

## **WOWBatangas: An Android Based Tourist/Traveler Navigator Assistant**

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### ***Abstract***

Cellular phones are today's most used technology in human decade. As phones become popular more and more people use it as the year come. Phones came from simple communication devices use by people and now it is widely use as all around portable mobile computers by people. The developers create an android application that helps to promote tourism in Batangas province and create a more efficient way of finding locations and destinations of people, especially the foreign tourist visiting the area. It will serve as a mobile map and reference in the province's available churches, hotels, malls, markets, parks, resorts, restaurants, and stations. It also shows important information that promotes the province. This provides accessible and portable application which can be used anytime at any place, because it can be installed on Android devices which meet the required specification.

**Keywords:** Android, Application, Mobile map, Portable application

### **I. INTRODUCTION**

The mobile phone is known as the best adopted technology in human history. As smart phones drop in price, the developers see a rapid shifting on how mobile phones are perceived from simple communication devices to general purpose mobile computers. Apple iPhone and Google Android are the most popular smartphones because of its functionality. Soon, even low-end phones will be deployed with fast processors, long battery life, and rich sensing capabilities such as GPS, accelerometer, and infrared light. Unlike their desktop counterpart, mobile phones have the unique property of always being on hand, a near constant companion of their users.

In this way, the mobile phone will become a sort of digital extension of the user, sensing context as the user moves on around the

world. However, tools and techniques that have been refined for creating successful desktop computing environments do not translate well to the mobile environment. Global Positioning System (GPS) is a kind of space-based navigation technology that provides us with the exact location and time details of a person's whereabouts.

The study aims to develop an Android-based application called WOWBatangas Application. This is a travel mapping application designed to guide tourists in their travel. The application helps the users by showing the route of the chosen spot and give information about the most beautiful spots in Batangas province. The developed topic aims in creating a travel guide integrated with GPS to track the user's location and give route to their destination using the GPS in their mobile devices. The application is created with the help of Google Maps and Waze for the navigation of spots in Batangas province. It will help promote the tourist spots in Batangas by showing the best spots in the province.

### **Objectives of the Study**

The main objective of this study is to design, develop and test an android mobile application for Batangas province named WOWBatangas that promotes tourism exclusive of Batangas province while guiding its tourist and travelers.

Specifically, the study, aimed to: design an android application that can navigate to the tourist destinations using Global Positioning System.; to develop an android application that can show the information and details of tourist spots in Batangas; to test the acceptability of the android application using ISO/IEC 25010:2011 standards of software development.

### **Related Work**

WOWBatangas: An Android travel application for Batangas province helps the

tourist show what are the famous tourist land spot and landmark and the application will show a more detailed information all needed by the user, and the application will show a track point on how to get into that location. We gather different studies that are related in our work and some of them are: Android Mobile Application for Batangas Route Guide which helps see jeepney route and some routes that can't be seen in google maps. Android Mobile: Batangas Guide Map which locates tourist spot and provide the user the easiest way to get in that place. Pansol Laguna Resort Mapping and Information Application for Android Mobile Phone which works on simulating private pools to be shown on the application. Nasugbu 3D Map on Android Phones which the focus is to promote tourism in Nasugbu Batangas. Mobile Phone Locator thru GPS for Android Mobile Operating System which locates other use with same app using GPS. San Bidet which locates nearest bidet around Metro Manila and lastly, we choose Android Application: Odometer as the one that's closet to our study because it has the same logic of our study that shows in that study it is an Android based application provided with a simple guide map for the users to easily find tourist spots in Batangas province and we use that study as a guide in doing our project to help promote the Tourism in Batangas.

## II. METHODOLOGY

The developers choose the Mobile Development Lifecycle for Android because the developers process of building an android application following a detailed one step approach at a time and this comes in Android Mobile Development Lifecycle. The step that used by the developer is Planning. The developer analyzes that some of the tourists are having a hard time in finding a tourist spot. The developers construct the methodology of the application with the functionalities and the structure that the user needs. Coding is in the last part of construction to develop the application.

