

# Navigating the Current Location without the Availability of GPS

Karan Mahajan, Manish Mahajan

**Abstract-** Today in this world we are surrounded of technologies like smart phone technology. In smart phone there is an option GPS that is being used these days very much for checking in our location and navigate the google maps. But what about those cell phones which are having ANDROID operating system but no having option of GPS. This paper deals with the NAVIGATING THE CURRENT LOCATION WITHOUT THE AVAILABILITY OF GPS. Because GPS is having some limitations. First GPS may or may not be available in all smart phones. This application which we developed will work in the phones which are not having feature of GPS.

**Keywords:** GPS, LBS, GIS, MGIS, Android, Eclipse, SQLITE3, PDA, Toast.

## I. INTRODUCTION

Recent years have seen an increasing interest in the open source movement as a new paradigm for software development. Geological field data collection is vital for geologists. The primary objective of data collection is that the raw data collected must be accurate. Geological field data are always varying, greatly affected by the various factors and more difficult to be informationized compared with remote sensing data and mapping data[1]. This practice was being made by hand with paper and then manually entered into Geographic Information System (GIS) databases once in the office, which is time-consuming. Introducing Mobile GIS Technology in combination with Global Positioning System (GPS) technology, data in the field is stored digitally and it is ready for treatment back in the desk. The extension of a GIS from the office into the field is Mobile GIS. It allows to access, capture, store, and update, manipulate, analyze, and display geographic information directly in the field.

### A) MOBILE GIS

A Mobile Geographic Information System (M-GIS) can be defined as the subset of an LBS. Whereas an LBS extends spatial information processing or GIS capabilities to end users via the Internet, an M-GIS limits that extension to only mobile devices, as to create an abstract "portable GIS", therefore an application that delivers geographic information to a non mobile device will be defined as an LBS. An application that delivers geographical information to a mobile device, will be classified as an M-GIS. A Mobile-GIS can also be define as an extension of Geographical Information System so as to deploy leverages map and data on the Mobile Devices. [2]

Manuscript published on 30 February 2013.

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Mobile Geographical Information System (Mobile GIS) is a Geographical Information System based on mobile computing and mobile Internet. It is not a conventional GIS modified to operate on a smaller computer, but an extension of Web GIS to mobile Internet including wireless Internet/Intranet and mobile communication network. But architectures of Web GIS are unsuitable for Mobile GIS, because of several bottlenecks such as the low-bandwidth of wireless network, the diversity of mobile devices, limited processing power and screen display limitation of mobile devices and the diversity of mobile system platform. With the emergence of Mobile GIS, GIS application system will not be used only in professional area; but also it can be widely used by the public, in the meantime GIS system will become a new kind of service that the general consumers can apply and use this kind of service. Instead of the traditional software and spacious data, the deployment of Mobile GIS will change into a new kind of service which the general consumers can purchase by wireless internet, for example, Navigate service, Moving object monitor Service etc. Mobile GIS application system will make the GIS technique be used and shared broadly into the everyday life the public, it will become popular. Moreover, Once GIS is conscious by the public, GIS industry will develop greatly and rapidly.

