



Economic Commission for Europe

Inland Transport Committee

World Forum for Harmonization of Vehicle Regulations

Working Party on Automated/Autonomous and Connected Vehicles

Fourteenth session

Geneva, 26-30 September 2022

Report of the Working Party on Automated/Autonomous and Connected Vehicles on its fourteenth session

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I. Attendance

1. The Working Party on Automated/Autonomous and Connected Vehicles (GRVA) met from 26 to 30 September 2022, hosted from Geneva. The meeting was chaired by Mr. R. Damm (Germany) and was attended by 205 accredited experts from the following countries, following Rule 1 of the Rules of Procedure of the World Forum for Harmonization of Vehicle Regulations (WP.29) (TRANS/WP.29/690/Rev.2): Australia, Austria, Canada, China, Czech Republic, Denmark, Finland, France, Germany, Hungary, India, Italy, Japan, Lithuania, Luxembourg, Malaysia, Netherlands, Norway, Republic of Korea, Russian Federation, Singapore, Slovakia, South Africa, Spain, Sweden, Switzerland, Türkiye, the United Kingdom of Great Britain and Northern Ireland, the United States of America and Viet Nam. Experts from the European Commission (EC) also participated.
2. Experts from the following non-governmental organizations (NGOs) and international organizations participated: the American Automotive Policy Council (AAPC), Automotive Open System Architecture (AUTOSAR), European Agricultural Machinery Organization (CEMA), International Motor Vehicle Inspection Committee (CITA), International Association of the Body and Trailer Building Industry (CLCCR), European Association of Automotive Suppliers (CLEPA/MEMA/JAPIA), European Garage Equipment Association (EGEA), European Tyre and Rim Manufacturer Association (ETRMA), European Transport Safety Council (ETSC), European Association of Internal Combustion Engine Manufacturers (EUROMOT), International Automobile Federation (FIA), International Federation of Automotive Distributors (FIGIEFA), International Motorcycle Manufacturers Association (IMMA), International Organization for Standardization (ISO), International Telecommunication Union (ITU), International Organization of Motor Vehicle Manufacturers (OICA), SAE International, Securing America's Future Energy (SAFE), World Bicycle Industry Association (WBIA) and the World Economic Forum (WEF). An expert from Amazon Web Services participated as observer upon invitation by the secretariat.
3. The Chair opened the meeting welcoming the 100 delegates present in the meeting room.

II. Adoption of the agenda (agenda item 1)

Documentation: ECE/TRANS/WP.29/GRVA/2022/15
Informal documents GRVA-14-01 and GRVA-14-02

4. GRVA considered the provisional agenda prepared for this session (ECE/TRANS/WP.29/GRVA/2022/15). GRVA adopted it without modifications, as reproduced in GRVA-14-02, a version that included the reference to all informal documents received until 23 September 2022. (All informal documents submitted are listed in Annex I of this report. Annex II provides the list of Informal Working Groups (IWG) reporting to GRVA.)
5. GRVA also agreed on the running order for the session (GRVA-14-01).
6. The Chair welcomed the delegation from Vietnam, attending GRVA for the first time.

III. Highlights of the June 2022 session of WP.29 (agenda item 2)

Documentation: (ECE/TRANS/WP.29/1166)
Informal document GRVA-14-03

7. The Secretary presented GRVA-14-03, with highlights from the WP.29 session in June 2022 having relevance for GRVA. He referred to the session report ECE/TRANS/WP.29/1166 for more details. He mentioned that the amendment to the interpretation document on UN Regulation No. 155 (adopted by GRVA at its March 2022 session) required a correction at the time of adoption by WP.29 and that he had spoken on behalf of GRVA to confirm the correction. He invited GRVA to check

ECE/TRANS/WP.29/1166, para. 103. He informed that the representative of the Netherlands, Co-Chair of the IWG on Validation Methods for Automated Driving (VMAD), noted the development of UN Regulation No. 157 and suggested that its title be reviewed. GRVA noted the report from the secretariat.

8. The Secretary informed GRVA that the reference documents produced by GRVA, such as guidelines, recommendations, interpretation documents were made available on the UNECE website: <https://unece.org/reference-documents-0>.

IV. Artificial Intelligence in vehicles (agenda item 3)

Documentation: (Informal document GRVA-13-04)
Informal documents GRVA-14-04/Rev.1 and GRVA-14-23

9. The Secretary recalled the purpose of GRVA-13-04, titled Outcome of the GRVA workshops on Artificial Intelligence (AI) and Vehicle Regulations. He highlighted that the document contained AI relevant draft definitions in square brackets. He introduced GRVA-14-04/Rev.1 based on GRVA-13-04 and including revised definitions, submitted by the expert from OICA.

10. The expert from the Netherlands welcomed the document. He inquired whether the definitions were new or derived from other reference documents. The expert from OICA confirmed that some definitions were derived from an ISO standard, when available, and that the other definitions, not part of that standard were new definitions proposed by OICA.

11. The expert from FIA introduced GRVA-14-23, presenting the position of his organization, formed following discussions with the German Federal Office for Information Security, ITU and OICA. He explained that his organization trusted more narrow artificial intelligence and supervised learning than other forms of AI. He explained that regulatory requirements would be necessary to address AI related risks. He suggested that the real-world testing pillar would include considerations related to AI, as a specific technology. He supported the steps proposed by OICA (see Chapter 4 to GRVA-13-04). He proposed several general policies, from the point of view of consumers, regarding AI in automotive products: AI shall (a) support safety and environmental performance consideration, (b) behave in such a way that it translates into safe driving, (c) support humans, (d) avoid cycle beating and (e) be designed in such a way that it is resettable by the user.

12. The expert from ITU supported the document and advised to move forward with it. He mentioned the activities initiated by ITU in September 2021 regarding AI for Road Safety and encouraged delegations to attend the next meetings.

13. The expert from France shared the concerns of his delegation regarding transparency, the basis for building trust in AI technologies. He stressed the importance of being able to check the good functioning of such systems. He volunteered to elaborate on this statement at the next GRVA session.

14. The expert from OICA raised questions for clarification and asked why FIA preferred narrow AI and supervised learning (FIA answered that it was a conservative position). He agreed with FIA regarding online learning: he supported the view of GRVA that a new version of a type-approval relevant software based on AI was subject to approval, according to the provisions of UN Regulation No. 156, before deployment.

15. The expert from the Russian Federation supported that this matter was addressed by the IWG on Functional Requirements for Automated and Autonomous Vehicles (FRAV). The expert from OICA/CLEPA argued that this was also relevant for the IWG on VMAD.

16. The expert from Germany mentioned the importance of this work: sound definitions were the prerequisite before starting regulatory initiatives. He offered to comment the definitions proposed.

17. The expert from the United States of America questioned the need to regulate AI.

18. The expert from ITU stated the importance of understanding how AI works. He also stressed that software using AI would need to be frozen and tested before being deployed.

19. The expert from United Kingdom of Great Britain and Northern Ireland offered views on what could be subject to regulations. He mentioned as an example the risks related to discrimination. He suggested that future steps would be needed in the near future.

20. GRVA agreed to keep this item on its agenda. GRVA invited the expert from OICA to organize a workshop to finalize the work on definitions, with the assistance of the secretariat.

21. The expert from SAE International volunteered his members to assist in that process. GRVA invited SAE International to join the workshop.

V. Automated/autonomous and connected vehicles (agenda item 4)

A. Deliverables of the Informal Working Group on Functional Requirements for Automated and Autonomous Vehicles

Documentation: Informal document GRVA-14-35

22. The expert from the United States of America, Co-Chair of the IWG on FRAV, introduced GRVA-14-35, with a status report of the activities of the group. He presented the outcome of the meeting in Detroit, Michigan in September 2022. He reported on developments regarding requirements related to the performance of the Dynamic Driving Task (DDT), traffic-rule conversions to address local requirements, guidelines for documenting the Operational Design Domain (ODD) of Automated Driving System (ADS) features, ODD-based framework to generate scenarios for assessing ADS performance, safety models for assessing ADS responses under scenarios, behavioral competencies to set verifiable performance criteria for scenarios, safety requirements for ADS user Human Machine Interface (HMI) and interactions.

