

## GRVA – 11<sup>th</sup> session

The Working Party on Automated/Autonomous and Connected Vehicles (GRVA) met from 27 September to 1 October 2021 online, hosted in Geneva.

The 11<sup>th</sup> session of the GRVA started with the topic of Artificial Intelligence (AI) in vehicles. With regards to this topic, the secretary presented a summary of the [GRVA-11-03](#) (“Artificial Intelligence and Vehicle Regulations”) document. This document aims at compiling the situation regarding AI related to vehicle regulations and to propose a way forward. To this end, GRVA addresses this item, also with the aim to develop definitions first and then, corresponding requirements in the scope of WP.29 activities. After presenting the summary of the document, many experts at the meeting expressed their intentions on reviewing the document and giving feedback to the secretariat. Related to AI, expert from ISO introduced the document [GRVA-11-13](#) that explains the activities of the ISO working group that is developing publicly available specification concerning safety and artificial intelligence for road vehicles.

The second main topic of the GRVA 11<sup>th</sup> session addressed **Automated/autonomous and connected vehicles**. For this topic, the following IWG presented different documents:

- Informal Working Group on Functional Requirements for Automated and Autonomous Vehicles
  - o [GRVA-11-24](#) → Informal group’s status report
  - o [GRVA-11-25](#) → Consolidation of FRAV working documents that present current elements of the FRAV discussions
- Informal Working Group on Validation Methods for Automated Driving
  - o [GRVA-11-37](#) → Informal group’s status report
- Informal Working Group on Event Data Recorder / Data Storage Systems for Automated Driving
  - o [GRVA-11-31](#) → Informal group’s status report

Additionally to the reporting of the abovementioned IWGs, inside the Automated/autonomous and connected vehicles topic, different proposals on **UN Regulation on Automated Lane Keeping System regulation** were analysed.

The report of the Special Interest Group (SIG) on UN Regulation No. 157, provided in [GRVA-11-32](#), was introduced. The SIG on UN Regulation No. 157 is working on the provisions’ development related to higher speeds for ALKS concerning: (i) following distances (in line with traffic rules), (ii) smooth and anticipatory driving that avoids inducing string instability in traffic, (iii) strategies to mitigate collisions with wrong way drivers and pedestrians, forward detection ranges along with control strategies to adapt speed if braking performance and/or detection range is impaired and (iv) new performance model introduced for reference. This work is still being developed and the mentioned open points are still under consideration. As the work is ongoing, no decisions were done during this session.

Another topic reported during the 11<sup>th</sup> session is related to **Connected vehicles**. The Co-

Chair of the IWG on **Cyber Security, Software updates and Over-the-Air issues (CS/OTA)**, reported on the activities of the group ([GRVA-11-05](#)). Those activities are summarised below:

- The task force reviewed the inclusion of agricultural vehicles within the scope of R156 (on software updates). The conclusion is that given the use of over the air updates in the industry it is appropriate for R, S and T vehicles to be within scope of R156 (so no modifications should be made to the regulation regarding this topic). It has been suggested that GRVA should consider a timeline for bringing R, S and T vehicles within scope of R155 on cybersecurity.
- This task force also considered proposals for R155 and how to treat extensions should be issued to vehicles types whose approval was given prior to 1 July 2024 as per 7.3.1 and 7.3.4. The group developed amendments to (a) the UN Regulation No. 155 (Cyber Security and Cyber Security Management System, and (b) the respective Interpretation Documents for UN Regulation No. 155 ([ECE/TRANS/WP.29/2021/59](#)), in order to clarify under which circumstances extensions were possible and which additional information was expected to be provided by the vehicle manufacturer applying for approval.

Related to connected vehicles, a discussion regarding **data and vehicle communications** was held during the meeting. The discussion started with the expert from FSD presenting (also on behalf of CITA) document [GRVA-11-15](#). This document summarises existing regulatory activities on remote access to in-vehicle data within the Motor Vehicles Working Group of the European Commission and within GRVA. He described the current situation with regard to remote access to in-vehicle data and explored, in the case GRVA would be willing to deal with this item, the implications of relying on ISO 20077 (extended vehicle), which only allows data transfer via Business to Business (B2B) transactions. He highlighted that such system would not be appropriate for sovereign use cases, including Market Surveillance Activities and Periodic Technical Inspections. He advocated for a trust centre to be developed that would manage access to in-vehicle data. He based his explanation on an example (DSSAD) and highlighted the importance of the separation of duties in that context and the importance for authorities to get access to these data. After this presentation, different experts expressed their opinions regarding the topic, as a result, GRVA agreed to resume consideration of this agenda item at its next session to discuss the role of GRVA. GRVA also noted that the IWG on EDR/DSSAD could perform a first review of the topic presented by CITA (related to EDR/DSSAD) at one of its next sessions.

