



D2.5: System Concept and Specifications Definition

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Control sheet

Version history			
Version	Date	Main author	Summary of changes
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0.2	24/02/2017	Thorsten Stamm von Baumgarten	Description of approach
0.3	20/06/2017	Thorsten Stamm von Baumgarten	Imported released requirements from working documents
0.5	05/07/2017	Dennis Jünemann	Internal review
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1.0	31/07/2017	Thorsten Stamm von Baumgarten	Final version including comments from peer reviewers and other final comments

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Glossary of terms

Acronyms / terms	Description
AC	Air Conditioning
ACC	Adaptive Cruise Control
ADAS	Advanced Driver Assistance System
ADC	Analog Digital Converter
API	Application Programming Interface
ATS	After treatment System
AUX	Auxiliary
BMS	Battery Management System
CAN	Cable Area Network
CPU	Central Processing Unit
DAC	Digital Analog Converter
DB	Data Base
DBMS	Data Base Management System
DDP	Differential Dynamic Programming
DEF	Diesel Exhaust Fluid (AdBlue)
DOC	Diesel Oxidation Catalyst
DPF	Diesel Particle Filter
EAT	Exhaust Aftertreatment
ECU	Engine Control Unit
EGR	Exhaust Gas Recirculation
ePCC	Enhanced Predictive Cruise Control
FMEA	Failure Mode and Effects Analysis
GPS	Global Positioning System
HMI	Human Machine Interface
HW	Hardware
I/O	Input/Output
LIDAR	Light Detection and Ranging
MQTT	Message Queue Telemetry Transport
PCC	Predictive Cruise Control
PCCM	Predictive Cruise Control Module
PWM	Pulse-width Modulation
RCP	Rapid Control Prototyping
RPU	Rapid Prototyping Unit
SCR	Selective Catalytic Reduction

Acronyms / terms	Description
SOI	Start of Injection
SRS	System Requirement Specification
SW	Software
TCU	Transmission Control Unit

Publishable Executive Summary

The system requirements specification (SRS) defines the function and scope of services of the optiTruck system. The desired system functions and system behaviour should be defined by requirements. Simultaneously, the requirement definitions are a model (functional architecture) of the developed optiTruck system. The system specification as well as a part of the operator manual is derived from the requirement definitions.

Doing a proper SRS, will help achieving the following goals:

- Describing accurately what optiTruck system the stakeholders want
- Developer understands what the stakeholders expect from the optiTruck system

A SRS describes what the optiTruck system must do.

A good specification has the following attributes:

- Adequate (The need to describe what is wanted / needed)
- Complete (Everything that is wanted / needed must be described)
- Unambiguous (Prevent errors due to misinterpretations)
- Consistent (SRS needs to be consistent)
- Comprehensible (for the developer)
- Traceable (origin and history of an system requirement)
- Testable (Verify that developed system complies with the system requirements)



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