23. The expert from ITU mentioned a specific challenge faced by the stakeholders dealing with the development of Automated Driving Systems, namely the lack of uniform and harmonized traffic rules around the world. He explained that the combined workshop (see para. 39) of the Informal Group of Experts on Automated Driving (IGEAD) and FRAV identified the need to provide information on traffic rules by jurisdictions, as one of the potential items for cooperation. He offered ITU to host a database on traffic rules under the direction of the Global Forum for Road Traffic Safety (WP.1) and WP.29 to determine the format. He offered ITU to participate in WP.1 to provide the UN Information and Communications Technology (ICT).

24. GRVA endorsed the progress report of the IWG on FRAV.

25. GRVA discussed the input from the IWG on FRAV regarding light-signalling for ADS under agenda item 4(e).

B. Deliverables of the Informal Working Group on Validation Methods for Automated Driving

Documentation: Informal documents GRVA-14-16 and GRVA-14-45

26. The expert from Japan, Co-Chair of the IWG on VMAD, presented GRVA-14-45 with a brief review of the group's deliverables until June 2022, information regarding the change of the leadership of the VMAD subgroup four, suggestions for deliverables during the two years provided by the mandate extension by WP.29, and a report of the activities since the May 2022 session of GRVA (elaboration of GRVA-14-16, organization of future activities of the four subgroups, and the preparation of the suggestion for deliverables until June 2024). He listed the open issues addressed by each subgroup, he presented the proposed deliverables until June 2024 and he offered suggestions of the leadership team regarding the collaboration with the IWG on FRAV. He announced the invitation by Japan for FRAV and VMAD meetings in December 2022, including a joint session.

27. The experts from France, the Netherlands, and the United Kingdom of Great Britain and Northern Ireland asked for clarifications. GRVA endorsed the status report of the IWG on VMAD.

28. GRVA considered and endorsed GRVA-14-16, including amendments to ECE/TRANS/WP.29/2022/58 (Guidelines for Validating Automated Driving System).

C. Deliverables of the Informal Working Group on Event Data Recorder / Data Storage Systems for Automated Driving

Documentation: Informal documents GRVA-14-29, GRVA-14-39 and GRVA-14-40/Rev.1

29. The expert from Japan, Co-Chair of the IWG on Event Data Recorder (EDR) / Data Storage Systems for Automated Driving (DSSAD), presented GRVA-14-39, recalling the mandate of the group, providing an overview of the group's activities and listing the activities of the group since the May 2022 session of GRVA. He explained that the group clarified the primary objective of DSSAD, which was to record data to evaluate and monitor the overall safety performance and identify when ADS was in control of vehicles. GRVA agreed with the group's suggestion that, while data obtained from DSSAD could be used for other purposes including liability, this was not the primary goal or objective of the DSSAD requirements.

30. He reported that the Co-Chairs of the IWG on EDR/DSSAD held discussions with the Co-Chairs of the Special Group on Automated Lane Keeping System (ALKS) and OICA to review ECE/TRANS/WP.29/2022/59/Rev.1 and replace 'Abortion of Lane Change Procedure', that is to be recorded, by 'Abortion of Lane Change Manoeuvre', as proposed in ECE/TRANS/WP.29/GRVA/2022/16 under agenda item 4(d).

31. GRVA reviewed GRVA-14-40 (Inventory of best ADS storage practices (Review of the existing national / regional activities and a proposed way forward for DSSAD)) and adopted GRVA-14-40/Rev.1, a version including updates by the expert from France. GRVA requested the secretariat to submit it to WP.29 for information at its November 2022 session.

32. The expert from OICA introduced GRVA-14-29, highlighting the implications concerning the absence of harmonized requirements in UN Regulation No. 157 (ALKS), Chapter 8 (DSSAD) regarding data availability, access and retrieval. He also mentioned that some Contracting Parties sought to require storing additional data elements (e.g. for location) which were neither included nor mandated by the regulation. He invited GRVA to consider harmonizing these requirements. The expert from the United States of America, Co-Chair of the IWG on EDR/DSSAD, confirmed that the IWG did not discuss this matter.

D. UN Regulation No. 157

Documentation: ECE/TRANS/WP.29/2022/16
Informal documents GRVA-14-42 and GRVA-14-43

33. The expert from the United Kingdom of Great Britain and Northern Ireland presented GRVA-14-42 on behalf of the Special Interest Group on UN Regulation No. 157 (ALKS). He recalled recent achievements and informed that the 01 series of amendments to UN Regulation No. 157 was expected to enter into force within the next six months. He explained that the group worked on clarifications to the DSSAD requirements in ECE/TRANS/WP.29/2022/16, which was proposed to be adopted as Supplement 1 to the 01 series of amendments to UN Regulation No. 157. He reported on discussions within the group concerning the drafting of an interpretation document, the improvement of the information document, and the review of the restriction of regular lane change to Category M₁ and N₁. He suggested that GRVA discuss these future actions.

34. The expert from OICA suggested that the group should work on an interpretation document, only if there was an identified need and stated that deciding on such a work item was premature. The expert from France suggested that, if any provision in the regulation

required clarifications, then this should first be achieved by a supplement to that regulation. The expert from the Netherlands agreed with France and added that experience should be gathered first before engaging in such activities. The expert from Japan supported the views of OICA.

35. The expert from Germany stated that, from the perspective of a Technical Service, similar practices to those of the Technical Services Group (TSG) under the Working Party on Passive Safety (GRSP) could be envisaged. GRVA expressed words of cautions to not create a parallel universe in the regulatory world and agreed that any potential lack of clarity should be addressed via a supplement.

36. The expert from the United Kingdom of Great Britain and Northern Ireland introduced ECE/TRANS/WP.29/2022/16 (as amended by GRVA-14-43), developed with the guidance of the leadership of the IWG on EDR/DSSAD and aimed at resolving open questions related to the data element recording by DSSAD in UN Regulation No. 157.

37. GRVA adopted ECE/TRANS/WP.29/GRVA/2022/16, as amended by GRVA-14-43 and requested the secretariat to submit it, as a supplement to the 01 series of amendments to UN Regulation No. 157, to WP.29 and AC.1 for consideration and vote at their March 2023 sessions.

E. Coordination of work on automation between working parties (GRs)

Documentation: Informal documents GRVA-14-15/Rev.3, GRVA-14-31, GRVA-14-36, GRVA-14-41, GRVA-14-44, GRVA-14-51/Rev.2, GRVA-14-53, GRVA-14-54/Rev.1 and GRVA-14-56

38. The expert from the United States of America, Co-Chair of the IWG on FRAV, introduced GRVA-14-15. He explained (a) that the IWG did not recommend mandatory requirements for additional light-signalling devices under WP.29 beyond those requirements established for manually driven vehicles, (b) that the IWG believed existing light-signalling devices may be suitable (if permitted) to signal initiation of an automated fallback response designed to place the ADS vehicle in a minimal risk condition, (c) that the IWG recommended the establishment of uniform provisions for a light signal to communicate the operational status of the ADS, if fitted on an ADS vehicle and under certain conditions to serve the purpose of countries that may wish to mandate such light-signal, (d) that the IWG noted that means other than light-signalling may be suitable to achieve safety needs, and (e) that the IWG recommended continued monitoring of research into ADS signalling and the safety of interactions between other road users and ADS vehicle.

