



Optimization of scalaBle rEaltime modeLs and functiOnal testing for e-drive COnceptS

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Publishable Executive Summary

This document describes most of all subsystem controls developed in an electrical vehicle like motor control, inverter control, braking system control or torque vectoring control. Dedicated calibration approaches have been presented for these models with a focus on the components performance and their reliability balance thanks to optimized controls. They will be used in Use Cases dedicated to safety purpose (WP5) and by the OEMs like RT-SAS, CRF or FO to integrate these functions into their vehicle models.

Furthermore, tools developed for vehicle integration optimization allow:

- A better subsystem integration by taking the benefit of the regenerative power and a refined energy balance understanding
- A time reduction in term of development cycle design by reducing the combination of subsystem integration with consideration of all the most efficient ones

By combining physical components and enhanced controls, faster and better vehicle model could be used for safety analyses and allowing less test measurement to validate the final vehicle configuration. Another key point is the validation at vehicle level of the hardware controllers.



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Project partners:

Partner no.	Partner organisation name	Short Name
1	AVL List GmbH	AVL
2	Centro Recherche Fiat SCpA	CRF
3	FORD Otomotiv Sanayi Anonim sirketi	FO
4	Renault Trucks SAS	RT-SAS
5	AVL Software and Functions GmbH	AVL-SFR
6	Robert Bosch GmbH	Bosch
7	SIEMENS INDUSTRY SOFTWARE NV	SIE-NV
8	SIEMENS Industry Software SAS	SIE-SAS
9	Uniresearch BV	UNR
10	Valeo Equipements Electroniques Moteurs	Valeo
11	Commissariat à l'Énergie Atomique et aux Énergies Alternatives	CEA
12	LBF Fraunhofer	FhG-LBF
13	FH Joanneum Gesellschaft M.B.H.	FHJ
14	National Institute of Chemistry	NIC
15	University Ljubljana	UL
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