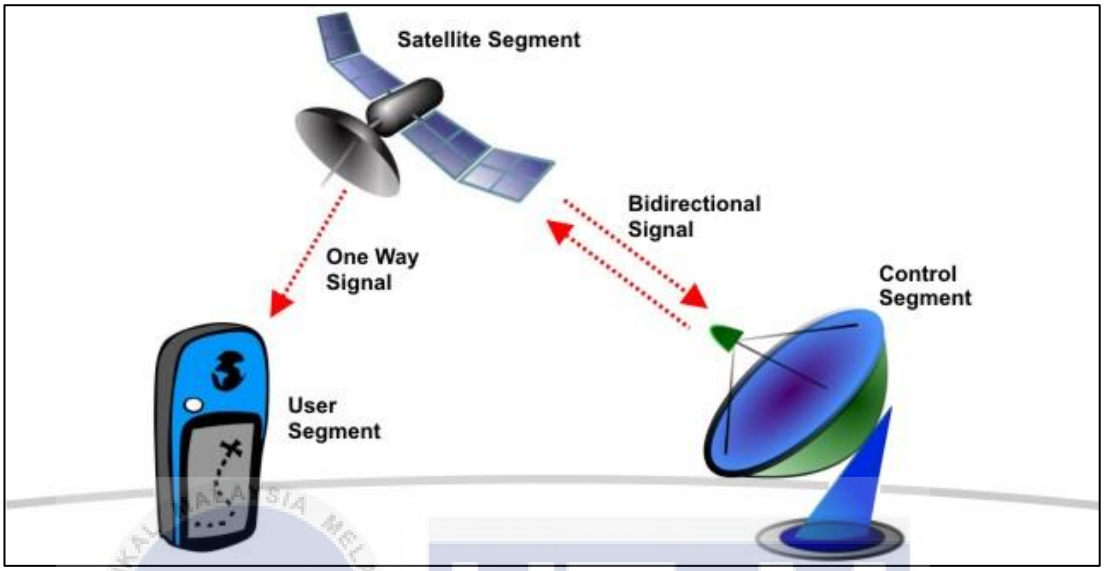

Figure 1.3 Segment of GPS

A Bluetooth with different version give the different limit of range. It depends on what version used. For the latest version is Bluetooth version 4.0. it supports until 50 meters for each diameter. Main Bluetooth will sent the signal to the point and the signal will return back to the main.

1.2 Problem Statement

Nowadays, there are several issues that always discuss from the public user about track misplace thing. The problem that issue are :

Table 1.1 Problem Statements

PS	**Problem Statements**
PS_1	Users always forgot where their put their things or the last time their using it.

PS_2	No tool has two services in one device.
PS_3	Existing application only give the notification but cannot give the distance between application and device.

1.3 Project Questions

Table 1.2: Project Questions

PS	PQ	Project Question
Q	PQ_1	What is the available way to find the misplace thing?
	PQ_2	What suitable technique to tracking misplace thing?
	PQ_3	What we want if we have tracking application?

1.4 Project Objective

To solve the problem identified as in Section 1.2, three objectives are derived such as;

Table 1.3: Objective Project

PS	PQ	PO	Objective Project
PS_1	PQ_1	PO_1	To create mobile application to track misplace things.
		PO_2	To develop combination Bluetooth and GPS technique to track misplace things.
		PO_3	To prevent the forgotten or missing important items.

1.5 Project Scope

The scope for this project are:

I. This project limit to android OS only.
II. Signal is disturbing with noise and obstacle.
III. The functionality of the project is limited to the hardware (mobile phone) capability.

1.6 Expected Output

This application will satisfy all the objective that stated above. So, user can be used it to resolve all the problem that their facing. This project also is to prove that GPS and Bluetooth is the best method to track the misplace things

1.7 Report Organization

Chapter II: Introduction

This chapter explained about the definition, background study, problem statement, objective, scope and expected output related to the tracking application.

Chapter II: Literature Review

This chapter elaborated about mobile application, long distance tracking(GPS), short distance tracking(Bluetooth), and alarm system reminder. It will help to more understanding about what is the tracking application.

Chapter III: Methodology

This chapter provide a decision of the method of development that will be carry out to develop thus project. With certain method of development will help to develop the system in less time required and easy for system testing and correction.

Chapter IV: Design and Implementation

This chapter will have explained in detail the design phase of the system such as:

I. Specifies the preliminary design and the detailed design of the system.
II. Specifies the Graphical User Interface design.

After that, the design decision will be implemented into the software code and logic process.

Chapter V: System Testing

On system testing stage, it will explain about the designed and documented that carried out to identify the test case and expected result. A test case is documented set of data input and operating condition required to run a test item for the expected result for each system modules.

Chapter VI: Conclusion

This chapter compile the entire chapter in a final documentation and state the contribution that able to provide for future works.