39. GRVA reviewed the document in detail, which received comments from the experts from Canada, France, Japan, the United Kingdom of Great Britain and Northern Ireland, the United States of America as well as from AAPC, ITU, OICA and SAE International. The secretariat produced revised versions of the document reflecting the input received during the session. GRVA noted OICA's concern with the approach of leaving the choice to mandate, allow or forbid such light signal for ADS to Countries or States (in the case of federal countries). GRVA adopted GRVA-14-15/Rev.3 (GRVA recommendations on ADS external light-signalling) and requested the secretariat to submit it to AC.2 and WP.29 for consideration at their November 2022 sessions.

40. The Secretary presented GRVA-14-44, providing information on the involvement of the GRVA Chair and Secretary at the session of WP.1, that took place during the week before the fourteenth session of GRVA. He explained that WP.1 was informed of the content in GRVA-14-15 on light-signalling for ADS, that WP.1 discussed signalling for ADS vehicles (also on the basis of an informal document that was submitted by the expert from the Netherlands), that the WP.1 Chair recalled the invitation to GRVA for a public joint event, possibly during ITC and that the contracting parties present at WP.1 expressed the interest to have an exchange (workshop) involving the GRVA IWG on FRAV and the WP.1 IGEAD. He drew the attention of GRVA to WP.1 documents (on Human Factors, on draft WP.1 resolution on activities other than driving), also posted on the GRVA webpage for convenience.

41. The expert from Canada welcomed the interaction with WP.1; he suggested that discussions on activities of common interest should also be conducted at WP.29 level, he mentioned his involvement in a WP.1 activity on human factor under agenda item 3 (d) (1), by chairing a panel discussion on human factor. He did not favour a public joint event with WP.1. He suggested to resume the work on taxonomy, definitions and lexicon (initiated a few years before COVID-19).
42. The expert from OICA described the two kinds of events discussed by WP.1. He mentioned on the one side the invitation of WP.1 Chair to GRVA for a communication exercise and on the other side the WP.1 decision for a workshop co-organized by IWG on FRAV and IGEAD, serving the purpose of sharing information, avoiding double work or repetitions, identifying items of common interest and avoiding slowing down the work. He confirmed the information provided by the secretariat in GRVA-14-44 and stated the industry's need for harmonized traffic rules to avoid the fragmentation of rules, that would have to be added in ADS algorithms.
43. The expert from Canada recalled the nature of IGEAD, an informal group of interested parties. He stated that any discussion would need to be brought back to WP.1 and that such repetition would be beneficial.
44. GRVA noted that the collaboration should not impact the respective internal processes. GRVA invited the Chair to report to AC.2 and WP.29 on informal exchanges between the GRVA IWG on FRAV and the WP.1 IGEAD.
45. The expert from OICA presented GRVA-14-31, recalling the suggestion of the automotive industry to target end of 2025 for the development of an internationally harmonized certification scheme for Automated Driving Systems. He presented recommendations regarding the development of vehicle categories regarding ADS. He also provided ideas of relevance in the context of the screening and review of the UN Global Technical Regulations (UN GTRs) and UN Regulations under the purview of GRVA regarding their fitness for ADS.
46. The expert from the Netherlands, Co-Chair of the IWG on VMAD, noted the interest of the industry for an internationally harmonized certification scheme for ADS. He stated that the IWG on VMAD was not likely to be ready to cover all use cases and vehicle categories by the end of 2025 and that there was no commitment at this stage to meet that date.
47. The expert from Canada, Co-Chair of the IWG on VMAD, recalled the recent extension of the IWG on VMAD. He agreed with his colleague from the Netherlands. He stated that the work was ongoing, and that the industry should adapt its timeline too. He suggested that WP.29 be consulted about the proposal to address the vehicle categories for ADS. He advised that the screening of the UN GTRs and UN Regulations should not be euro-centric. He warned that any acceleration request or disruption could affect the progress of the IWG on VMAD. He suggested that the industry should join the IWG on VMAD meetings to present the state-of-the-art technology, the obstacles, how the industry deals with safety before performing trials or before hitting the market.
48. The Secretary recalled GRVA that the Working Party on General Safety provisions (GRSG) was in charge of the resolutions that include definitions for the vehicle categories and suggested to liaise with that working party.
49. The expert from ITU considered that GRVA did not have the time to address every topic. He suggested to concentrate on conventional vehicles that include an ADS.
50. The expert from SAE International mentioned that vehicle categories might even have an impact on Vehicle Identification Numbers (VIN).
51. GRVA requested the Chair to consult AC.2 and WP.29 at their November 2022 sessions on the way to address the question of vehicle categories for automated vehicles.
52. The expert from the European Commission's Joint Research Center, Chair of the IWG on VMAD subgroup three, explained that the European Union (EU) recently adopted a EU Regulation that covered among others the (small series) approval of driverless shuttles, a first and very good example of the principles application of the New Assessment Test Method

applying the Multi Pillar Approach of GRVA. She volunteered to present this regulation at the next IWGs on FRAV and VMAD meetings.

53. The expert from OICA stated, in response to the Co-Chairs of IWG on VMAD, the importance to recognize the need for prompt action. He acknowledged the role of GRSG on vehicle categories, noted the specificities of ADS and called on GRVA to provide assistance to GRSG. He thanked the expert from EU to highlight the work done at the EU level and acknowledged that many aspects of this work were closely linked to the IWGs on FRAV/VMAD activities; therefore discussion and exchange would be interesting. He confirmed that the work done on the screening of UN Regulations and UN GTRs was not Eurocentric.

54. The expert from France introduced GRVA-14-36, informing GRVA on the work done by the Task Force (TF) on the fitness of GRVA UN Regulations and UN GTRs for ADS. He thanked the expert from China for the collaboration on this topic. The expert from the Netherlands presented GRVA-14-41, reporting on the GRSG activities on this topic and asking for guidance to GRVA. The expert from Germany informed on the GRSP activities on this topic.

55. GRVA discussed GRVA-14-54, prepared by the Secretary on the basis of input received, and proposing guidance to the GRs dealing with the screening of UN Regulations and UN GTRs. The proposal received comments from the experts from China, France (GRVA-14-53), Germany, Japan, the Netherlands and the Russian Federation as well as from OICA (GRVA-14-56). GRVA confirmed that ALKS was not in the scope of this screening. GRVA endorsed GRVA-14-54/Rev.1 with guidance for the experts from all GRs, involved in these activities. GRVA requested the Chair to inform AC.2 about this coordination between the GRs.

56. GRVA discussed the deliverables of the IWGs on FRAV and VMAD. GRVA adopted GRVA-14-51/Rev.2 (Proposal for amendments to ECE/TRANS/WP.29/2021/151 (Framework document)) and requested the secretariat to submit it to AC.2 and WP.29 for information at their November 2022 sessions.

F. Other business

Documentation: Informal documents GRVA-14-08 and GRVA-14-19

57. The expert from China presented GRVA-14-19, with the views of China on open issues to be addressed for effectively tackling ADS performance assessment and testing, as well as with other suggestions. The expert from Canada recalled the leadership function of the expert from China at IWG on FRAV and the possibilities for her to bring these suggestions to the attention of her group, directly. He invited China to share suggestions directly with the IWG on VMAD subgroup one. The expert from the United States of America echoed Canada's comments. The expert from China clarified that, for the sake of good governance, China preferred to share these considerations with GRVA, the formal and parent body of IWGs on FRAV and VMAD, first. GRVA noted these considerations, that would be cascaded down to the IWGs.

58. The expert from SAFE presented GRVA-14-08, introducing the Association for Standardization of Automation and Measuring Systems (ASAM) informing the community on the release of ASAM OpenSCENARIO® 2.0.0, including a new scenario description language and supplying tools and mechanisms for regulators to communicate with developers, for better ADS safety assurance validation, testing and certification.

