GLocate

Vision Document

Version 2.0

Revision History

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| --- | --- | --- | --- |
| **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 |
| 18/11/2019 | 2.0 | Updated alternatives and competitions | Hồ Minh Trí |
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Vision (Small Project)

# 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, calculating time until meet up, chatting with each other, 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

One of the alternatives to our app is to maintain the status quo. That is, to keep doing what everyone is doing. Currently, the way most people 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.

There are also several available apps that are in many ways similar to our app, in that they all provide the ability for users to track the real time locations of other users. However, these apps have different focuses and are targeted at different user groups compared to our app. Therefore, our app is the first app that is specifically designed for friends hanging out.

Below are two popular apps that have many similarities with our app. We compare the apps with our app, including their strengths and weaknesses, to show which app is suitable for which purpose.

### Family Locator and GPS Tracker:

* **Link:** <https://apps.apple.com/us/app/family-locator-and-gps-tracker/id588364107>
* **Description:** An app designed to help users track the locations of their family members to make sure that they are safe.
* **Comparison:** The app has many functionalities in common with our app such as the ability to track the location of other users, chat with them, be alerted when they are too far away from you, etc. However, because the purpose of this app is to track family members, it is focused on a static, stable group. The family members of a person rarely change so a user only needs to track a fixed group for as long as they use the app. Our app, on the other hand, is focused on friends hanging out so is more dynamic. A virtual group is created for a group of friends hanging out on one day and is removed at the end of the day.
* **Strengths:** The app has many useful functionalities to serve its purpose, such as:
  + You can set up safe or danger zones that when a family member enters or leaves, you are alerted
  + The app knows the schedule of your family members, such as when your child leave school, and notify you at important events in the day
* **Weaknesses:** The app is not fit for more dynamic uses, such as:
  + There is only one group where each member is tracked 24/7. This is suitable for family members but is not appropriate for friends who are not very close and who only need to hang out for a day.
  + The app does not have the functionality to set meeting points, which is a very important functionality for friends hanging out.

### Family Locator GPS - Safe365:

* **Link:** <https://apps.apple.com/us/app/family-locator-gps-safe365/id622546357>
* **Description:** An app designed to help users take care of their older relatives.
* **Comparison:** This app is in many ways similar to the first app. Its purpose is also to track family members but it is more focused on helping users take care of older relatives. Also like the first app, it is static and therefore has a different focus compared to our more dynamic app.
* **Strengths:** Many useful functionalities to help keep track of elderly family members:
  + The app reminds the older relative of important tasks in their days, such as taking pills or exercising. The app informs you if the family member is completing all of their tasks.
  + The app alerts both the user and the older relative if the battery of the older relative’s device is running out.
* **Weaknesses:** As stated above, the app is static and does not support dynamic functionalities such as the ability to create, join, and leave groups, the ability to set meeting points for friends hanging out, etc.

# 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 their account in order to use the app.
* Users can create, join, and leave groups.
* Users in a group can see the real time locations of each other, displayed on a map.
* Users can choose members in the 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.
* Users can view the profile of each other.
* Group leaders are automatically highlighted on the map.
* Group leaders can choose a common meeting point for all of the group to head to.
* Group leaders can remove members from the group.
* 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.