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Working Party on Automated/Autonomous and Connected Vehicles

Fifteenth session

Geneva, 23-27 January 2023

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

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I. Attendance

1. The Working Party on Automated/Autonomous and Connected Vehicles (GRVA) met from 23 to 27 January 2023, hosted from Geneva. The meeting was chaired by Mr. R. Damm (Germany). Accredited experts from the following countries participated in the work, 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, Luxembourg, Netherlands, Norway, Poland, Portugal, Republic of Korea, Russian Federation, Singapore, Slovakia, South Africa, Spain, Sweden, Switzerland, the United Kingdom of Great Britain and Northern Ireland (UK) and the United States of America (USA). An expert 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), European Association for Electric Mobility (AVERE), European Agricultural Machinery Organization (CEMA), the International Association of the Body and Trailer Building Industry (CLCCR), International Motor Vehicle Inspection Committee (CITA), European Association of Automotive Suppliers (CLEPA/MEMA/JAPIA), European Garage Equipment Association (EGEA), European Tyre and Rim Manufacturer Association (ETRMA), European Tyre and Rim Technical Organisation (ETRTO), European Transport Safety Council (ETSC), European Association of Internal Combustion Engine Manufacturers (EUROMOT), Federation of European Manufacturers of Friction Materials (FEMFM), International Automobile Federation (FIA), International Federation of Automotive Distributors (FIGIEFA), Forum 21 Institute, International Motorcycle Manufacturers Association (IMMA), International Road Union (IRU), International Organization for Standardization (ISO), International Telecommunication Union (ITU) (also speaking on behalf of the Fédération Internationale des Sociétés d'Ingénieurs des Techniques de l'Automobile (FISITA) and of the International Global Positioning System (GPS) community), International Organization of Motor Vehicle Manufacturers (OICA), SAE International, Securing America's Future Energy (SAFE), and World Bicycle Industry Association (WBIA).
3. The Chair opened the meeting welcoming the 100 delegates present in the meeting room and those connected remotely via the teleconference system sponsored by the Chinese Automotive Standards Internationalisation Centre (based in Geneva).

II. Adoption of the agenda (agenda item 1)

Documentation: ECE/TRANS/WP.29/GRVA/2023/1
ECE/TRANS/WP.29/GRVA/2023/1/Add.1
Informal documents GRVA-15-01 and GRVA-15-02/Rev.1

4. GRVA considered the provisional agenda prepared for its fifteenth session (ECE/TRANS/WP.29/GRVA/2023/1 and Add.1). GRVA adopted it (without modifications), as reproduced in GRVA-15-02/Rev.1, which is a version that included the reference to all informal documents received until 23 January 2023. (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-15-01).

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

Documentation: (ECE/TRANS/WP.29/1168)
Informal document GRVA-15-03

6. The secretariat presented GRVA-15-03, with highlights from the WP.29 session in November 2022, having relevance for GRVA. He referred to the session report ECE/TRANS/WP.29/1168 for more details. He informed GRVA on activities of other groups

dealing on adjacent activities such these of the Group of Experts on drafting a new legal instrument on the use of automated vehicles in traffic. The expert from the United States of America encouraged the experts to consult the document mentioned by the Secretary. The Chair requested the secretariat to share with GRVA the list of items defined during a joint session of the IWG on Functional Requirements for Automated Vehicles (FRAV) and the Global Forum for Road Traffic Safety, WP.1, Informal Group of Experts on Automated Driving (IGEAD) (see GRVA-15-47). GRVA noted the report from the secretariat.

IV. Artificial Intelligence in vehicles (agenda item 3)

Documentation: Informal documents GRVA-15-04 and GRVA-15-39

7. The expert from FIA introduced GRVA-15-04 and expressed FIA's views on Artificial Intelligence (AI) in the context of vehicle regulations, based on GRVA-11-03, which includes a background note on AI in vehicles as well as a draft guideline on the use of AI in vehicles. He explained that the preparation of the document followed bilateral exchange with industry. He expressed views related to the role of the consumer or driver in that context, the necessary transparency at the time of Type Approval of systems embedding AI and what should be covered at GRVA regarding AI in vehicles.

