

## ELECTRONIC DOCUMENTATION FORM

**Thesis Title** : Mobile GIS based Shopping Assistant System  
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### Expert Comments:

Someday soon shoppers using a wireless pocket PC may be able to interact with a store's computer system to visualize floor plan maps of shopping malls, locate items and learn about special promotions. Shoppers may soon be able to discard paper lists and use a pocket PC to assist with their purchases.

Shopping assistant is a system which will work on a wireless Pocket PC with functionality of easy shopping, location of a customer inside the shopping mall, finding /browsing the exact shop according to one's choice and needs /requirements of the customers.

The thesis investigates the various components within a mobile GIS and considers the way they will interact from an operational perspective. The Thesis work involves development of a Mobile GIS based Shopping Assistant System. The mobile devices will have the integrated capabilities of WebGIS.

### *How technology can help shopper and improve business???*

*I realized one thing that many customers especially foreigners – complained that: it is waste of time, and also difficult to find a specific item inside a “forest” of products; moreover, they really need consultant when roaming inside the mart.....*

That was why one had to hire staffs and paid much to train them just to guide the customers, this is also a common issue for all the medium and large supermarkets.

The shopping assistant E-Shopping is born to solve that issue; the “E” envisions:

***“Everything is Easier for Everybody on Every time”.***

Overall, it provides shoppers all information they need to make an enjoyable shopping by the aid of a shopping digital assistant. E-Shopping does this by providing rich information and services via a network-enabled mobile device, giving them direct access to the valuable information quickly and easily.

A concept of portable digital shopping assistant is planned to be developed using Mobile - E-Shopping Solution become popular able to remove human's role and effectively contribute to the development one's business. It is also able to apply at any other kind of business like: museum, library, tourism places, etc.

### **Recommendations for Future Work**

The system developed in this thesis is a concrete in real time applications such as shopping center, museums, office buildings, duty free shopping Mall at airport, tourism, environment, e-government, etc.

Applying this system in real time applications will let the developer faster decision making and processing in building up the applications.

With regards to wireless/Internet component, further investigation with respect to reliability, data transfer capabilities and latency are warranted with use of latest developing wireless technologies such as CDMA and 3G.

This system can also be incorporated in software and database development business for mobile devices. Radio frequency Identification Tag (RFID) or smart label readers can also be incorporated with the pocket PC which comes with a reader and a Tag which helps the system to work more effective and robust.

In the last to over come many limitations, this system can be developed as a offline system. The system can be developed by using Visual net or embedded technology e.g. embedded visual dot net and database can also be designed in kiwi format.

For recommendation or feed back the author can be contacted by E-mail on the address , [katiyarkapil@hotmail.com](mailto:katiyarkapil@hotmail.com)

### **Abstract:**

Geographic Information System (GIS) is coming up with integrated wireless technologies for implementing in real time applications. OpenGIS enables spatial data sharing and system interoperability, which leads to data integrity, timeliness and hinders data replication. The shopping assistant E-Shopping is developed to solve that issue; the "E"envisions: *"Everything is Easier for Everybody on Every time"*. It provides shoppers all information they need to make a convenient shopping by the aid of a shopping digital assistant. E-Shopping does this by providing rich information and services via a network-enabled Pocket PC, giving them direct access to the valuable information quickly and

easily. The commercial software's developed for wireless applications do not provide a system in one suite for real time applications. The methodology designed and developed in this study is describing an Open Source wireless system for map visualization, data updating, uploading and retrieving in real time. The concept of portable digital shopping assistant using E-Shopping Solution become popular able to remove human's role and effectively contribute to the development one's business. Open Source software's and freeware packages, e.g. Minnesota Map Server, Apache web server, JBox, PHP, MYSQL and PHP are the foundation of this study. The integrated system demonstrates that reliable spatial data updating can be done in real-time. It is also able to apply at any other kind of business like: museum, library, tourism places, etc.

**Keywords:**

Open Source Technology, Mapserver, Shopping, PHP, MYSQL, Apache, Jbox, Applet, MobileGIS, Wireless GIS, Client Server Architecture, GIS

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