VI. Connected vehicles (agenda item 5)

A. Cyber security and data protection

Documentation: ECE/TRANS/WP.29/GRVA/2022/17
ECE/TRANS/WP.29/GRVA/2022/18
Informal documents GRVA-14-06, GRVA-14-07, GRVA-14-11,
GRVA-14-33, GRVA-14-34 and GRVA-14-46

59. The expert from CEMA presented GRVA-14-33, detailing the standardization activities and corresponding timeline of the agricultural vehicle industry regarding cyber security and software updates. He clarified, upon request by the expert from the United States of America, that his delegation would support the establishment of a new working group to deal with this issue.

60. The expert from Italy supported the process and activities presented by CEMA. The expert from Germany agreed to review the document prepared by CEMA. The expert from the United Kingdom of Great Britain and Northern Ireland noted that the deliverables of the IWG on Cyber Security (CS) and Over the Air (OTA) issues were very generic, i.e. risk assessment-based requirements and felt that waiting until the standardization process was completed would be too long. The expert from Canada confirmed that the work of the Group was general enough to encompass agricultural vehicles and explained that he was not convinced that there would be many other requirements that the IWG on CS/OTA should review.

61. GRVA noted that some delegations needed more time to consider the CEMA proposal. GRVA encouraged CEMA to liaise with the IWG on CS/OTA. GRVA agreed to keep GRVA-14-33 and GRVA-14-34 on its agenda for the January 2023 session.

62. The expert from the Japanese National Traffic Safety and Environment Laboratory presented GRVA-14-07, summarizing the outcome of the workshop on Vehicle Cyber Security, organized for the contracting parties of the 1958 and 1998 Agreements by NTSEL and the secretariat, upon request of GRVA (ECE/TRANS/WP.29/GRVA/13, paras. 48-50). GRVA noted the workshop conclusions: (a) the main impact of UN Regulation No. 155 was due to the Threat Analysis and Risk Assessment (TARA) related requirements, (b) Annex 5 should not become the primary focus or the checklist otherwise the consequence could be a less effective impact of the requirements. GRVA welcomed this report. GRVA agreed on the possibility of organizing another workshop for the contracting parties of the 1958 and especially 1998 Agreements, if requested by a contracting party.

63. The expert from the Japanese National Traffic Safety and Environment Laboratory presented GRVA-14-46, reporting on the outcome of workshops on the implementation of UN Regulation No. 155. He recalled the purpose of these workshops, gathering Type Approval Authorities and Technical Services nominated by the contracting parties of the 1958 Agreement. He explained that the outstanding issue discussed by the group was the conditions for acceptance of foreign cyber security management system certificates in the contexts of multi-brand projects and multi-stage type approval. GRVA noted that the workshop activities would come to an end soon and discussed the potential need for similar activities related to UN Regulation No. 156 and software update management systems. GRVA welcomed the report received and noted that the work could result in an amendment proposal to the interpretation document for UN Regulation No. 155 or draft amendments to UN Regulations that could be reviewed by IWG on CS/OTA before submission to GRVA.

64. The expert from SAE International recalled his presentation at the previous session of GRVA. He introduced ECE/TRANS/WP.29/GRVA/2022/17 and ECE/TRANS/WP.29/GRVA/2022/18 (GRVA-14-06 provides a version of ECE/TRANS/WP.29/GRVA/2022/18 with tracked changes), aimed at seeking clarification of the requirements of Annex 5, regarding the authentication of Global Navigation Satellite System (GNSS) messages. The proposals received comments from CLEPA and OICA (GRVA-14-11). GRVA agreed to transmit these four documents listed in this paragraph to IWG on CS/OTA for further discussion.

65. GRVA noted the number of tasks given to the IWG on CS/OTA and noted that the next session of the group was a two-hour virtual meeting. GRVA requested the IWG to provide more time for discussions. GRVA noted that the mandate of the IWG was going to expire in November 2022. GRVA agreed that the mandate of the IWG on CS/OTA could be extended at least for one year. GRVA requested the secretariat to provide information to AC.2 and WP.29 at their November 2022 sessions, that the proposed deliverables of the group would be detailed at the next session.

B. Software updates and over-the-air issues

66. No document was submitted under this agenda item.

C. Data and vehicle communications

Documentation: Informal documents GRVA-14-20

67. The expert from China introduced GRVA-14-20. He noted that GRVA's name mentioned *connected vehicles* and that GRVA deliverables on connectivity were limited to cyber security and software updates, so far. He suggested that GRVA consider new tasks in that field. He stressed that whether a vehicle can send and receive data accurately was an important factor for the vehicle to realize connectivity-related functions. He stated that Vehicle-to-Vehicle (V2V) data interaction was important to materialize the potential of technology in the field of road safety. He noted the standardization and regulatory activities of ISO, ITU, the International Electrotechnical Commission (IEC), SAE International, European Telecommunications Standards Institute (ETSI) and the Intelligent Transport System (ITS) Connect Promotion Association of Japan. He proposed that GRVA carry out preliminary research on V2V data interaction, data content, data format, data broadcast rules and communication performance requirements. He suggested to address three questions, (a) whether the subject of V2V data interaction would be a system of the vehicle, (b) at what level such activities could be carried out, and (c) how to coordinate the formulation of harmonized technical requirements. The proposal received comments from the experts from Canada, France, Germany, Japan, ITU and OICA. GRVA agreed to explore the need for such activities, to check if other GRs or the IWG on ITS would have a role. GRVA agreed to inform and to consult AC.2 and WP.29 at their November 2022 sessions on the way forward with this technical item.

D. Other business

68. No document was submitted under this agenda item.

VII. Advanced Driver Assistance Systems and UN Regulation No. 79 (agenda item 6)

A. Advanced Driver Assistance Systems

Documentation: Informal document GRVA-14-18

69. The expert from the Russian Federation, Co-Chair of the TF on Advanced Driver Assistance Systems (ADAS), introduced GRVA-14-18, with the progress achieved by the group on the drafting of a UN Regulation on Driver Control Assistance System (DCAS). He detailed the activities of the small drafting group. He mentioned the discussion within the TF regarding the allocation of vehicle control assistance systems between UN Regulation No. 79 and the new UN Regulation on DCAS. He detailed the DCAS master document review process and the associated timeline. He expected the drafting completion of the UN Regulation by May or September 2023. GRVA endorsed the progress report.

B. UN Regulation No. 79 (Steering equipment)

Documentation: (ECE/TRANS/WP.29/GRVA/2021/9,
ECE/TRANS/WP.29/GRVA/2021/10)
Informal documents GRVA-14-24/Rev.1 and GRVA-14-25

70. GRVA agreed, following the recommendation of the TF on ADAS, to keep ECE/TRANS/WP.29/GRVA/2021/9 and ECE/TRANS/WP.29/GRVA/2021/10 on its agenda for the January 2023 session.

71. The expert from OICA introduced GRVA-14-25, detailing an amendment proposal to the provisions on the activation of Automatically Commanded Steering Function of Category C to reduce the driver's confusion.

72. The expert from Japan supported the proposal. The expert from the United Kingdom of Great Britain and Northern Ireland supported the intention of the proposal and suggested to review the text proposed.

73. The expert from Germany was not in favour of GRVA-14-25. He suggested to address this concern via a better human-machine interface requirement.

74. The expert from OICA presented GRVA-14-24/Rev.1, aimed at addressing the comment from the expert from Germany. The expert from Germany welcomed the modifications proposed but still had concerns with the wording of paragraph 5.6.4.5. because it would introduce a weak requirement, difficult to verify. GRVA agreed in principle with the aim of the proposal but required an improved wording for consideration at its January 2023 session.