8. The expert from OICA welcomed the exchange with FIA. He explained that OICA had further developed their document regarding definitions and a proposal for a future way forward. He volunteered to submit a revised document containing definitions on AI for consideration at the next session. He announced that he aimed to present OICA's views at the May 2023 session of GRVA.

9. The expert from ITU recalled that ITU was the Information and Communication Technology agency of the United Nations and was coordinating a United Nations' wide initiative called AI for good that includes, among others, the Focus Group on AI for Automated Driving. He explained that ITU stood ready to work with OICA on this matter.

10. The expert from Canada suggested that the collaboration on this item would continue at the sessions of the IWG on Cyber Security and Over the Air issues (CS/OTA), noting risk posed by cyber security vulnerabilities related to AI. The expert from OICA explained that the AI issue went beyond cyber security.

11. GRVA agreed that the cyber security risks related to AI shall be addressed by the IWG on CS/OTA.

12. The expert from IRU inquired if the work at GRVA only covered passenger cars and light vehicles. The expert from FIA explained that they did not distinguish between vehicle categories. GRVA recalled that UN Regulation No. 157 applied to heavy vehicles too.

13. The expert from France presented (GRVA-15-39) an update to GRVA-11-39 on the activities regarding AI in France. He detailed the activities under the "Grand Defi project" related to the performance evaluation and the use cases under scrutiny, i.e. vehicles with automation level 4 as well as delivery robots.

14. GRVA discussed the potential scope of activities at WP.29 on AI in the context of vehicle regulations. The expert from ITU suggested to focus on Automated Driving System (ADS) applications. GRVA discussed the potential groups that could deal with it, such as the IWG on CS/OTA and the IWG on Intelligent Transport Systems (ITS) under WP.29.

15. GRVA agreed to continue its work on AI in the context of vehicle regulations, according to the mandate received from WP.29 (GRVA-08-10), with the aim to inform AC.2 of the outcome in June 2023.

16. The expert from Germany suggested that GRVA could focus on preparing a resolution.

17. GRVA invited delegations to submit their documents on AI in advance so that delegations could prepare for a discussion in May 2023.

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 documents GRVA-15-35/Rev.1 and GRVA-15-36

18. The expert from the United States of America, Co-Chair of the IWG on FRAV, presented GRVA-15-36/Rev.1 containing the status report of the group. He explained the interim deliverables to be expected from the group during the following six months, he detailed the current activities on the Dynamic Driving Task (DDT) performance criteria, he mentioned the coordination efforts with the IWG on Validation Methods for Automated Driving (VMAD), using a matrix of ADS requirements and validation methods for that purpose and reported on the IGEAD/FRAV workshop that took place on 7-8 November 2022 in The Hague (Netherlands), which identified four areas of common interest.

19. He pointed at GRVA-15-36, which provided draft terms and definitions to support WP.29 activities.

20. GRVA endorsed the progress report from the IWG on FRAV.

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

Documentation: Informal documents GRVA-15-26 and GRVA-15-38

21. The expert from the Netherlands, Co-Chair of the IWG on VMAD, presented GRVA-15-38 with a brief review of the work and deliverables until June 2024, a reporting on VMAD activities since the September 2022 session of GRVA, considerations regarding the FRAV/VMAD collaboration and announcing the future VMAD meetings. He mentioned the excellent hosting by the Ministry of Land, Infrastructure, Transport and tourism (MLIT) and the Japan Automotive Standards Internationalization Center (JASIC) of the December 2022 meeting in Tokyo (Japan) which was complemented by an interesting symposium on the last day of the meeting week.

22. The expert from Canada, Co-Chair of the IWG on VMAD, noted that the representation from industry was not what it used to be at IWGs meetings. He stated his surprise and the fact that it was in contrast with the ambitious roadmap proposed by industry. He noted the commitment of the contracting parties to join meetings to advance the work and hoped that industry would also strongly commit to these activities to support the group with expertise to help meeting the 2025 milestone proposed by industry. He mentioned that the Tokyo meeting offered the possibility for a session with FRAV and VMAD experts as well as a small group meeting to reflect on the integration of the FRAV and VMAD outcomes, which led to the drafting of an integration matrix (see para. 18). GRVA endorsed the status report.

