Software Requirements Specification MECHTRON 4TB6: Formulate

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Revision History

Date	Version	Notes
Date 1	1.0	Notes
Date 2	1.1	Notes

1 Introduction

1.1 Project Description

1.2 Purpose

1.3 Project Scope

1.4 Table of Symbols

Symbol	Unit	Description
A_C	m^2	coil surface area

1.5 Abbreviations and Acronyms

Symbol	Description
A	Assumption
DD	Data Definition
GD	General Definition
GS	Goal Statement
IM	Instance Model
LC	Likely Change
PS	Physical System Description
R	Requirement
SRS	Software Requirements Specification
DBTL	Design Build Test Learning
KPI	Key Performance Indicators

2 User Characteristics

2.1 Stakeholders

2.2 Use Cases

2.3 User Consideration

2.4 Impact

3 Requirements

[The requirements refine the goal statement. They will make heavy use of references to the instance models. —TPLT]

This section provides the functional requirements, the business tasks that the software is expected to complete, and the nonfunctional requirements, the qualities that the software is expected to exhibit.

3.1 Functional Requirements

3.1.1 Hardware

RH1: The device should contain a rechargeable battery

RH2: The device should have a screen to display the current status to the user

RH3: The device should easily mount to the base of a Formula SAE car

RH4: The device should connect to a PC wirelessly to transmit data

RH5:

3.1.2 Desktop Application

3.1.3 Data Analytics Platform

3.2 Nonfunctional Requirements

NFR1: **Maintainability**

NFR2: **Portability**

4 Likely Changes

LC1: [Give the likely changes, with a reference to the related assumption (aref), as appropriate. —TPLT]

5 Unlikely Changes

LC2: [Give the unlikely changes. The design can assume that the changes listed will not occur. —TPLT]

6 Development Plan

References

[The following is not part of the template, just some things to consider when filing in the template. —TPLT]
[Grammar, flow and LaTeXadvice:

- For Mac users `*.DS_Store` should be in `.gitignore`
- LaTeX and formatting rules
  - Variables are italic, everything else not, includes subscripts (link to document)
    - Conventions
    - Watch out for implied multiplication
  - Use BibTeX
  - Use cross-referencing
- Grammar and writing rules
  - Acronyms expanded on first usage (not just in table of acronyms)
  - "In order to" should be "to"

—TPLT]
[Advice on using the template:

- Difference between physical and software constraints
- Properties of a correct solution means *additional* properties, not a restating of the requirements (may be "not applicable" for your problem). If you have a table of output constraints, then these are properties of a correct solution.
- Assumptions have to be invoked somewhere
- "Referenced by" implies that there is an explicit reference
- Think of traceability matrix, list of assumption invocations and list of reference by fields as automatically generatable
- If you say the format of the output (plot, table etc), then your requirement could be more abstract

—TPLT]