Augmented Reality using Android Application

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Abstract— The main objective of our project is to help people to reach destination in very less time and help them to make easy to found out their particular destination in virtual view. The virtual view support higher time accuracy and less searching work so that it make easy to stranger person who are new in their particular places. Other application requires more information of the user to provide their destination details. But in our application User just provide their basic information and our application will provide particular view according to that information. Suppose the user is new to place and doesn't know anything about that area so our application makes that easy to know surroundings. It highly dependent on GPS based navigation so the Work will become less to User.

Key words: Mobile base augmented reality, tracking, ARToolkit

I. INTRODUCTION

Android + Mobile combination has created the large spike in the world with their mobile application. This has inspire the creation of mobile application many different forms but one of the forms which has seen so far the most promising is the implementation of mobile based augmented reality application(AR). This application serve combine virtual data in an interactive way with the physical reality of the mobile devices surroundings.

This new technology has wide spread applications from merely created more interactive games to aiding in highly technical and complex building Project. In AR 3D virtual object are integrated into real environment in real time using mobile devices.

With the implementation of augmented reality to fine distance from current location to destination using available data sources. Our application uses GPS system to track the current image streaming from the mobile device and locate various check points from the available datasources like Wikipedia, Google BUZZ, Twitter, and display various location and tweets. The project 'Mobile Based Augmented Reality' will basically deal with addition of information and meaning to a real object or place. Unlike virtual reality, augmented reality does not create a simulated reality. Instead, it takes a real object or space and uses technologies to add contextual data to deepen understanding of it.

II. MODEL

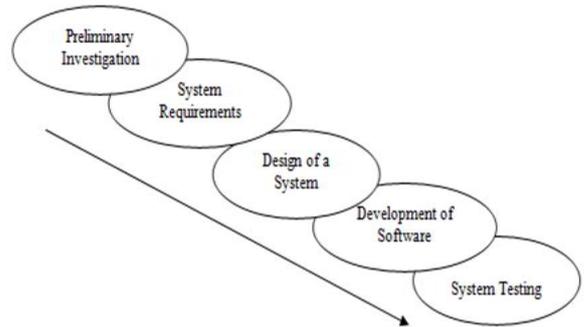We have used waterfall model. Is has Five stages in it: Requirement, Design, Coding, Testing, Maintenance

Fig. 1: Different phases of the Model

1) Requirement Phase: Basic requirement are gathered during the planning stage.
2) Design Phase: Front end and Back end is decided.
3) Engineering Phase: In this phase software is developed and testing is also done.
4) Evaluation Phase: This phase allows customer to evaluate the output of the project.
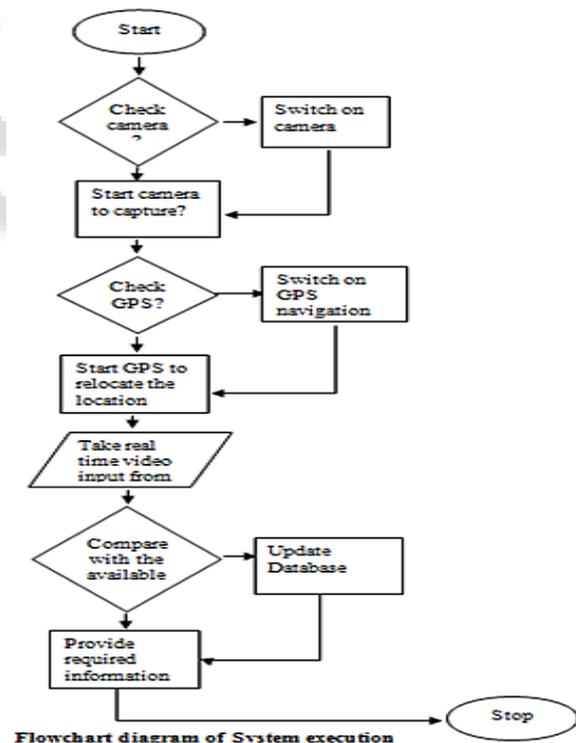
III. FLOWCHART

Fig. 2: Flowchart

A. Hardware Requirement

− Display drive that should support 32-bit color scheme.
− Mobile device should have good resolution of capturing images(3.2 megapixel+)
− It should have significant graphic drivers which can suite well to the application
− Minimum of 128 MB RAM is required in System.

- Mobile should support GPS navigation, and incorporated with good bandwidth of network speed and bandwidth for image tracing for check points
- The processor preferably should be Pentium III or above /its equivalent.

B. Software Requirement

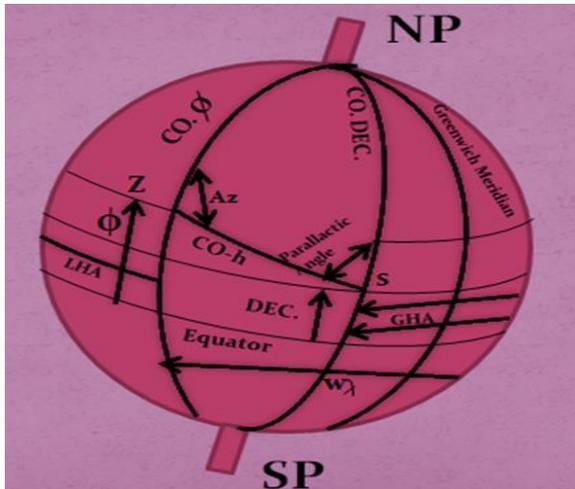- Android Operating system(min version 2.2 and above)

IV. AZIMUTH ALGORITHM

Fig. 3: SP

A. Screenshots

Fig. 4:

Fig. 5:

Fig. 6:

Fig. 7:

V. FUTURE SCOPE

- Local data store can be implemented
- 3D graph view as well as street view will be provided.
- Google maps can be implemented as source and destination pinpoints

VI. REASON FOR USING JAVA

- Following are the reasons for using the Java
- Java will help in doing the operations at the bit level in implementing image files and incorporating with Android application.
- Since our application is user interactive and it needs navigation through GPS system, Java can be used implementing those in the application development.
- The Object-Oriented concept can be used for reusability of the application and is very good for Incremental Model of software development which we will be used.
- Since we are using Android SDK we need to import its packages, Java provide quite simpler implementation of package import and its overriding
- Java provides various streams for handling files; it also has classes rendering images.

VII. CONCLUSION

The presented platform is still under development, though several feature could be implemented, such as calculating length of shadow, compensating for rainy, snowy, cloudy weather, where most of the object tend to have no shadows since no distortion is very high and the object is in illuminated almost from all sides. Another important factor that could affect the experience of the user is the quality of the camera in their mobile device since modem mobile devices are equipped with autofocus and have automatic exposure correction.

REFERENCES

[1] www.java.sun.com
[2] www.wikipedia.com
[3] www.youtube.com/videos
[4] developer.android.com/guide/basics/what-is-android.html.