Another topic in the agenda of the meeting was **Advanced Driver Assistance Systems**. GRVA-11-16 was introduced, with a status report of the activities performed by the group. He detailed the activities under the two workstreams on the review of amendment proposals to UN Regulation No. 79 and on the drafting of a new Regulation. He explained that the group was envisaging to develop a new UN Regulation on Dynamic Control Assistance Systems (DCAS), as a subset of ADAS, with a structure derived from the one of UN Regulation No. 157 and incorporating outcomes from the IWG on VMAD concerning audits and tests (including virtual testing). It was confirmed during the session that the

draft was addressing both the DCAS performance and DCAS interactions with human drivers. The expert from Finland mentioned the excellent work of the group but was not sure whether the new UN Regulation should address DCAS or ADAS, as the name DCAS could suggest it would also address higher level of automation, as the word “driver” was missing in DCAS. He also raised the importance to involve the Global Forum for Road Traffic Safety (WP.1). No comments from GRVA were made.

With regards to **Advanced Emergency Braking System**, GRVA adopted two documents to be submitted to WP.29 and AC.1 for their consideration at March 2022 sessions:

- ECE/TRANS/WP.29/GRVA/2021/22, as amended by GRVA-11-40 (draft supplements for the 00, 01 and 02 series of amendments to UN Regulation No. 152)
- ECE/TRANS/WP.29/GRVA/2021/23 (draft supplements for the 02 series of amendments to UN Regulation No. 152)

Also, the Co-chair of the IWG on AEBS for M1 and N1 explained that the group wanted to gather experience during the next two years, including on simulation, before submitting amendment proposals addressing tests via simulation.

During the session, an exchange of views on **guidelines and relevant national activities regarding automated vehicles** was performed. Different experts presented documents on automated systems and vehicles legislation on their respective countries. Below there is a summary on the outcomes that each expert presented:

- France → Document [GRVA-11-23](#) was introduced. The document provides an overview of the French Decree on automated vehicles’ conditions of use and automated road transport systems’ commissioning. The decree covers automation levels up to fully automated systems, provided that these are under supervision of a person in charge of remote intervention and are deployed on predefined paths or zones. It also contains definitions such as the one for Automated Road Transport System (ARTS) and general safety provisions for these systems, as well as requirements for the driver or the person in charge of remote intervention and specify responsibility principles (including criminal liability) as set in ordinance 2021-443 dated 14 April 2021.
- Germany → A presentation ([GRVA-11-19](#)) providing details on the regulatory act on Automated Driving Systems adopted in Germany in 2021 was shown. It detailed the variety of use cases covered, the infrastructure and ODD requirements, the technical requirements and the approval of the technology and authorization regarding the use to operate. The presentation received questions from the experts from China on the timeline, from Italy on the use of specific registration plates, and from France on potential definitions for autonomous shuttles. The expert from Germany highlighted that an ordinance was envisaged to clarify details.
- China → The expert from China introduced [GRVA-11-21](#) providing information about activities performed in China regarding their Framework of Automated Driving Standard System, providing details regarding Intelligent and Connected Vehicles and the related general technical requirements for automated driving

systems. The expert from China also gave proposals and suggestions, derived from the experience gathered in China, for GRVA:

- (i) to consider dealing with the vehicle operating on both public road and limited areas.
- (ii) to promote the organic combination of FRAV and VMAD work results.
- (iii) to clarify the relationship between Automated Driving Systems and Advanced Driver Assistance System.
- (iv) to regulate other technologies or functions, such as on-board positioning system, as the basic function to serve the automated driving..

Another topic discussed during the session was related to document [GRVA-11-11](#). The expert from Germany introduced on behalf of the IWG on The **Database for the Exchange of Type-Approval Documentation (DETA)**. He referred to Schedule 5 in the Revision 3 of the 1958 Agreement that sets the grounds for the use of the feature called Unique Identifier (UI). He explained that the IWG on DETA was developing, on the basis of the activities of the Working Party on Lighting and Light-signalling (GRE), the “summary document” that could be stored in DETA to facilitate the use of UI. He clarified that the subsidiary bodies of WP.29 (GRs) would be in charge to define the content of the summary document. He recalled the importance of defining which Regulation would not allow the use of UI.

This topic is not directly related to the CAV technologies, but aims to define a procedure for the exchange of information on type approval of such systems. Thus, it has been included in this summary, as the exchange of relevant information among authorities is a key aspect for the purposes of the mutual recognition and acceptance of the different technologies. To conclude, during the last part of the meeting, the Secretary presented [GRVA-11-26](#) “All you need to know about Automated Vehicles”, a publication (brochure) that UNECE would publish within the next months, dealing to technological developments and governmental responses at international level, related to ADAS and ADS. This document has already been published and can be followed in the following link: <https://unece.org/sites/default/files/2022-01/Brochure%20Automated%20Vehicles.pdf>

The complete meeting report by GRVA Secretariat can be found in the following link: <https://unece.org/sites/default/files/2021-12/ECE-TRANS-WP.29-GRVA-11e.pdf>

Next GRVA meeting will be held online, from January, the 24<sup>th</sup> 2022 to January, the 28<sup>th</sup> 2022.