## Context Diagram

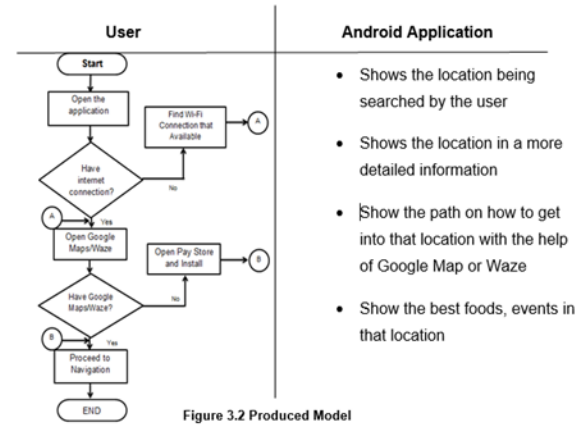


Figure 1. Context Diagram

Figure 1 shows what will be the outcome of the produced design of the project and how the project will work. The user will ask for a location and the application will show the information base on the input of the user, then if the user wants to go into that location the application will show the highlighted track route into that location but if the user did not want to go into that location he can go and search for another place he wants to visit.

## Project Methodology



Figure 2. Project Methodology

The first step is planning. Planning is an important part of the cycle as it will shape the project outcome. In designing the project, the researchers need to pay attention on the layout of the application because having a clean and easy to understand layout is important. Development, in development and integration of the study the researchers need to focus more on UX or User Experience and the overall architecture of the

application to make it work more efficiently and user friendly.

### System Architecture



Figure 3. System Architecture

Figure 3 shows the Architecture Diagram of the application on how the application works. The user must have the package installer of the application and an android phone to install the application. The application can be installed when the android phone meets the required specification. Once the user is finished with the installation process, the user must connect the android phone to an internet connection to load the map and to use all the features of the application. In the navigation process, the application can use either Waze or Google Maps for getting the route of the tourist spots.

### Graphical user interface (actual photos)

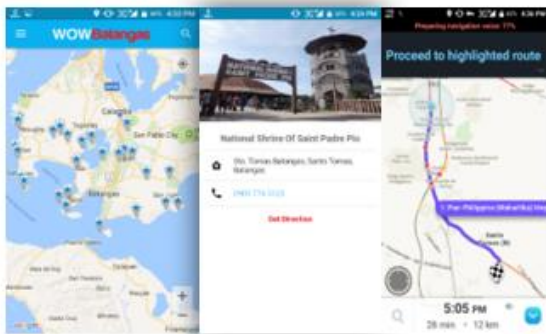


Figure 4. Graphical User Interface

Figure 4 shows the most significant part of Landmark Assistant Guide Application for Batangas Province is to promote the tourist spots in Batangas province and guide the tourists to their destination. Figure B shows one of the purposes of the application is to provide information about the tourist spot. The

application gives information about the tourist spot chosen by showing its picture, address, contact number and the navigation button. Figure C shows the Tourist Spot Navigation is another feature of the application that allows the user to get the direction of the tourist spot he/she wants to visit. The application uses Google Map or Waze in navigating a specific tourist spot.

## III. RESULTS AND DISCUSSIONS

### Evaluation of system performance

#### OVERALL SYSTEM PERFORMANCE

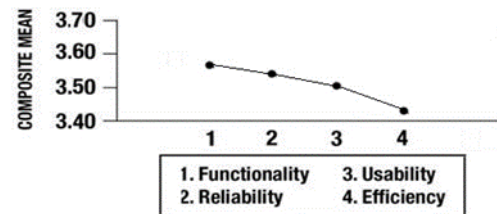


Figure 4. Overall System Performance

Figure 5 shows the overall system performance based on the ISO 9126 standards for software evaluation. The highest criteria for system performance are functionality and reliability which received an overall composite mean of 3.58 and 3.57.

## IV. CONCLUSIONS

After developing the application, the developers concluded that the project was studied and developed to achieve the satisfaction of the client. As a result, the developers derived that with the use of the developed application that focuses on the tourist spots of Batangas, it promotes tourism in the province by showing the most beautiful and wonderful tourist spots in the province. Tourists can search the best spots in Batangas province and give the tourist useful information that help user to reduce the time consumed. The developed application gives accurate information about the tourist spots in Batangas that help the tourist even the Batangueño to have to get knowledge about the said tourist spot. The developed application gives accurate route to the user, by connecting the

user's location to his/her destination with the help of searching and sorting in the application. The WOWBatangas: An Android Based Tourist/Traveler Navigator Assistant ensures the functionality, reliability, usability, and efficiency for the tourist. It helps the user to know the accurate route of the tourist spot. It is promoting the Batangas province by showing the information, location, and routes of tourist spot in Batangas Province.

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