Software Requirements Specification

for

Hotter’n Hell

**Version 2.0 Approved**

**Axion Technologies**

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**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Brice Allard | 11/6/18 | Initial document creation | 1.0 |
| Brice Allard | 04/30/19 | Alpha Testing | 2.0 |

# Introduction

## Purpose

The purpose of this document is to give a detailed description of the requirements for the “HOTTER’N HELL” software. It will illustrate the purpose and the complete declaration for the development of the system. It will also explain system constraints, interface, and interactions with other external applications. This document is primarily intended to be a reference for developing the first version of the system for the development team.

## Intended Audience and Reading Suggestions

This document is intended for the use of the developers and those who want to gain further knowledge of the application, from the standpoint of a user. It is written to give in a in depth description on the background development of the application such.

## Product Scope

Hotter’n Hell is an event representation application that allows users to access information specific to the Hotter’n Hell Hundred annual bicycle race. Providing navigation of the registered race with rest area information and friend/team tracking, allowing users the ability to visualize the race on their smart devices. Users will have the ability to register and view the schedules for upcoming events throughout the week of the race, as well as find local resources for lodging, dining, and entertainment.

# Overall Description

## Product Perspective

This app is to be a new, self-contained intellectual property. It may make use of existing technologies including but not limited to, Flutter, Google Maps, and Google Places.

## Product Functions

The app provides a secure login, access to the users personal account, the ability to navigate with device GPS, the ability to connect to other users, the ability to find local attractions, and the ability to follow schedules and deadlines for specifics events.

## User Classes and Characteristics

This app is intended to be used by any individual of a certain age. Its functionality may be greater to highly active people, but those individuals do not necessarily make up the entire user base.

## Operating Environment

The app can utilize any Android specific device with Android Platform 5.0+ installed.

## Design and Implementation Constraints

The design and functionality of the app will be limited to the abilities of the Flutter Framework and the hardware that it supports.

## User Documentation

Apart from this document there is not and will be not be any additional documentation provided.

# External Interface Requirements

## User Interfaces

The user must first register with the service via a registration page. If already registered they will instead be greeted by a login page. After logging in they have access to the full range of implemented features, in a style that has yet to be determined.

## Hardware Interfaces

To interact with several of the app’s functionalities an internet connection is required as well as the use of an Android device with working GPS capabilities.

## Software Interfaces

The HOTTER’N HELL app is developed using the Flutter Framework utilizing both Dart and FlutterIO, with a privately hosted backend service and database where all user information will remain privately stored.

## Communications Interfaces

To utilize this app a user is required to have an Email Address for password recovery as well as an Android smartphone. The use of a tablet running a similar operating system will also suffice.

# System Features

## Route Navigation

By accessing the smartphones GPS location, each user will have the ability to select which race he/she is registered for and navigate the pre-determined route. While displaying the route data on the device, all rest stop locations will be highlighted for the user with a visual representation of how many miles remain until the next stops location.

## Find and Search for Friends/Teams

During the registration process the user will be required to enter their email address which can later be used as a search variable for other friends/family/teammates. Once added requested invitations are accepted by the user, the requester will have the ability to view the racers location unless otherwise determined by the user.

## View Upcoming Events

A schedule will be available in app displaying all upcoming events that the registrant can attend. If the event requires some form of registration, the option will be included within the application. Once and event is registered for, or chosen to be attended, a notification reminder will prompt the user of starting times and changes to the events.

## View Local Attractions

Users will have the ability to view all local amenities and attractions within the city of Wichita Falls, including, but not limited to, recommended lodging, dining and entertainment.

# Other Nonfunctional Requirements

## Security Requirements

HOTTER’N HELL uses a privately hosted Authentication that adds a user’s email, password and information. This allows each person to have access to their account thus allowing them to alter only the information that they have created.

## Workload

HOTTER’N HELL must be capable of handling 50,000 registered users during the event time frame.

## Response Time

HOTTER’N HELL must always respond within 2 seconds of user interaction providing a smooth, interactive service for all.

## Power Management

HOTTER’N HELL must be efficient and provide the user with a minimum of 3 hours navigation time on a full battery charge.

**Appendix A: Glossary (Citations/References)**

Hotter’n Hell or HOTTER’N HELL: The app being developed by Axion Technologies.

Flutter: all relevant information can be found here:

* https://flutter.io/

Hotter’n Hell Hundred: all relevant information can be found here:

* https://www.hh100.org/

Clean Architecture: all relevant information can be found here:

* https://blog.cleancoder.com/uncle-bob/2012/08/13/the-clean-architecture.html

**Appendix B: Analysis Models**

The following link is to the most up to date design for the mobile application structure.

* https://github.com/ShadyBoukhary/Axion-Technologies-HnH

**Appendix C: Motivations and Purpose**

The Hotter’n Hell Hundred is an event held yearly in the city of Wichita Falls TX which brings thousands of travelers to the city. With each traveler brings an increase to our local economy, private business owners’ revenue, and city tax increases. However, with a declining number of volunteers for the event and an increase in registrants, as well as the increased demand in high tech applications to simplify life, there came an opportunity to act and create the mobile app to resolve all the issues brought to light. The purpose of the mobile application is to simplify the event for both the user and the workers. By offering the ability to handle event registration, payments, and navigation for the user, we can accommodate both. By supplying the users with a list of local attractions, such as dining / night life / lodging etc., our application continues to increase simplicity for the user, while also providing benefits to the local community by increased revenue.