1 Overall Description

1.1 Product Perspective

The product we will release is composed by four main software applications.

- A **Web Application (User)** addressed to the *users* to use our service. This application has to interface mainly with the **Back-end Application** and with Google's Maps API.
- A **Mobile Application (User)** addressed to the *users* to use our service and available for Android, iOS, Windows Mobile and Blackberry. This application has to interface mainly with our **Back-end Application** and with Google's Maps API
- A **Mobile Application (Taxi Driver)** addressed to the *taxi drivers* to use our service and available for Android, iOS. This application has to interface mainly with our **Back-end Application** and with Google's Maps API
- A **Back-end Application** that will handle all the business logic and that has to interface mainly with Google's Maps API and with a MongoDB database .

1.1.1 User Interfaces

1.1.2 Hardware Interfaces

Both the *Mobile Application (User)* and the *Mobile Application (Taxi Driver)* has to interface with the GPS module and with the Network module.

1.1.3 Software Interfaces

Web Application (User)

- MyTaxyService API
  - Mnemonic : Back-end
- Google Maps API
  - Mnemonic : Google Maps API
  - Version Number : V3
  - Source : *https://developers.google.com/maps/documentation/javascript/*

Mobile Application (User and Taxi Driver)

- MyTaxyService API
  - Mnemonic : Back-end
- Google Maps API
  - Mnemonic : Google Maps API
  - Version Number : V3
  - Source : *https://developers.google.com/maps/*
- Android SDK
  - Mnemonic : Android
  - Version Number : 6.0
  - Source : *http://developer.android.com/sdk/index.html*
- iOS SDK
  - Mnemonic : iOS
  - Version Number : 9.2
  - Source : *https://developer.apple.com/ios/download/*
- Windows Mobile SDK
  - Mnemonic : Windows Mobile
  - Version Number : 6.5
  - Source : *http://www.microsoft.com/en-us/download/details.aspx?id=17284*
- BlackBerry SDK
  - Mnemonic : BlackBerry
  - Version Number : 10
  - Source : *https://developer.blackberry.com/*

Back-end Application

- Node.js API
  - Mnemonic : Node.js
  - Version : 4.2.1
  - Source : *https://nodejs.org/api/*
- MongoDB API
  - Mnemonic : MongoDB
  - Version : 3.0
  - Source : *https://docs.mongodb.org/manual/*
- Google Maps API
  - Mnemonic : Google Maps API
  - Version Number : V3
  - Source : *https://developers.google.com/maps/documentation/javascript/*
- Javascript API
  - Mnemonic : Javascript
  - Source : *https://developer.mozilla.org/en/docs/Web/API*

1.1.4 Communication Interfaces

Web Application (User)
Every application has to interface with the Internet network. This interface is handled by the operative systems and not by the applications themselves.

1.1.5 Memory Constrains

Mobile Applications (User and Taxi Driver) and Web Application
The Mobile and Web Applications can not exceed 75MB of RAM usage.

Back-End Application The Back-End application can not exceed 15GB of total RAM usage.

1.1.6 Site Adaptation Requirements

Software Adaptation
Every Mobile Application has to be developed according to the platforms design guidelines.

1.2 Product Functions

This section highlights the main product functions sorted by application.

1.2.1 Web Application and Mobile Application (User)

- [FUN1]: the app has to allow the user to book a taxi on the spot.
- [FUN2]: the app has to allow the user to reserve a taxi ride up to 7 days before the chosen date.
- [FUN3]: the app has to allow the user to share his ride with other people whose destination is included in the ride path.

1.2.2 Mobile Application (Taxi Driver)

- [FUN4]: the app has to provide position updates to the *back-end application*
- [FUN5]: the app has to allow the taxi driver to accept or refuse a ride request.
- [FUN6]: the app has to allow the taxi driver to report issues that could delay his arrival (traffic jam, car faults, etc ...)
- [FUN7]: the app has to allow the taxi driver to overview a history of his last rides.
- [FUN8]: the app has to allow the taxi driver to report a absent user.