

Proposal for amendments to ECE/TRANS/WP.29/2021/151

Detailed WP.29 work priorities related to automated/autonomous vehicles

Title	Description of work / ECE/TRANS/WP.29/2019/2	Corresponding principles/elements	Allocation to	Main targets	Activities		Deliverable/ Deadline for submission to WP29
					Current activities	Future Activities	
Functional Requirements for automated/ autonomous vehicles	<p>This work item should cover the functional requirements for the combination of the different functions for driving: longitudinal control (acceleration, braking and road speed), lateral control (lane discipline), environment monitoring (headway, side, rear), minimum risk manoeuvre, transition demand, HMI (internal and external) and driver monitoring.</p> <p>This work item should also cover the requirements for Functional Safety.</p>	<ul style="list-style-type: none"> a. System safety b. Failsafe Response c. HMI /Operator information d. OEDR (Functional Requirements) e. Operational Design Domain 	<p>GRVA/ FRAV informal group</p>	Automated / Autonomous vehicles	<p><i>Development and submission of recommendations for global ADS safety requirements, including methods for [scenario generation] and verifiable criteria, covering the corresponding principles.</i></p>	<p><i>Shift of emphasis towards alignment of FRAV and VMAD outcomes to provide integrated guidelines on ADS safety assurance sufficient to enable WP.29 decisions on initiatives, if any, under the Agreements.</i></p>	<p>June 2023: Guidelines for regulatory requirements and for verifiable criteria for ADS safety validation</p> <p>June 2024: Consolidated FRAV/VMAD submission (requirements + assessment)</p>
					<p><i>Progressive increase in FRAV-VMAD collaboration towards 2024 deliverable of consolidated submission.</i></p>		

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New assessment / Test method	Multi-pillar concept: Audit, simulation, electronic system compliance, digital identity, test track, real world driving evaluation., in-use monitoring, use of scenarios.	<p>b. Failsafe Response (Assessment Method)</p> <p>c. HMI /Operator information (Assessment Method)</p> <p>d. OEDR (Assessment Method)</p> <p>e. Operational Design Domain (Assessment Method)</p> <p>f. Validation for System Safety</p>	GRVA/ VMAD informal group	Automated / Autonomous vehicles	<ul style="list-style-type: none"> - Description of the credibility assessment - Description of In Service Monitoring & Reporting - Description for Real World Testing - Description on how to create and maintain the catalogue for scenarios - <u>Start of exploration</u> Exploration of safety validation methods, linking to the status of FRAV's consideration of technical requirements for <u>Dynamic Driving TaskDDTs, Operational Design Domain, and traffic-rule conversions etc.</u> 	<p>2nd iteration of the Guidelines for NATM</p> <p><i>Outcomes based on FRAV and VMAD collaboration for integrated guidelines on ADS safety assurance sufficient to enable WP.29 decisions on initiatives, if any, under the Agreements.</i></p> <p><i>Progressive increase in FRAV-VMAD collaboration towards 2024 deliverable of consolidated submission.</i></p>	<p>June 2023 2nd iteration of the Guidelines for NATM including outcome of "outstanding issues"</p> <p>June 2024 Consolidated FRAV/VMAD submission (requirements + assessment)</p>
					<p><i>Progressive increase in FRAV-VMAD collaboration towards 2024 deliverable of consolidated submission.</i></p>		

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Cyber security and (Over-the-Air) Software updates	Work of Task Force on Cyber Security and (OTA) software updates (TF CS/OTA) ongoing. Draft recommendations on the approach (based on draft technical requirements).	g. Cybersecurity h. Software Updates	GRVA Cyber/software update informal group	Conventional and Automated / Autonomous vehicles	[November 2023 - pending discussions]
Data Storage System for Automated Driving vehicles (DSSAD)	DSSAD are for autonomous vehicles (e.g. accident recoding). This work item should take into consideration of the discussion at GRVA and its Informal Working Group on Automatically Commended Steering Function (IWG on ACSF). Clear objectives, deadline and the identification of differences with EDR to be determined first before discussion on detailed data information.	i. EDR/DSSAD	GRVA EDR/DSSAD informal group	Automated / Autonomous vehicles		Inventory of best ADS storage practices DSSAD performance elements for ADS	[November 2022] [June 2024]
Event Data Recorder (EDR)	Existing systems - as road safety measure (e.g. accident recording).	i. EDR/DSSAD	GRSG In coordination with GRVA EDR/DSSAD informal group	Conventional and Automated / Autonomous vehicles	Complete EDR Performance Elements for 1958/1998 Contracting Parties Corrections/ amendments to existing EDR regulation [and ADS data elements for ALKS]'	WP29 guidelines on EDR Performance	July 2021 [March 2022] November 2022

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					<i>Current activities</i>	<i>Future Activities</i>	
						Elements for ADS EDR Step 2: Consideration of additional technical requirements to current UN Regulation regarding trucks and buses	March 2023

¹ Subject to endorsement by WP.29 in November 2021