

TUmap Initial Project Proposal

Project Abstract

Top Level Requirements

TUmap is a highly customized campus specific Android application that aims to ease navigation around campus for new students and guests. It will be Android based and levy Google Maps API for routing and an open source mapping toolkit for our custom map. The interface will include a simple drop down menu of buildings on campus. Once a building is selected, a user's location will be automatically polled and a route will be traced to their destination. As the user moves, the phone will update the GPS location and the route if necessary.

Conceptual Design

Our application will be designed to run primarily on Android 3.0 or greater (Honeycomb, Ice Cream Sandwich, and Jelly Bean). The application will be developed in Java which will also be coupled extensively with XML for user interaction within the application (i.e. buttons, checkboxes, lists, etc.). Furthermore, the application will consist of multiple activity components which will provide the user with an interface to interact with the running app. An example of such an activity would be, **StudentHomeScreenActivity** or **TUCampusMapActivity** with a dependency on **CampusMapHelper** to provided updates for locations, generating routes, discovering the users location, etc.

Background

The TUmap app will provide to users a more detailed and functional map for use at Temple University. Currently Google Maps does not have the capability to easily create routes to campus buildings that fully take advantage of the footpaths available around campus. Customized maps built off of the Google Maps API exist such as Loughborough University, <http://maps.lboro.ac.uk/>, but the map does not have routing. Due to limitations with the Google Maps API the open source osmdroid, <http://code.google.com/p/osmdroid/>, will be used.

Required Resources

The project requires a version control software (GIT) for tracking, controlling, and merging changes in the project. Each team member will have a Rally account to assist organization and collaboration through the project development process. For the development environment, we will need Eclipse IDE and the most distributed versions of Android SDK including all the required plugins. In addition, we will be using Temple University wireless network to support our application and keep track of geolocation of mobile users. This project does not need any financial resources since all the required softwares are open source and free to download.

