

SAFESPOT INTEGRATED PROJECT - IST-4-026963-IP

DELIVERABLE



SP4 – SCOVA– Cooperative Systems Applications Vehicle Based

Application communication for co-operative vehicles and infrastructure

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Authors (per company, if more than one company provide it together)		U. Staehlin (CAS) J. Fjellström, M. Dozza (VOLVO)	
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EXECUTIVE SUMMARY

This document describes the parameters used for the communication between the SCOVA (System Cooperative Vehicle Based Applications) in-vehicle applications (meaning the information exchange amongst them), the communication with the Local Dynamic Map (LDM), the communication with the in-vehicle sensors and the data flow for all these communications.

The specification of the parameters and the information flow is based on the preliminary work performed in previous parts of the project, especially the use case definition (see deliverable D4.2.3 - Use Case and Typical Accident Situation) and the user needs and requirements (see deliverable D4.2.4 - User Needs and Requirements). Using an iterative process, which is defined in the first part of the document, it was made sure that the parameters defined here are consistent with the analysis shown in deliverable D4.3.1 - Safety Margin Application Parameters Analysis and Characterization and the functional specifications shown in deliverable D4.3.2 - SP4 Applications Functional Specifications.

The parameters specified here represent all the information needed by the SCOVA in-vehicle applications in order to be successfully implemented, including both data related to the ego-vehicle and data concerning its surroundings. For each of these parameters, important values, like resolution and update rate, are defined and, if necessary, these definitions are given for the three assistance areas of the safety margin (comfort, safety and critical) separately. These parameters are first given for each general SCOVA use case and then in a synthesized version, complying with the needs of all SCOVA use cases. This synthesized version of the parameter specification is the basis for implementation, since it covers all information available to the applications.

For the information flow, the exchange of data between the LDM and the applications, the information flow coming from the vehicle's sensors and the information flow between the ego-vehicle SCOVA applications is analysed. Two of the major outcomes of this information flow analysis are the estimation of the delay of information and the estimation of the data traffic generated by the applications.

The specification shown in this deliverable is crucial for a successful implementation of the SCOVA in-vehicle applications, since it defines the data framework for each of these applications.