1.8 Summary

"Keychain Tracker" is mobile application for tracking misplace things. This application will be combining 2 methods and will give 3 types of service. First method will use GPS to get the longitude and latitude of the tracking long distance and the last method is Bluetooth. This application use strength of the Bluetooth signal to find the thing in a short distance. Furthermore, first service that this application provide is track the things for the long distance by using GPS. Next, second service is track in the short distance and always remind user for things by using strength of Bluetooth signal. This Keychain Tracker will be develop using JAVA programming language while device will use portable GPS and Bluetooth chip. (A. EI-Rabbany, 2006). The Objective of the system is easy to track misplace things. Furthermore, this system to prevent from misplace things. Lastly, to develop simple application for easy to use and more user friendly. This project methodology adopts the Object-Oriented approach. The methodology is used because it provides conceptual structure that help to deal with modelling information system including development of its sub-system. The methodology consists of the Object-Oriented Analysis and Design (OOAD) approach to software development, the used of the Unified Modelling Language (UML), which supports the approach and life cycle model to structure the development process. The expected outcome of this project is a fully develop mobile application that allow user to track them misplace things

Chapter II

LITERATURE REVIEW

2.1 Introduction

The previous chapter has been discussed the problem statement, objectives and the scope of this project. In this chapter, it will explain about the related topic as shown in Figure 2.1. The literature is based on the several resources such as journal articles, proceeding, technical report and white paper.

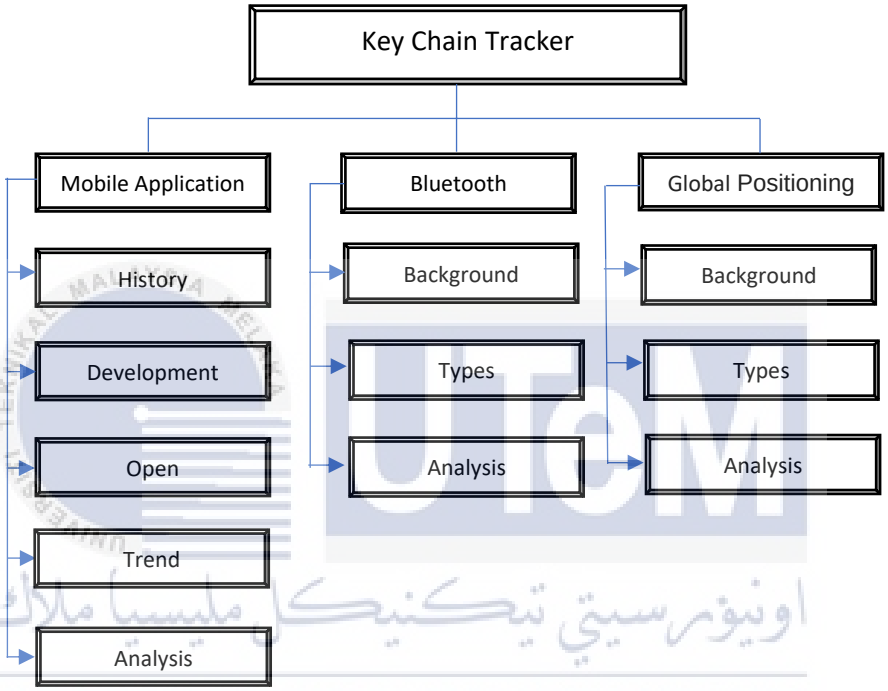

Figure 2.1 Keychain Tracker

2.2 Mobile Application

In this section, the history, development platform, and analysis of mobile application are elaborated and analyzed

2.2.1 History of Mobile Application

Mobile communication is so incorporated into our lives that many humans feel uncomfortable without a cellular phone. Last ten years in the past, cell cellphone most effective for calling and sending a text. But now, mobile cellphone is sensible small pc which have multifunctional that could help people to improve their excellent life.

Cell programs flow decreases lower back to the finish of the 20 th century. Typically, they had been small arcade video games, ring tone editors, calculators, calendars, and so on. The begin of the emblem-new millennium noticed a fast marketplace evolution of mobile content material and programs. Further, sort of going for walks structures for smart telephones like domestic home windows mobile, symbian, rim, android, and mac ios, are open to the development of third-party software program software, in assessment to the conventional programming surroundings of large mobile telephones.

In recent times, manufacturers attempted to make their merchandise greater attractive for customers with the aid of introducing increasingly applications. But best subjects as nicely. Mobile smartphone improvement needs to be easy and intuitive. Each corporation tries to facilitate the system of improvement in order that customers can customize their devices.

In history, The Motorola DynaTAC 8000X was the first commercially available cell phone. First marketed in 1983, it was 13 x 1.75 x 3.5 inches in dimension, weighed about 2.5 pounds, and allowed you to talk for a little more than half an hour and It retailed for $3,995, plus hefty monthly service fees and per-minute charges. It only can have made calls, and there was a simple contacts application included in the operating system.(Applications, 2107)

First-generation cellular telephones were designed and developed with the aid of the handset producers. competition turned into fierce and change secrets have been carefully guarded. They didn’t want to show the secrets and techniques and strategies of their handsets, simply so they evolved the phone software program program in-