C. Other business

Documentation: Informal document GRVA-14-14

75. The expert from Japan presented GRVA-14-14, proposing that GRVA harmonize requirements for Acceleration Control for Pedal Error (ACPE) under the 1958 Agreement. She detailed the situation in Japan, with drivers aged 75 and above being statistically more often involved in accidents due to errors when using the acceleration pedal instead of the brakes. She provided details demonstrating the benefits of mandating ACPE and proposed a work plan for GRVA.

76. The expert from the United States of America inquired why harmonization was proposed to be performed under the 1958 Agreement and raised questions on data to determine potential costs/benefits ratios supporting regulatory activities. The expert from France asked about existing feedback regarding false positives and inquired whether such system would only make sense for vehicles with an automatic gearbox. The expert from Sweden inquired whether Advanced Emergency Braking System (AEBS) regulations could address such situations. The expert from the Republic of Korea explained that his country experienced similar cases, as demonstrated by EDR data, and that they would participate in such activities, as proposed by Japan. The expert from Germany mentioned similar accidents in his country as well and explained that such systems would require regulations as they potentially override the driver. The expert from OICA inquired whether guidelines could be considered to address ACPE. He noted that "overriding the driver" was discussed in the context of complex ADAS and ADS but had not been acceptable so far from the regulator point of view for more simple systems such as AEBS, hence for ACPE.

77. GRVA agreed that the expert from Japan, together with interested Contracting Parties, would draft preliminary Terms of Reference (ToRs) of a potential IWG on ACPE. GRVA agreed to review draft ToRs and to decide on the way forward at its next session.

VIII. Advanced Emergency Braking Systems (agenda item 7)

Documentation: ECE/TRANS/WP.29/GRVA/2022/19
 ECE/TRANS/WP.29/GRVA/2022/20
 ECE/TRANS/WP.29/GRVA/2022/21
 ECE/TRANS/WP.29/GRVA/2022/22
 ECE/TRANS/WP.29/GRVA/2022/23
 ECE/TRANS/WP.29/GRVA/2022/24
 Informal documents GRVA-14-10, GRVA-14-21, GRVA-14-26,
 GRVA-14-28, GRVA-14-37, GRVA-14-38, GRVA-14-47,
 GRVA-14-48, GRVA-14-49, GRVA-14-50 and GRVA-14-57

78. The expert from the European Commission presented GRVA-14-38, presenting ECE/TRANS/WP.29/GRVA/2022/19, ECE/TRANS/WP.29/GRVA/2022/20 and ECE/TRANS/WP.29/GRVA/2022/21, aimed at harmonizing UN Regulation No. 152 with the most recent wording adopted for UN Regulation No. 131. The expert from OICA proposed two editorial corrections.

79. The expert from OICA presented GRVA-14-28 proposing clarifications to the provisions in the three official documents above regarding reinstating AEBS e.g. for new engine start. The expert from France presented GRVA-14-21 on the same issue, aimed at clarifying the French version. The secretariat prepared GRVA-14-48, GRVA-14-49 and GRVA-14-50 including all modifications proposed.

80. GRVA adopted ECE/TRANS/WP.29/GRVA/2022/19, as amended by GRVA-14-48 and requested the secretariat to submit it as a supplement to the original text of UN Regulation No. 152 to WP.29 and AC.1 for consideration and vote at their March 2023 sessions.

81. GRVA adopted ECE/TRANS/WP.29/GRVA/2022/20, as amended by GRVA-14-49 and requested the secretariat to submit it as a supplement to the 01 series of UN Regulation No. 152 to WP.29 and AC.1 for consideration and vote at their March 2023 sessions.

82. GRVA adopted ECE/TRANS/WP.29/GRVA/2022/21, as amended by GRVA-14-50 and requested the secretariat to submit it as a supplement to the 02 series of UN Regulation No. 152 to WP.29 and AC.1 for consideration and vote at their March 2023 sessions.

83. The expert from Germany, Co-Chair of the IWG on AEBS for heavy vehicles, presented ECE/TRANS/WP.29/GRVA/2022/22 and ECE/TRANS/WP.29/GRVA/2022/23, proposing amendments to the AEBS reinstatement provisions (e.g. for new engine start) in UN Regulation No. 131 and a clarification of the robustness provisions. The expert from OICA presented GRVA-14-26, proposing clarifications to the provisions in the two official documents above regarding reinstating AEBS e.g. for new engine start. The secretariat prepared GRVA-14-47 and GRVA-14-57 to reflect these amendments.

84. GRVA adopted ECE/TRANS/WP.29/GRVA/2022/22, as amended by GRVA-14-47 and requested the secretariat to submit it as a supplement to the 02 series of UN Regulation No. 131 to WP.29 and AC.1 for consideration and vote at their March 2023 sessions.

85. GRVA adopted ECE/TRANS/WP.29/GRVA/2022/23, as amended by GRVA-14-57 and requested the secretariat to submit it as a supplement to the 01 series of UN Regulation No. 131 to WP.29 and AC.1 for consideration and vote at their March 2023 sessions.

86. The expert from France gave an oral report on activities related to virtual testing for AEBS. He explained that virtual testing for AEBS could be inspired by the activities of the IWG on VMAD subgroup two.

87. The expert from Italy proposed to raise the 8 tons limit in the scope of UN Regulation No. 152 up to 10 tons. GRVA invited the expert from Italy to provide more details and data for consideration at the next session.

88. The expert from Germany presented GRVA-14-37, introducing ECE/TRANS/WP.29/GRVA/2022/24, a proposal to harmonize requirements on Urban Emergency Braking System (UEBS) via a new UN Regulation that would address specifically heavy vehicles travelling at low speeds and would aim at the protection of

vulnerable road users. He stated that, with this UN Regulation, the direct vision regulation under the purview of GRSG could be amended so as to have different performance criteria for vehicles equipped with this UEBS.

89. The expert from Denmark introduced GRVA-14-10. He delivered a statement on the situation in Ukraine (see Annex III). The expert from the Russian Federation answered via comments in the chat tool of the meeting, other statements were submitted to the secretariat, for reproduction in the report, see Annex III. The expert from Denmark explained that a new UN Regulation on UEBS could be discussed separately from the considerations related to the GRSG activities on direct vision. He proposed to amend UN Regulation No. 131 instead of adopting a new UN Regulation. He provided technical comments on the draft provided by Germany in order to better address real life conditions. The expert from the Netherlands supported the views expressed by Denmark and stated that UEBS should not water down the direct vision requirements developed by GRSG. He acknowledged the big step recently achieved with the upgrade of UN Regulation No. 131 (including requirements regarding pedestrian and cyclist detection) but he also noted potential actions in order to better address real conditions. He agreed with Denmark on the shortcomings of ISO 19206-4:2020 referred to in UN Regulation No. 131, not being sufficiently representative of cyclists.

90. The expert from OICA expressed concerns regarding the statements related to real condition performance. He stated that UN Regulations Nos. 131 and 152 both prohibited that AEBS change the control strategy in conditions other than those tested. He noted the ambitious proposal of Germany, that UEBS was not aimed to be an ADS but that it could be intrusive in the driving task. He expressed concerns that UEBS could be made mandatory, when UN Regulation No. 131 just completed its review.

91. The expert from Germany proposed to keep this item on the agenda, to present UEBS to GRSG and to consult WP.29 if an IWG could review the proposal. GRVA agreed that it was up to Germany to decide whether or not to present UEBS to GRSG and that contacts with GRSG would be welcomed to work towards a common understanding. GRVA requested the Chair to inform WP.29 at its November 2022 session about the ongoing discussions on the proposal (ECE/TRANS/WP.29/GRVA/2022/24).

