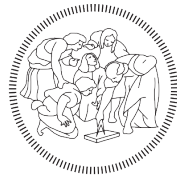


Politecnico di Milano

SAFESTREETS - DD



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1 Introduction

1.1 Purpose

The following Design Document (DD) is aimed to provide an overview of the *SafeStreets* application, explaining how to satisfy the project requirements declared in the RASD and stating the successive refinements made together with the Stakeholders according to their needs. The document is mainly intended to be used by developers teams as a guidance in the development process, by testing teams to write automated testing and to avoid structural degradation of the system in case of maintenance or future extension. Indeed, its purpose is to provide a functional description of the main architectural components, their interfaces and their interactions, along with the design patterns and algorithms to be implemented.

1.2 Scope

As explained in the RASD document, *SafeStreets* is a crowd-sourced mobile application that allows Citizens to notify Authorities about traffic violations, with particular emphasis on parking contraventions. Citizens are able to manage their reports, visualizing the whole history and modifying or removing them. On the other hand, Authorities can access a complete overview of the incoming reports and choose if to accept or reject them.

1.3 Definitions, Acronyms, Abbreviations

1.3.1 Definitions

1.3.2 Acronyms

1.3.3 Abbreviations

1.4 Revision History

1.5 Reference Documents

1.6 Document Structure

2 Architectural Design

2.1 Overview

2.2 Component View

2.3 Deployment View

2.4 Runtime View

2.5 Component Interfaces

2.5.1 REST API

2.6 Selected Architectural Styles and Patterns

2.6.1 Multi-tier Architecture

2.6.2 Use of RESTful guidelines

2.7 Other Design Decisions

2.7.1 Thin Client

2.7.2 MVC

2.7.3 Firewalls

3 User Interface Design

3.1 User eXperience Diagrams

4 Requirements Traceability

5 Implementation, Integration and Test Plan

5.1 Overview

5.2 Component Integration

5.3 Something on Testing?

6 Effort Spent

The effort spent from each member of the team to build the DD can be summarized with the following tables: