SafeStreet
RASD document

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Contents

1 Introduction

This is the RASD document for *SafeStreet*, it provides a general view about key aspects of the project. The purpose of this document is to formalize a description of the system's requirements both functional and non-funcional. In the following pages will be covered goals of the application with respect to phenomena. This document is addressed to developers as a guideline to implement the requirements that follows.

1.1 Purpose

SafeStreets is a service that aims to provide users with the possibility to notify authorities when traffic violations occur, and in particular parking violations. The application's goal is achieved by allowing users to share photo, position, date, time and type of violation and by enabling *Authorities* to request them.

Safestreets requires the users to create an account to access its services, the functionalities unlocked after registration depend on the type of account created.
If a user creates an account as *Citizen*, he/she must provide information about ID card on order to prove that he/she is a real person. Furthermore, he must provide an email with which he will be uniquely identified and a password. Once the account has been activated, user can finally start to report parking violation. The users can also see a summary of the streets with the highest frequency of violations.

On the other hand, an officer will create an account as *Authority* and he will need to provide his name, surname, work's Matricola, a password and as for *Citizen*, will be uniquely identified by an email. Once the Matricola has been verified and the account has been activated, the officer can retrieve the potential parking violations sent by *Citizen* that have not been taken into account yet by other officers, analyze them and, if it is the right case, generate traffic tickets. *Authorities* can also see a summary of the vehicles' license plate that commit the most violations.

From this brief description of the functionalities we may extract the following goals for SafeStreets:

- **[G1]**: allow users to be identified as a *Citizen* or as *Authority*;
- **[G2]**: allow *Citizens* to report parking violations;
- **[G3]**: *Citizen* has to be able to input information about the violation that he has reported;
- **[G4]**: must provide a visualization of the streets with high frequency of violations and vehicles' license plate that commit the most violations;
- **[G5]**: *Authority* can retrieve traffic violantions' data inserted by *Citizens*

1.2 Scope

1.2.1 World Phenomena

The World Phenomena are the events that occur in the real word and are not affected by the Machine.
We identify:

- *Citizen* sees a parking violation and wants to report it;

- *Authorities* want to know about some violations that have been occurred;
- A parking violation occurs;

1.2.2 Shared Phenomena

Shared phenomena are the events that can be controlled by the world and observed by the machine or controlled by the machine and observed by the world. there are 2 types:
controlled by the world observed by the machine:

- A Citizen take a photo of a violation;
- Users can enter data for registration/login;
- Users can request data;

Controlled by the machine observed by the world:

- track position of the violation;
- mark areas with an high rate of violations;
- System can fullfill data requests;

1.2.3 Machine Phenomena

The Machine Phenomena are the events that occur inside the machine and are not affected by the real world.
We identify:

- storing permanently collected data;
- encryption of sensitive data;
- retrieving data for a request;

1.3 Definitions, acronyms, abbreviations

1.3.1 Definitions

- user: can be either citizen or authorities

traffic violation: generic violation that can occur in a street parking violation: a violation caused by a bad parking violation: general violation, identity both traffic or parking violation unsafe areas: areas with an high rate of violations

1.3.2 Acronyms

Table with all acronyms used in document.

ACRONYM	COMPLETE NAME
RASD	Requirements Analysis and Specification Document
GPS	global positioning systems
ID	Identity document

1.3.3 Abbreviations

1.4 Revision History

1.5 Reference documents

1.6 Document Structure

2 Overall Description

2.1 Product perspective

2.1.1

2.2 Product functions

2.2.1

2.3 User characteristics

2.3.1

2.4 Assumption and Dependencies Constraints

[D1] dalla foto si deve vedere la targa bene