IX. UN Regulations Nos. 13, 13-H, 139 and 140 and UN GTR No. 8 (agenda item 8)

A. Electronic Stability Control

Documentation: (ECE/TRANS/WP.29/2020/99,
Informal documents GRVA-13-23 and GRVA-13-39)
Informal documents GRVA-14-27 and GRVA-14-30

92. The expert from the Republic of Korea informed GRVA that no progress was achieved on the potential amendment to UN GTR No. 8 regarding the testing provisions for innovative steering with low gear. He explained that his country volunteered at AC:3 to sponsor this amendment for the sake of consistency between UN Regulation No. 140 and UN GTR No. 8. He explained that he did not have experience with such system. The expert from Canada expressed interest in data supporting the amendment proposal. The expert from the United States of America mentioned the difficulty to support the proposal in the absence of evidence. He suggested the Contracting Parties to the 1998 Agreement be involved in case UN Regulation No. 140 would be further amended to facilitate the harmonization of UN GTR No. 8. GRVA agreed to pause this activity, waiting for further data.

93. The expert from OICA presented GRVA-14-30, introducing GRVA-14-27 with amendments to UN Regulation No. 140 clarifying testing procedures for low gear steering. The expert from Canada noted the figures proposed for the steering robot mechanical power in the proposal and asked if OICA could share data supporting them. The expert from France expressed interest for the proposal, mentioned supporting material in ISO standards dealing with such testing conditions that could serve as a reference and required more time to study the proposal.

94. The expert from France updated GRVA on the development of their proposal in ECE/TRANS/WP.29/GRVA/2022/14, aimed at requiring that concrete mixer truck be fitted with a vehicle stability function. He had discussed the proposal with the expert from OICA in order to identify which vehicle configuration would be relevant. The expert from OICA explained that vehicle manufactures do not produce concrete mixer trucks and that most of the concrete mixers were built on the basis of 8x4 or 8x4/4 chassis, and only very few were 8x2 vehicles. The expert from Switzerland identified that many concrete mixer trucks were vehicles of Category G, with significant roll over risk.

95. GRVA agreed to keep GRVA-13-23, GRVA-13-39 and GRVA-14-27 on electronic stability control on the agenda for its next session.

B. Electromechanical brakes

Documentation: Informal documents GRVA-14-12 and GRVA-14-52

96. The expert from CLEPA updated GRVA (GRVA-14-52) on the outcome achieved following the weekly meetings organized by CLEPA since February 2022, with both industry group representatives and contracting parties regarding the drafting of provisions for the approval of Electromechanical Brakes (EMB) for electric powered trucks and coaches. EMB was presented for the first time to GRVA at the seventh session of GRVA (see ECE/TRANS/WP.29/2020/21). The original proposal has been iteratively updated following GRVA guidance (see ECE/TRANS/WP.29/GRVA/2021/24, ECE/TRANS/WP.29/GRVA/2022/8 and GRVA-13-05). He presented the recent developments related to the effect of aging of the electrical energy storage device. He presented GRVA-14-12, the most recent draft superseding GRVA-13-05. He kindly invited interested contracting parties to join their activities.

97. GRVA noted the presentation of the expert from CLEPA on EMB and their ambition to submit an amendment proposal to UN Regulation No. 13, based on GRVA-14-12, for consideration at the next session.

C. Clarifications

Documentation: ECE/TRANS/WP.29/GRVA/2022/25
Informal documents GRVA-14-13, GRVA-14-32 and
GRVA-14-55/Rev.1

98. The expert from OICA introduced ECE/TRANS/WP.29/GRVA/2022/25, aimed at ensuring the continuity of the American Society for Testing and Materials (ASTM) Method E1337 for the measurement of the Peak Braking Coefficient (PBC) in UN Regulation No. 140, by introducing a reference to the new ASTM Standard Reference Test Tyre F2493.

99. The expert from Canada noted that a similar amendment had been introduced in the 01 series of amendments to UN Regulation No. 13-H. He inquired whether it would be needed for the original series too. The expert from OICA answered that it would make sense. The secretariat prepared the corresponding document, GRVA-14-55.

100. GRVA adopted ECE/TRANS/WP.29/GRVA/2022/25 and requested the secretariat to submit it as a supplement to the original version of UN Regulation No. 140 to WP.29 and AC.1 for consideration and vote at their March 2023 sessions.

101. GRVA adopted GRVA-14-55/Rev.1 and requested the secretariat to submit it as a supplement to the original version of UN Regulation No. 13-H to WP.29 and AC.1 for consideration and vote at their March 2023 sessions.

102. The expert from CLCCR introduced GRVA-14-13, aimed at allowing the type approval of braking systems for trailers equipped with an electric regenerative braking system and/or a propulsion system in its axle. These new axles in trailers have the potential to convert the kinetic energy of an axle to supply electric systems (e.g. cooling units for reefer) as well as to support the motor vehicle (e.g. the tractor) during start-stop manoeuvres, during accelerating/braking. This leads to lower fuel consumption of the motor vehicle respectively

cooling units (ergo lower CO2 emissions). The expert from CLEPA supported the proposal. The expert from OICA welcomed the innovation proposed by CLCCR, but could not support the amendment proposal, as drafted.

103. GRVA invited industry to work together on this item and requested the secretariat to distribute GRVA-14-13 with an official symbol at the next GRVA session.

104. GRVA resumed consideration of an amendment proposal to Annex 18 in UN Regulation No. 13 tabled by the expert from the United Kingdom of Great Britain and Northern Ireland. GRVA noted that the expert would submit a revised proposal, or a working document, possibly based on GRVA-14-32, potentially merged with the CLEPA proposal for amendments of UN Regulation No. 13 regarding EMB, for consideration at the next GRVA session.

X. Motorcycle braking (agenda item 9)

A. UN Global Technical Regulation No. 3

105. The expert from Italy informed GRVA that discussions on a potential amendment to UN GTR No. 3 had taken place since the June 2022 session of the Executive Committee of the 1998 Agreement. GRVA followed his recommendation that this amendment should be put on hold, pending further amendments to UN Regulation No. 78 to be reviewed.

B. UN Regulation No. 78

Documentation: ECE/TRANS/WP.29/GRVA/2022/26
Informal document GRVA-14-09

106. The expert from IMMA presented ECE/TRANS/WP.29/GRVA/2022/26, introducing provisions for the type approval of automatically commanded braking systems. The experts from France, Germany, Italy, Japan, the Netherlands, Spain and the United Kingdom of Great Britain and Northern Ireland supported the proposal. The expert from Canada noted that automatically commanded braking systems might surprise riders and might have unintended consequences. He inquired whether the safety of these systems would be covered elsewhere. The expert from IMMA explained that the safety requirements were included in the proposal in GRVA-14-09.

107. The expert from the Netherlands introduced GRVA-14-09, prepared together with the expert from IMMA. He explained that the proposal was aimed at introducing a complex electronic annex on the model of the one in other braking regulations.

108. The expert from Canada noted that such annex was based on audit requirements, without pass/fail requirements. The expert from IMMA acknowledged that a discussion under the 1998 Agreement would require measurable pass/fail criteria.

109. The expert from France and from the United Kingdom of Great Britain and Northern Ireland supported the aim of the proposal.

110. GRVA adopted ECE/TRANS/WP.29/GRVA/2022/26 and requested the secretariat to submit it as a supplement to the 05 series of amendments to UN Regulation No. 78 to WP.29 and AC.1 for consideration and vote at their March 2023 sessions.

111. GRVA requested the secretariat to distribute GRVA-14-09 with an official symbol at the next GRVA session. The expert from IMMA confirmed, upon request by the secretariat, that it was a proposal for a new 06 series of amendments.

XI. UN Regulation No. 90 (agenda item 10)

Documentation: Informal document GRVA-14-17

112. The expert from Italy presented GRVA-14-17, aimed at correcting a mistake in the text of UN Regulation No. 90. GRVA adopted GRVA-14-17, containing urgent amendments and requested the secretariat to submit it as a supplement to the 02 series of amendments to UN Regulation No. 90 to WP.29 and AC.1 for consideration and vote at their November 2022 sessions, if possible, or at their March 2023 sessions if no fast-track procedure can be found.

