SAFESPOT INTEGRATED PROJECT - IST-4-026963-IP

DELIVERABLE

SP2 INFRASENS–SAFESPOT Infrastructure Platform

Interim Report: Implementation and prototypes for infrastructure-based components

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EXECUTIVE SUMMARY

This report describes the first stage of development of the components of the Infrastructure Platform being developed by INFRASENS (SP2). These consist of the prototypes for the following:

- roadside sensing systems
- data fusion methods
- algorithms for detection of safety-related events
- distributed actuation systems
- interfaces required for integration of external systems such as urban traffic control systems and traffic management centres.

Firstly, a description is provided of the Functional Architecture of the Roadside Unit (RSU), indicating all the data processing modules which make up the Data Fusion block. An explanation is given of the 'Core Components', which are the modules common to all implementations.

A description is then given of the Physical Architecture of the Roadside Unit and of the Infrastructure Platform as a whole, indicating the assignment of SW elements to the hardware. The RSU is the processing unit which represents the main "intelligence" of the SAFESPOT system on the roadside, and is also responsible for data exchange with the SAFESPOT equipped vehicles.

The two Reference Implementations currently being developed are described, with details of the technical choices which have been made to ensure that the system meets the system specifications presented in the deliverable D2.3.2.

This is followed by a set of Data Sheets providing a technical description of the hardware components required for the SAFESPOT applications. This is intended to offer guidelines for the SAFESPOT Test Sites implementations involving infrastructure-based elements.

The two Annexes provide some additional information. Annex 1 consists of a series of diagrams showing the data sources and processing modules needed for the SAFESPOT Test Sites, and Annex 2 lists the data items produced by the sensing systems.