1. Introduction
   1. Purpose
      1. General Purpose

This document represents the Requirement Analysis and Specification Document (RASD). In this document we will explain SafeStreets. This will be done by a detailed presentation of the proposed solution and its purpose, listing its goals, and the requirements and assumptions through which they will be achieved.

SafeStreets is a public interface aimed to public-spirit citizens who want to help keeping the streets clear. This S2B intends to provide users with the possibility to notify authorities when traffic violations occur. This materializes using a platform through which users can upload pictures of streets violations, in particular parking violations.

There could also be other types of issues that a customer can report, for example speed violations, accidents, non respected traffic lights and give ways. They’re reported in different ways.

The S2B also has a map, based on Google Maps, on which some areas are highlighted with different colors according to the number and types of violations reported (for example first the user can choose the type of violation, then the map shows different areas with different colors: a red area means that a lot of the chosen violation have occurred, yellow is medium quantity, green one means very few).

Once the violation is sent, its data are stored in SafeStreets center and analyzed by the software, in order to retrieve information to update the map.

The customers of the application are both singular users and authorities, for example the Police Department, that can find the S2B useful in order to maintain the public order.

An important point is that a user can eventually report fake violations. First, the application allows the user to report a violation even if the user’s geographical position and the violation’s positions are different (for example the user sees an illegal parked car while he is jogging but doesn’t want to stop his run to make the signalization, so he updates the violation once he gets home. This means that he could give a non accurate position of the illegal parking). Secondly, there could actually be some users that find funny reporting wrong violations, for now there is nothing we can do to fix this.

Finally, SafeStreets also wants to offer a service exploiting the information of the municipality, if it allows users to retrieve the required information. The application crosses the information given by the municipality (only accident info), which are reliable, and the ones given by the users, which are not. Then it updates the map and periodically make suggestions regarding possible solutions to prevent violations (only in red areas).

* + 1. Goals

·[G1] The application must allow users to send reports of parking violations and accidents, in particular users can send reports even if they aren’t in the position in which violation is occured.

·[G2] The application will have to store the information received reports and complete them with suitable metadata.

·[G3] The application must allow both end users and authorities to mine the information stored. This is done by coloring the map based on the number of violations.

·[G4] The system must update the highlighted map periodically.

·[G5] The system must be able to cross information received from authorities with its own data.

·[G6] The system must suggest to municipality possible interventions to prevent accidents.

* 1. Scope
  2. Definitions, acronyms, abbreviations
     1. Definitions
     2. Acronyms
     3. Abbreviations
  3. Revision history
  4. Reference documents
  5. Document structure

1. Overall Description
   1. Product perspective
   2. Product functions
   3. User characteristics
   4. Assumptions, dependencies and constraints
2. Specific Requirements
   1. External interface requirements
      1. User interfaces
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   2. Functional Requirements
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   5. Software system attributes
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4. Effort spent