XII. Exchange of views on guidelines and relevant national activities (agenda item 11)

Documentation: Informal document GRVA-14-22

113. The expert from France presented GRVA-14-22, updating GRVA on national regulatory activities for the deployment of vehicles equipped with ADS in France. The expert from OICA welcomed this presentation and encouraged other countries to do the same, as such information was of crucial importance in order to develop ADS.

XIII. Revision 3 of the 1958 Agreement (agenda item 12)

A. Implementation of relevant provisions in Revision 3 to the 1958 Agreement

Documentation: Informal document GRVA-14-05/Rev.1

114. The secretariat presented GRVA-14-05 and Rev.1, listing the UN Regulations under the purview of GRVA for which the use of the Unique Identifier (UI), as defined in Schedule 5 of the 1958 Agreement, would not be permitted. The expert from the Netherlands stated that, in general, UI did not provide many benefits and would create issues related to enforcement and periodic technical inspection. GRVA discussed whether UI provisions would need to be introduced in selected UN Regulations for the sake of uniform application and agreed to resume discussion in January 2023.

B. International Whole Vehicle Type Approval

115. No document was submitted under this agenda item.

XIV. Election of Officers (agenda item 13)

116. In compliance with Rule 37 of the Rules of Procedure (TRANS/WP.29/690 as amended), GRVA called for the election of officers, by acclamation.

117. Mr. R. Damm (Germany) was elected as Chair for the GRVA sessions in 2023. Ms. C. Chen (China) and Mr. T. Naono (Japan) were elected as Vice-Chairs for the GRVA sessions in 2023.

XV. Other business (agenda item 14)

A. Arrangement of meetings

118. GRVA noted that no country offered to host a session of GRVA. GRVA agreed to look, with the support of the secretariat, for possibilities to hold a session outside Geneva

either in 2023 or 2024. GRVA noted that the meetings in 2023 were expected to take place in-person only.

B. Any other business

119. GRVA noted that the experts of WP.1/IGEAD and the GRVA/IWG on FRAV would meet on 7-8 November 2022. GRVA agreed to further consult WP.29 on a potential joint event with WP.1 during the Inland Transport Committee week in February 2023.

XVI. Tributes

120. GRVA learned that Mr. A. Lagrange (European Commission) would no longer attend GRVA sessions. GRVA acknowledged his great contributions regarding ADS, ADAS, AEBS to name a few, as well as during the last decade in several Working Parties of WP.29, including as Secretary, and wished him success in his carrier.

Annex I

[English only]

List of informal documents (GRVA-14-...) considered during the session

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>
1	(Chair) Running order of the fourteenth GRVA session	A
2	(Secretariat) Updated and consolidated provisional agenda for the 14th session of GRVA	A
3	(Secretariat) General information and highlights from the June 2022 sessions of AC.1/AC.2/AC.3/(AC.4)	C
4/Rev.1	(CLEPA/OICA) Industry input on GRVA-13-04 titled "Outcome of the GRVA workshops on Artificial Intelligence and Vehicle Regulations"	C
5/Rev.1	(Secretariat) Unique Identifier and UN Regulations under the purview of the Working Party GRVA	D
6	(SAE International) Proposal for amendments to the interpretation document of UN Regulation No. 155	C
7	(NTSEL/secretariat) Summary of Vehicle Cyber Security Workshop with the contracting parties of the 1958 and 1998 Agreements	C
8	(SAFE) Update to WP.29/GRVA - ASAM OpenSCENARIO 2.0.0	C
9	(Netherlands/IMMA) Proposal for a new 06 series of amendments to UN Regulation No. 78	B
10	(Denmark) Position paper - Danish position on the proposal on UEBS (Germany)	C
11	(OICA/CLEPA) CLEPA and OICA comments on GRVA-14-06	C
12	(CLEPA) EMB - Proposal for a supplement to the 12 series of amendments UN Regulation No. 13	C
13	(CLCCR) Proposal for a Supplement to the 11 series of amendments to UN Regulation No. 13	B
14	(Japan) Proposal to start discussion of Acceleration Control for Pedal Error (ACPE)	C
15/Rev.3	(FRAV) FRAV recommendations on ADS external light-signalling	A
16	(VMAD) NATM guideline - proposal for updates to WP.29-187-08	C
17	(Italy) Proposal for a corrigendum to UN Regulation No. 90	A
18	(ADAS) Report of the TF on ADAS for the 14th GRVA session	C
19	(China) Open issues for Automated Driving Assessment & Test and Suggestions (reissued on 24/09/2022)	C
20	(China) Proposal for V2V data interaction (reissued on 24/09/2022)	C
21	(France) Proposal for amendments to ECE/TRANS/WP.29/GRVA/2022/22	C
22	(France) Automated and connected road transport - regulatory framework in France - Latest update	C
23	(FIA) GRVA - Artificial Intelligence	C
24/Rev.1	(OICA, CLEPA) Proposal for amendments to UN Regulation No. 79	D
25	(OICA, CLEPA) UN Regulation No. 79 - ACSF C - Amendment for HMI	C
26	(OICA, CLEPA) Proposal for amendments to UN Regulation No. 131 - proposed amendments to ECE/TRANS/WP.29/GRVA/2022/22	C
27	(OICA) Proposal for amendments to UN Regulation No. 140	D
28	(OICA, CLEPA) Proposal for amendments to UN Regulation No. 152	C
29	(OICA) National/Regional DSSAD requirements and need for harmonization	C

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>
30	(OICA) UN Regulation No. 140 modification proposal	C
31	(OICA, CLEPA) Regulatory activities related to Automated Driving - View from Industry	C
32	(UK) Working draft for amendments to UN Regulation No. 13	C
33	(CEMA) Agricultural Machinery Industry Roadmap on Cybersecurity – SUMS	C
34	(CEMA) Proposal for a Roadmap on CS and SUMS for Categories R, S and T	C
35	(FRAV) Status Report	C
36	(France) Taskforce on the Fitness of GRVA Regulations and GTRs for ADS	C
37	(Germany) Justification for the UEBS proposal (ECE/TRANS/WP.29/GRVA/2022/24)	C
38	(EC) Proposal for a supplement to the Original text and the 01 and 02 series of Amendments to UN Regulation No. 152	C
39	(EDR/DSSAD) Activities/Deliverables of IWG on EDR/DSSAD	C
40/Rev.1	(EDR/DSSAD) Inventory of best ADS storage practices (Review of the existing national / regional activities and a proposed way forward for DSSAD)	A
41	(Netherlands) Automated Vehicles – Regulatory Screening (AVRS) of UN Regulations and GTRs under responsibility of GRSG	C
42	(SIG R157) Progress report	C
43	(SIG R157) Proposal for amendments to document ECE/TRANS/WP.29/GRVA/2022/16	C
44	(Secretariat) WP.1 exchange with the Chair of GRVA on 22 September 2022	C
45	(VMAD) Status report	C
46	(NTSEL/secretariat) Questions and Answers/Comments derived from the Workshop on the implementation of UN Regulation No. 155 (Updated, 24 September 2022)	C
47	(GRVA) Amendments to ECE/TRANS/WP.29/GRVA/2022/22	A
48	(GRVA) Amendments to ECE/TRANS/WP.29/GRVA/2022/19	A
49	(GRVA) Amendments to ECE/TRANS/WP.29/GRVA/2022/20	A
50	(GRVA) Amendments to ECE/TRANS/WP.29/GRVA/2022/21	A
51/Rev.2	(Secretariat) Proposal for amendments to ECE/TRANS/WP.29/2021/151 (Framework document)	A
52	(CLEPA) UN Regulation No. 13 and Electro-Mechanical Brakes	C
53	(France, Germany, the Netherlands) Automated Vehicles – Regulatory Screening (AVRS) of UN Regulations and GTRs – Scope of the study	C
54	(Secretariat) Automated Vehicles Regulatory Screening of UN Regulations and GTRs - Guidance	C
55/Rev.1	(Secretariat) Proposal for amendments to the original version of UN Regulation No. 13-H (Braking of passenger cars)	A
56	(OICA) Automated Vehicles Regulatory Screening of UN Regulations and GTRs – Guidance – Comments on GRVA-14-54	C
57	(Secretariat) Proposal for a supplement to the 01 series of amendments to UN Regulation No. 131 (Advanced Emergency Braking System)	A

Notes:

Administrative follow-up, for the secretariat, with the informal documents:

- A Adopted;
- B Distribute with an official symbol at the next session;
- C Consideration completed;
- D Resume consideration at the next session.

