Software Requirements Specification

for

Cama Island Fire System

Version 1.0

Prepared by

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Revisions

| Version | Primary Author(s) | Description of Version | Date Completed |
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| 1.0 | Tarun Peela  Henry Porter  Adam Wardell  Ethan Rae | Initial Software Requirements document. | 02/26/14 |

# 

# Introduction

## Document Purpose

<Identify the product whose software requirements are specified in this document, including the revision or release number. Describe the scope of the product that is covered by this SRS, particularly if this SRS describes only part of the system or a single subsystem.

TO DO: Write 1-2 paragraphs describing the purpose of this document as explained above.>

The purpose of this document is to outline the necessary requirements for Cama Island Fire System. This GUI application will allow the end user to see all the sensors: Temperature, Humidity Battery level and location. This document will describe the implementation and execution both hardware and software of the entire Cama Island Fire System application. It will provide a detailed overview of the application itself as well as necessary backend support to make such an application possible.

## Product Scope

<Provide a short description of the software being specified and its purpose, including relevant benefits, objectives, and goals.

TO DO: 1-2 paragraphs describing the scope of the product. Make sure to describe the benefits associated with the product.>

As stated, the Cama Island Fire System will allow the end user to see all sensors: Temperature, Humidity Battery level and location. This application will have an easy to use intuitive interface that will allow the end user to quickly see all the sensors and their readings, giving the fire department early warnings. The Fire Department now will get ready before the fire ignites which can save life’s.

## Intended Audience and Document Overview

<Describe the different types of reader that the document is intended for, such as developers, project managers, marketing staff, users, testers, and documentation writers (In your case it would probably be the “client” and the professor). Describe what the rest of this SRS contains and how it is organized. Suggest a sequence for reading the document, beginning with the overview sections and proceeding through the sections that are most pertinent to each reader type.>

This document is intended for our Software Engineering Professor as well as Cama Island Fire Department.

## Definitions, Acronyms and Abbreviations

<Define all the terms necessary to properly interpret the SRS, including acronyms and abbreviations. You may wish to build a separate glossary that spans multiple projects or the entire organization, and just include terms specific to a single project in each SRS.

TO DO: Please provide a list of all abbreviations and acronyms used in this document sorted in alphabetical order.>

No Definitions at this time

## Document Conventions

<In general this document follows the IEEE formatting requirements. Use Arial font size 11, or 12 throughout the document for text. Use italics for comments. Document text should be single spaced and maintain the 1” margins found in this template. For Section and Subsection titles please follow the template.

TO DO: Describe any standards or typographical conventions that were followed when writing this SRS, such as fonts or highlighting that have special significance. Sometimes, it is useful to divide this section to several sections, e.g., Formatting Conventions, Naming Conventions, etc.>

No proprietary document Conventions at this time.

## References and Acknowledgments

<List any other documents or Web addresses to which this SRS refers. These may include user interface style guides, contracts, standards, system requirements specifications, use case documents, or a vision and scope document.

TO DO: Use the standard IEEE citation guide for this section. An example citation guide is posted for you on the website.>

No citations at this time.

# Overall Description

## Product Perspective

<Describe the context and origin of the product being specified in this SRS. For example, state whether this product is a follow-on member of a product family, a replacement for certain existing systems, or a new, self-contained product. If the SRS defines a component of a larger system, relate the requirements of the larger system to the functionality of this software and identify interfaces between the two. In this part, make sure to include a simple diagram that shows the major components of the overall system, subsystem interconnections, and external interface. In this section it is crucial that you will be creative and provide as much information as possible.

TO DO: Provide at least one paragraph describing product perspective. Provide a general diagram that will illustrate how your product interacts with the environment and in what context it is being used.>

The Cama Island Early Fire Warning System is a GUI based application that previews the weather conditions at Cama Island for the purpose of monitoring the Island to get an early warning towards potential fire warnings and hazards. The user would monitor the Island from database readings collected from sensors located on the island and be able to contact emergency personal should a fire occur.

## Product Functionality

<Summarize the major functions the product must perform or must let the user perform. Details will be provided in Section 3, so only a high level summary is needed here. Organize the functions to make them understandable to any reader of the SRS. A picture of the major groups of related requirements and how they relate, such as a top level data flow diagram or object class diagram, will be effective.

TO DO:

1. Provide a bulleted list of all the major functions of the system

2. **(Optional)** Provide a Data Flow Diagram of the system to show how these functions relate to each other.>

* Gives a graphical overview of the sensor readings from Cama Island
* Gives a sortable list of sensors
* Has the ability to sort sensors to bring outlying values to the users attention
* Gives a status summary of the Island’s conditions

# Specific Requirements

## External Interface Requirements

### User Interfaces

<Describe the logical characteristics of each interface between the software product and the users. This may include sample screen images, any GUI standards or product family style guides that are to be followed, screen layout constraints, standard buttons and functions (e.g., Cancel) that will appear on every screen, error message display standards, and so on. Define the software components for which a user interface is needed.

TO DO: The least you can do for this section is to describe in words the different User Interfaces and the different screens that will be available to the user. Those who will be able to provide optional Graphical User Interface screenshots, will be rewarded by extra marks.>

The user will be able to utilize a GUI interface to read sensors and get readings from sensors in real time.

## Functional Requirements

*< Functional requirements capture the intended behavior of the system. This behavior may be expressed as services, tasks or functions the system is required to perform. This section is the direct continuation of section 2.2 where you have specified the general functional requirements. Here, you should list in detail the different product functions with specific explanations regarding every function.*

*TO DO: Brake the functional requirements to several functional areas and divide this section into subsections accordingly. Provide a detailed list of all product operations related to these functional areas.*

Have a graphical interface that shows a full grid of sensor elements.

Be able to sort and view sensors in a list to examine troubling data values.

The program grants the user the ability to contact emergency personnel with a single button.

## Behaviour Requirements

### Use Case View

<A use case defines a goal-oriented set of interactions between external actors and the system under consideration. Since sometimes we will not be able to specify completely the behaviour of the system by just State Diagrams, we use use-cases to complete what we have already started in section 3.3.1.

TO DO: Provide a use case diagram which will encapsulate the entire system and all possible actors. Do not include detailed use case descriptions (these will be needed when you will be working on the Test Plan), but make sure to include a short description of what every use-case is, who are the actors in your diagram. For more information please refer to your UML guide and the MiniThermostat SRS example file.>

User surveys sensor objects in grid view

User sees a group of sensors go ‘RED’

User selects the sensor from the list of sensors to see which data value is creating the warning

User identifies which data is causing disruption

User sorts that data to see if all ‘RED’ sensors are acting similarly

If ‘RED’ sensors are reporting dangerous conditions then the User may choose to alert emergency personnel