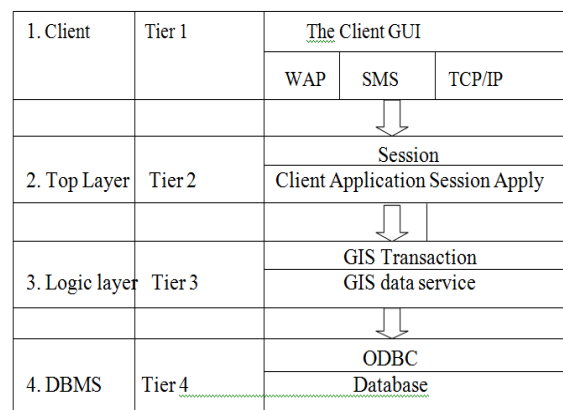


Figure 1: The Logic Diagram OF Mobile GIS

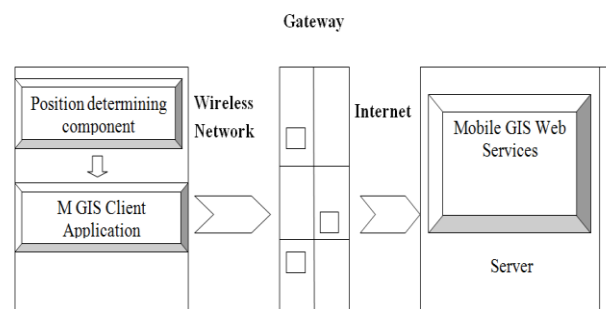
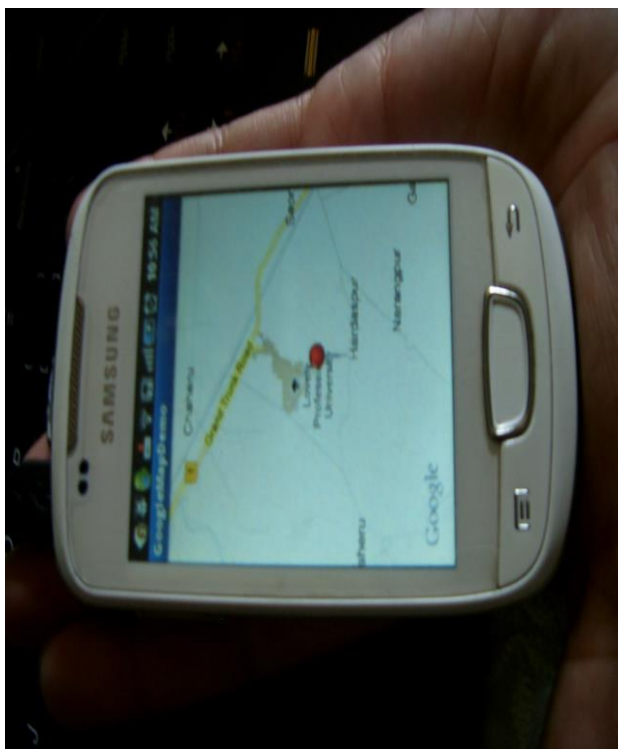


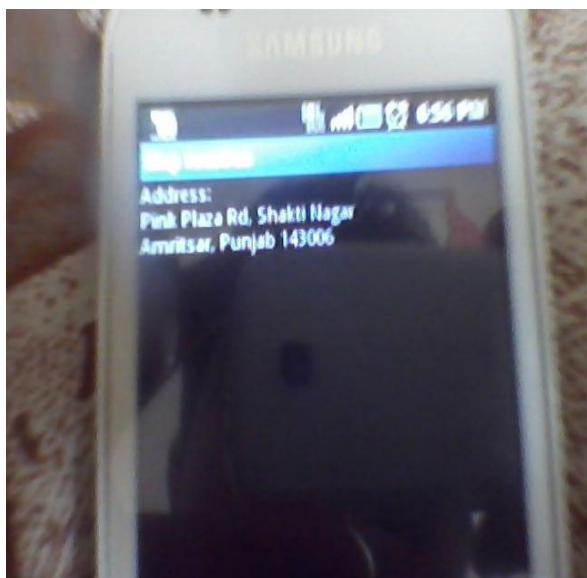
Figure 2: Overall Architecture of Mobile GIS

## II. NAVIGATING CURRENT LOCATION WITHOUT AVAILABILITY OF GPS

The main objective was to implement google maps in smart phones without GPS. For this firstly the latitude and longitude of current location has to be fetched. After fetching these latitude and longitude they should be made available on google maps. After displaying them on map these latitude and longitude are to be stored in a TOAST. Toast is a message box used in android to display message. Then process of geocoding is applied on these stored latitudes and longitudes. Geocoding converts the latitude and longitude in the proper address. This work is done in ANDROID 4.0 using ECLIPSE SIMULATOR. It should be helpful in smart phones which are not having option of GPS. This application help them to navigate current location without GPS.



**Figure 3 : Accessing google map without GPS showing current location**



**Figure 4 : Navigating current location without GPS**

## III. CONCLUSION DRAWN

Maps have a definite role to play in a Mobile GIS environment. In their dynamic appearance they will guide and assist the user in solving problems related to geographics. This can be proved with the help of this work that with the increased availability of mobile devices, proper software and abundant data, maps can play these various roles anywhere and at any time. This can help the persons to navigate current location in smartphones without GPS.

The geocoding of latitude and longitude is done by which latitude and longitude are converted to proper address in the form of string and is stored in database.

## IV. FUTURE RECOMMENDATIONS

The future recommendation for this work can be in implementing:

- It may take a long time to establish a connection between a client and the server on a wireless network. So, the latency time should kept minimum.

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