Annex II

List of Informal Working Groups reporting to GRVA (as of September 2022)

<i>Informal Working Group</i>	<i>Chair/Co-Chairs</i>	<i>Country</i>	<i>Mandate until</i>
Functional Requirements for Automated and Autonomous Vehicles (FRAV)	Ms. C. Chen ¹ Mr. R. Damm ¹ Mr. E. Wondimneh ¹	China Germany USA	June 2024
Validation Method for Automated Driving (VMAD)	Mr. I. Sow ¹ Mr. T. Nonaka ¹ Mr. P. Striekwold ¹	Canada Japan Netherlands	June 2024
Cyber Security and Over-The-Air software updates (CS/OTA)	Mr. T. Niikuni ¹ Mr. D. Handley ¹ Ms. M. Wondimneh ¹	Japan UK USA	[November 2024]
Event Data Recorder / Data Storage System for Automated Driving (EDR/DSSAD)	Mr. T. Guiting ¹ Mr. T. Nonaka ¹ Ms. J. Doherty ¹	Netherlands Japan USA	June 2024

¹ IWG Co-Chairs

Annex III

Statements by Member States

[English/French only]

Canada

[English] Canada continues to condemn in the strongest possible terms Russia's egregious attack on Ukraine. These unprovoked actions are a clear further violation of Ukraine's sovereignty and territorial integrity, in violation of Russia's obligations under international law and the Charter of the United Nations.

Canada calls on Russia to immediately cease all hostile and provocative actions against Ukraine and withdraw all military and proxy forces from the country.

We call on Russia to de-escalate and to provide transparency in its military activities. Dialogue is the only path forward, including that ongoing between Ukraine, the OSCE, and Russia, and via the NATO-Russia Council.

Canada remains a steadfast ally of the Ukrainian people and reaffirms its unwavering commitment to Ukraine's sovereignty and territorial integrity, as well as the right of any sovereign state to determine its own future.

Canada strongly condemns the sham referendums planned in occupied regions of Ukraine. These phony exercises with predetermined results will have zero legitimacy, and Canada will not recognize them. Borders will not change. Ukraine's territory will remain Ukraine's.

[French] Le Canada condamne dans les termes les plus fermes qui soient l'attaque injustifiable de la Russie contre l'Ukraine. Ces actions non provoquées constituent une autre violation flagrante de la souveraineté et de l'intégrité territoriale de l'Ukraine et elles contreviennent également aux obligations de la Russie dans le cadre du droit international et de la Charte des Nations Unies.

Le Canada exhorte la Russie à mettre fin immédiatement à toute action hostile et provocatrice contre l'Ukraine et à retirer du pays la totalité de ses forces militaires et agents interposés.

Nous appelons la Russie à la désescalade et à la transparence dans ses activités militaires. Le dialogue est la seule voie possible, y compris celui qui est en cours entre l'Ukraine, l'OSCE et la Russie, et par le biais du Conseil OTAN-Russie.

Le Canada demeure un allié indéfectible du peuple ukrainien et réaffirme son engagement indéfectible envers la souveraineté et l'intégrité territoriale de l'Ukraine, ainsi que le droit de tout État souverain de déterminer son propre avenir.

Le Canada condamne fermement les référendums fictifs prévus dans les régions occupées de l'Ukraine. Ces exercices bidons aux résultats prédéterminés n'auront aucune légitimité, et le Canada ne les reconnaîtra pas. Les frontières ne changeront pas. Le territoire de l'Ukraine restera celui de l'Ukraine.

Denmark

Oral statement of the representative of Denmark, mentioned in para. 89 of the report.

At the outset, allow me to express Denmark's full solidarity with Ukraine and the Ukrainian people. We condemn in the strongest possible terms Russia's acts of aggression against Ukraine; a grave violation of international law and the UN Charter. President Putin's unjustified and unprovoked attack undermines international peace and security.

We deplore the loss of human life and suffering caused and demand that Russia immediately ceases these acts of aggression in the entire territory of Ukraine and fully complies with international law.

European Union

The European Union and its Member States would like to reiterate their unwavering support to Ukraine and condemnation of Russia's unprovoked and unjustified war of aggression against Ukraine, in line with UNGA Resolution ES-11/1 entitled "Aggression against Ukraine". The EU and its Member States take this opportunity to again urge Russia to immediately stop its indiscriminate attacks against civilians and civilian infrastructure, and to immediately and unconditionally withdraw all its troops and military equipment from the entire territory of Ukraine within its internationally recognised borders.

The European Union condemns in the strongest possible terms the illegal sham "referenda" conducted in parts of the Donetsk, Kherson, Luhansk, and Zaporizhzhia regions of Ukraine currently and partially occupied by Russia. The EU does not and will never recognise these illegal "referenda" and their falsified outcome, nor any decision taken on the basis of this outcome, and urges all Members of the United Nations to do the same. We deplore Russia's path of confrontation also by announcing a partial mobilization and by threatening again with the use of weapons of mass destruction.

Russia's attacks harming the Ukrainian civilian population and infrastructure have far-reaching consequences on road transport services and technologies necessary for safety and sustainability, both in Ukraine and abroad. We emphasize that the Russian Federation's unprovoked war of aggression against Ukraine, facilitated by Belarus, undermines the achievement of the UN Sustainable Development Goals, already off track by the COVID-19 pandemic.

Japan

The recent aggression by Russia against Ukraine is a clear violation of Ukraine's sovereignty and territorial integrity, a unilateral attempt to change the status quo by force, and an act that shakes the very foundations of the international order.

Japan condemns in the strongest terms Russia's act of aggression and has urged Russia to cease the attack and withdraw its forces back to Russian territory immediately.

Japan stands with the people of Ukraine. Aligning closely with the international community, we will help Ukraine people through providing humanitarian assistance as well as accepting Ukraine people who have evacuated from their home country.

United Kingdom of Great Britain and Northern Ireland

The UK stands united with partners in condemning Russia's outrageous attack on Ukraine as a clear breach of international law and the UN Charter. As a Permanent Member of the UN Security Council, Russia has a particular responsibility to uphold international peace and security. Instead, it is violating the borders of another country and its actions are causing widespread suffering. While Russia continues to violate international law, human rights and multiple commitments to peace and security, we will work with our allies and partners across the multilateral system to condemn Russia's appalling actions and to isolate it on the international stage.

United States of America

The United States stands with the people and government of Ukraine as they fight to defend their country from Russia's forces. Vladimir Putin has chosen to launch a premeditated, unprovoked war that is bringing catastrophic loss of life, human suffering, and destruction of critical infrastructure and institutions. In response to Russia's aggression and in coordination with partners around the globe, the United States has resolved to impose severe economic costs on Russia, and we urge member states who have not yet done so to join us or adopt similarly restrictive measures. The Inland Transport Committee was crucial to rebuilding

Europe after World War II and Russia's aggression seeks to reverse much of that progress by destroying civilian transport infrastructure.
