Mobile Map-Based Positioning System Using Segmentation Algorithm

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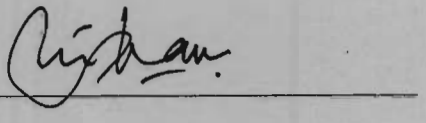
(Signature) : 

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ABSTRACT

The rapid deployment of mobile technology has increasingly provided people and organizations with ability to work away from office and be always on run. The mobile technology was developed to create ubiquitous environment where information can be access at any place and at any time. In the positioning process, the navigator needs to identify the position of his/her final destination in order to reduce any required efforts, and to make the right decision to choose the most suitable way. Knowing the locations is important in the navigation strategy. The major aim of this research is to provide the Navigators with information about his/her final destination according to his/her current location during the navigation. The research has targeted on UUM vital buildings. Vaishnavi and Kuechler Methodology has been implemented in various applications and it considered as a general methodology to develop totally new algorithms and create new information according to the accumulated information. This paper reports steps to build a segmentation positioning algorithm and to implement Mobile Map-Based Positioning System prototype.

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LIST OF ABBREVIATIONS

API	Application Programming Interface
ASP	Active Server Pages
CEPT	Conference of European Posts & Telegraphs
CIMD	Computer Interface to Message Distribution
CLR	Common Language Runtime
ETSI	European Telecommunication Standards Institute
GPRS	General Packet Radio Service
GSM	Global System for Mobile communications
HTTP	Hypertext Transfer Protocol
IIS	Internet Information Services
ISDN	Integrated Services Digital Network
LMS	Learning Management Systems
MMS	Multimedia Messaging Service
MM-BPS	Mobile Map-Based Positioning System
MO	Mobile Originated
MSIL	Microsoft Intermediate language
MT	Mobile Terminated
ODL	Open and Distance Learning
PC	Personal computer
PDA	Personal Digital Assistant
PMB	Pos Malaysia Berhad

POP3	Post Office Protocol version 3
PU	Plovdiv University
RS232	Recommended Standard 232
SIM	Subscriber Identity Module
SMS	Short Messaging Service
SMEs	Subject Matter Experts
SMSC	Short Message Service Center
SMTP	Simple Mail Transfer Protocol
SPSS	Statistical Package for Social Sciences
TAP	Telecor Application Protocol
UCP	Universal Communications Protocol
UML	Unified Modeling Language
UNISA	University of South Africa
URL	Uniform Resource Locator
USB	Universal Serial Bus
UUM	Universiti Utara Malaysia
WAP	Wireless Application Protocol
3G	Third Generation
3GPP	Third Generation Partnership Project

CHAPTER ONE
INTRODUCTION

Since the earlier ages of using the technology; the inventors and scientists were always trying to create methods and develop techniques in order to achieve the most flexible and easiest ever life for the humanity.

Nowadays; the wireless technology considered as one of the most important and common technologies which can be used in several applications. One of those applications is the mobile technology which occupies a wide area of our daily life; since it is very rarely to find any person did not own a mobile phone; moreover the mobile devices are considered as a very flexible devices; since they are easy to use and to be carried out every where by the users.

Mobile guides and navigational assistants have come a long way since the first re-search prototypes. At the moment; there are not only many different re-search projects working on the topic; but there are also several commercial services available to mobile phone users and car drivers (Baus *et al.* 2004).

So; it is very useful and convenient to increase the mobile efficiency and extend its usage during our daily life.

1.1. Problem Statement

There is no suitable technique displays map on the web-enabled mobile phones using a convenient way including the required positioning information. Moreover; the current

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