Software Requirements Specification

for

TSim

Version 1.0

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

The purpose of this document is to give a detailed description of the requirements for the "Traffic Simulator" (TSim) software. It will illustrate the purpose and complete declaration for the development of system. This document is primarily intended to be reference for developing the first version of the system for the development team.

1.2 Scope

TSim is a computer application with a drawing tool which is used to draw road(s), traffic light(s) and assign values to those drawn objects to calculate the aftermath.

1.3 Intended Audience and Reading Suggestions

This document is intended for any individual user, developer, tester, project manager or documentation writer that needs to understand the basic system architecture and its specifications. Here are the potential uses for each one of the reader types:

Developer: The developer who wants to read, change, modify or add new requirements into the existing program, must firstly consult this document and update the requirements with appropriate manner so as to not destroy the actual meaning of them and pass the information correctly to the next phases of the development process.
User: The user of this program reviews the diagrams and the specifications presented in this document and determines if the software has all the suitable requirements and if the software developer has implemented all of them.
Tester: The tester needs this document to validate that the initial requirements of this programs actually corresponds to the executable program correctly.

2. Overall Description

2.1 Product Perspective

This is an open source program so the source code is free to download. There are various reasons why should anyone use this program. First you can create, design, save and load traffic schemas. Second is a easy and reliable testing program that is very unique in its category. And third due to its open source nature you can modify it according to your needs.

2.2 Product Functions

- *Saved sessions: Every test session can be saved and load.*
- *Language support: Offers multiple language support.*

2.3 Operating Environment

This program will operate in the following operating environment for the client and the server GUI:

- *Microsoft Windows*

2.4 Design and Implementation Constraints

This program will be created using C++ programming language and uses the Qt libraries for the main interface.

3. External Interface Requirements

3.1 User Interfaces

In progress.

3.2 Hardware Interfaces

Storing devices (flash, optical disks etc.) for the client to load the schema.

4. Other Nonfunctional Requirements

4.1 Performance Requirements

Performance: checking the fact that the system must perform as what every user expects .So in every action-response of the system,there are no immediate delays. In case of opening windows forms, of popping error messages and saving the settings or sessions there is delay much below 2 seconds.

4.2 Safety Requirements

There is no safety schema of this program.

4.3 Security Requirements

This program uses object oriented mechanisms to protect its data passed using methods Also there is no currently a security schema of this program. Thus the log files that are being created are readable using a simple text reader.

4.4 Software Quality Attributes

***Availability**: Checking that the system always has something to funtion and always pop up error messages in case of component failure*
***Usability**: Checking that the system is easy to handle and navigates in the most expected way with no delays.*