**Herald!**

**Requirements Document**

**Ver. 1.0**

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# Application Overview

## Objectives

This app will be used to send text message updates of the user’s current location and/or time to the destination to contacts the user has chosen. This is useful in several scenarios:

* If you are picking someone up, it will notify them when you’re almost there so they can be ready
* If you’re taking a long trip to stay with friends/family, it will keep them updated with your whereabouts
  + In the event of an unexpected delay or emergency situation, others will not be kept in the dark

## Business Process

The user will first select who to send the message to. They can do this either by typing in the phone number or hitting the contacts button and selecting the number. The user will then select their destination. This is accomplished either by typing in the destination address, or pressing the google maps button and searching for the address. The user will then select the message interval timer using the interval spinner. Finally the user will press the Start Route button and begin their trip.

## User Roles and Responsibilities

Users are customers who are of driving age and own an android smartphone. The system will send automatic text updates on their travel progress to a specified receiver.

## Interactions with Other Systems

This application will interact with Google Maps to find travel time, the android texting app to send updates, and the Contacts app to source phone numbers.

# Replacement of Legacy Systems

Twist – On My Way!

* Allows users to send updates about current travel times to friends
* Latest version may require recipient to have a Twist account in order to receive meaningful information
  + Herald! will not require accounts

OnMyWay

* Basic app which lets the user input the amount of time you estimate is remaining until you reach your destination, and it will build and send a text message containing that (and optionally, your location) for you.
* Our app will calculate the ETA (estimated time to arrival) itself based on the current and destination locations.

## Terminology

ETA- The estimated time of arrival at the destination

# Functional Requirements

## Statement of Functionality

The user will interface with Android’s Maps features to select a destination and the Contacts feature to select recipients of the travel updates. The travel updates will consist of one or more of the following: a) the user’s location, and b) the user’s estimated time to the destination.

Allow the user to specify a recipient by phone number, through contacts

Always use the users current GPS location as the start point

Allow the user to specify an End location by address

Allow the user to specify a time interval on when to send updates

Send text messages automatically

# Non-Functional Requirements

Customizable text messages

Change google maps transportation type

Multiple recipients

## Usability

Hearld! Must be able to search and retrieve data from google maps and then send the SMS message fast enough for the ETA to remain accurate and meaningful.

## Concurrency

Google Maps, Herald! And SMS messaging are required to work concurrently.

* Herald! Counts down the interval and updates google maps with current location
* Google maps calculates new ETA and sends data back to Herald!
* Herald! Then converts this data to strings and Concatenates a message to be sent via SMS

Herald! And Contacts are required to work concurrently

* When the user presses the Contacts button contacts opens
* The user then selects the contact and that data is sent back to Herald to populate the recipients field.

## Timeline

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | taks/weeks | 1 | 2 | 3 | 4 | 5 |  |
|  | Maps Functionality |  |  |  |  |  |  |
|  | Messaging Functionality |  |  |  |  |  |  |
|  | Ease of use Testing |  |  |  |  |  |  |
|  | UI optimized |  |  |  |  |  |  |
|  | Multiple Recipients |  |  |  |  |  |  |
|  | Customizable messages |  |  |  |  |  |  |
|  | multiple travel types |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

* July 4th – Maps functionality complete
* July 11th – Messaging Functionality complete
* July 18th – ease of use testing complete
* July 25th – UI optimized
* August 1st – Multiple recipients complete
* August 8th – Customizable messages and multiple travel types

## Incomplete Feature List

Google Maps Support – implementation in progress

Travel Updates – requires google maps support for implementation

# Appendices

## Author’s background and expertise

### Connor Pike

I am a 3rd year in the Computer engineering program at the University of Cincinnati. I have experience in Web App development, C#, C++, Javascript, HTML, XML and XAML. Through the co-op program I have worked for about a year as a software developer.

### Jacob Holbrook

I am in my third year at University of Cincinnati in Computer Engineering. I’ve worked with Python, C++, PHP, HTML, MySQL, C#, and others.

**Resources/APIs**

Google Maps API –

Allows you to embed Google Maps in you app. See <https://developers.google.com/maps/documentation/javascript/reference>.

Contacts API –

Android.ContactsContract defines an extensible database of contact-related information. See <http://developer.android.com/reference/android/provider/ContactsContract.html> for more detail.

Android SMS Manager – android.telephony.SmsManager