GLocate

Version 1.1

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 07/11/2019 | 1.0 | First version | Hồ Minh Trí |
| 11/11/2019 | 1.1 | Updated product position, user summary, and product features | Hồ Minh Trí |
|  |  |  |  |
|  |  |  |  |

Table of Contents

1. Introduction

1.1 References

2. Positioning

2.1 Problem Statement

2.2 Product Position Statement

3. Stakeholder and User Descriptions

3.1 Stakeholder Summary

3.2 User Summary

3.3 User Environment

3.4 Summary of Key Stakeholder or User Needs

3.5 Alternatives and Competition

4. Product Overview

4.1 Product Perspective

4.2 Assumptions and Dependencies

5. Product Features

6. Other Product Requirements

# Introduction

The purpose of this document is to collect, analyze, and define high-level needs and features of the GLocate app. It focuses on the capabilities needed by the stakeholders and the target users, and **why** these needs exist. The details of how the GLocate app fulfills these needs are detailed in the use-case and supplementary specifications.

## References

# Positioning

## Problem Statement

|  |  |
| --- | --- |
| The problem of | Locating other people |
| affects | Friends hanging out trying to coordinate locations to make sure that everyone arrive at the same destination and that no one is lost or arrive too late |
| the impact of which is | People need to make use of inconvenient and ineffective methods such as constantly calling or texting each other in order to coordinate locations |
| a successful solution would | Help people to locate each other in a painless and efficient way |

## 

## Product Position Statement

|  |  |
| --- | --- |
| For | Friends hanging out |
| Who | Want to locate each other |
| The GLocate application | Is a software product |
| That | Display the real time locations of users on a map, helping them to easily locate each other |
| Unlike | The current methods such as constantly calling or texting, which are both inconvenient and ineffective |
| Our product | Makes locating each other easy by displaying the real time locations of users on a map |

# 

# Stakeholder and User Descriptions

## Stakeholder Summary

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Responsibilities** |
| TA | The TAs of the project. | Monitor the progress of the project, provide feedback on the strength and weakness of the project, and judge the quality of the project. |
| Team member | The members of the team developing the app | Develop the app, complete the requirements of each PAs, report the progress of the project to the TAs, take feedback from the TAs |

## 

## User Summary

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| Group member | Members of a group in the app. | This group of users uses most of the basic functionalities of the app such as determining the locations of others in the group, setting up meeting points, calculating time until meet up, etc. | TA |
| Group leader | Each group in the app has a group leader that manage the group. | A group leader uses special functionalities to be able to effectively manage the group. For example, they can quickly determine how many members of the group are nearby and be alerted when a member goes too far from the group. | TA |
| Admin | System administrators that manage the backend of the app. | Admins have special privileges such as the ability to reset password or delete user accounts, delete or view the members in each group, etc. | TA |

## User Environment

* A user uses the app by joining a group of users, e.g. group of friends. The user gets real time location of other users in the group. The app is kept running for as long as the users need to keep track of the location of each other.
* A user of the app is expected to have a mobile device, running a modern version of iOS or Android. The device should be able to connect to both GPS and the Internet and when the app is running, there should be a steady connection to both of them. This suggests that the app should be used where there is strong 3G signal and where there the device can be connected to GPS, likely outdoor.
* The app does not need to be run alongside any other applications.

## Summary of Key Stakeholder or User Needs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** |
| Know the location of others | High | Convenience, accuracy | Have to call or text to only know the general location | Display the real time locations of all group members on the map |
| Specify a meeting point | High | Accuracy | Describe the location using address, which may be hard to locate or lead to misunderstanding | Place a flag on the map and every member know exactly where they need to go |
| Change meeting point | Medium | Convenience | Have to inform each member using phone calls or text messages, while they are already on the road | Simply move the flag and every group member is automatically notified |
| Know how long until other people arrive at meeting point | Medium | Convenience | Have to call or text | The app calculates and displays the distances between members and meeting point |

## Alternatives and Competition

Currently, the best way to coordinate locations when hanging out is by using a combination of text messages, phone calls, and online maps. This method does not always work. From time to time, people would still arrive at the wrong destination or get lost. It is also not very convenient to communicate using text messages or phone calls while on the road. Our application provides a reasonable improvement to the current situation.

# Product Overview

## Product Perspective

The app is self-contained and is not part of a larger system

## Assumptions and Dependencies

It is assumed that a user of the app has a mobile device running a modern version of iOS or Android. The device needs to be connected to both GPS and the Internet when the app is running.

# Product Features

* Users can create, sign in to, and sign out of user accounts. A user needs to be signed in to an account in order to use the app.
* Users can create, join, and exit groups.
* Users in a group can see the real time locations of each other, displayed on a map.
* Users can choose a common meeting point for all of the group to head to.
* Users can choose members in a group that they want to focus on, such as the group leader.
* The app can display the distance between each user.
* The app alerts when a user goes too far from the group.
* Users can communicate through text messages, either through a group thread or private threads.
* Users can call each other.
* Group leaders are automatically highlighted on the map.
* Group leaders are provided the number of users nearby, and which user is not nearby.
* Administrators can perform various management activities such as viewing and deleting accounts, viewing and deleting groups.

# Non-Functional Requirements

* The app should implement standards complying security, in order to protect the accounts of the users.
* The app should be able to support at least 10 different groups at the same time, with at least 20 users per group.
* There should be at most 5 seconds of lag between when a user moves and when the location of that user is updated in the app.
* The locations of the users should have an error of at most 50 meters.
* The app should work properly in a region with decent GPS and Internet signals.
* The app should work on a mobile device running a modern version of iOS or Android.
* The basic features of the app – showing the locations of other users – should be very quick and simple to use.
* The app must be finished by the end of the first semester of the 2019-2020 school year.