WhereWeAre

-Specification Document-

Introduction

People often get in the situation, that they have to meet up with somebody at a certain location, and they have problems finding their partner, due to bad timing, or misunderstanding of the location. There are numerous occasions where sharing your current location would be useful.

Objectives

The main goal of the project is to develop a program for the Android platform, which allows users to share their GPS location over the Internet with their friends, having the application installed.

The user will be able to see his current location on the map, pinpoint another location, share it with his friends, or view the current position of his partners and the locations they pinpointed.

People will have the ability to meet more easily with each other or simply find out their loved ones whereabouts.

Requirements

Functional requirements

For proper functionality, the system needs the ability to complete the following tasks:

- Read GPS data from the mobile device hardware
- Implement Google Maps, with the ability to navigate
- Show the current geographic position on the map
- Establish a connection over the Internet with a dedicated server.
- Send the coordinates to the other device
- Receive the coordinates
- Pinpoint received coordinates on map
- Maintain stability even if telephone related actions occur (incoming call or SMS)

Non-functional requirements

For the software to run, it needs to be installed on Android OS with Internet access and a GPS sensor.

The opportunity for later extension has to be given, for future versions to be developed with ease. The main priority is efficiency, for a mobile device has very limited resources, compared with a PC.

System Overview

First the user has to sign in, using his Facebook account, if he has one.If not, the possibility is given to create a WhereWeAre account. After user login, the software system first acquires the coordinates from the GPS hardware, and shows the current location on Google Maps. On user request, it connects to another device, and sends the coordinates to the other user's copy of the program. The second copy accepts or declines the connection and the sent data. On accept, it pinpoints the location, and provides options to the user, concerning his next action.

The system uses a dedicated server, which administers connections between users (client applications), and stores the data about the users.

Conclusion

The application uses several phone features, like GPS, Internet and touchscreen navigation. It's a useful application, combining the functionality of a classic GPS software with social networking.

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