23. GRVA endorsed the work prepared by the group, reflected in GRVA-15-26 updating ECE/TRANS/WP.29/2022/58, the New Assessment/Test Method for Automated Driving (NATM) Guidelines for Validating Automated Driving System (ADS). GRVA requested the secretariat to submit GRVA-15-26 to WP.29 at its March 2023 session.

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

Documentation: Informal document GRVA-15-31

24. The expert from the United States of America, Co-Chair of the IWG on Event Data Recorder (EDR) / Data Storage Systems for Automated Driving (DSSAD), presented GRVA-15-31 with an update on progress achieved by the group. She mentioned the ongoing discussion of the group on the objective and purpose of DSSAD. She also mentioned the

fruitful exchanges based on presentations from China and Germany on their domestic experiences as well as the presentations by OICA and SAE International. She highlighted that the group, as its primary activity, was focusing on discussion of data elements to be recorded, to be followed by a discussion on the hardware requirements. She announced the next meeting, scheduled on 31 January 2023. GRVA endorsed the status report.

25. The expert from China detailed that the Chinese domestic standard was at the stage of public comment. She mentioned that they considered the possibility to record audio and video streams in the vehicle interior. She explained that the informal group discussed technical and practical issues demonstrating that the audio and video recording was not mature enough for driving and safety monitoring and that it could cause privacy related difficulties. She explained the aim of the standard, being performance monitoring and accident evaluation and reconstruction. She offered to share an update with the group at a next occasion.

D. UN Regulation on Automated Lane Keeping Systems

26. The Chair recalled the suggestion of the expert from the Netherlands at the June 2022 session of WP.29 to revise the title of UN Regulation No. 157. The expert from the Netherlands explained that the purpose of their comment had been general, to encourage WP.29 subsidiary bodies to consider the expected or potential evolution of a regulation when drafting its title.

27. The expert from the United Kingdom of Great Britain and Northern Ireland, who leads the activities of the special interest group dealing with UN Regulation No. 157, clarified upon request that nothing had been agreed yet regarding the development of an interpretation document for UN Regulation No. 157. He welcomed any input and volunteered to call for a meeting if input is sent to him.

28. GRVA postponed discussion on this item until the next session.

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

Documentation: Informal documents GRVA-15-37 and GRVA-15-47

1. Review of UN Global Technical Regulations and UN Regulations

29. The expert from France presented GRVA-15-37. He recalled the request from WP.29 to review UN Global Technical Regulations (GTRs) and UN Regulations regarding their fitness for Automated Driving Systems. He explained the expected evolutions of vehicles and role of the driver with the emergence of ADS. He detailed the activities of the Task Force on the Fitness for ADS of GRVA Regulations and Global Technical Regulations (TF on FADS) and reported on the completion of the first high level assessment of UN GTRs and Regulations under the purview of GRVA. He mentioned the further steps, which were already initiated and performed, using a collaboration platform. GRVA endorsed the status report. GRVA received an update from the experts from Germany and the Netherlands on the progress of similar task forces under the other WP.29 subsidiary bodies.

30. Upon request of the expert from the United States of America, the expert from France provided insights on the timing and the synchronization with the other task forces. He reported that the June 2023 deadline was tight but still feasible.

2. Collaboration with the Global Forum for Road Traffic Safety

31. The expert from OICA, secretary to IGEAD, presented the outcome of a joint workshop of the IWG on FRAV and IGEAD. He presented the list of items of common interest, drafted during the workshop, reproduced in GRVA-15-47.

32. The expert from Canada expressed concerns about this workstream. He asked whether IGEAD had a mandate under WP.1. He highlighted that the workshop went beyond its mandate. He suggested that the collaboration with WP.1 be discussed at the WP.29 level.

33. The expert from ETSC was astonished with the concerns expressed. He wondered why there should be bureaucratic obstacles to such exchanges and stated that they should be applauded and not regrated.

34. The expert from Canada dispelled the misunderstanding: he recalled his commitment to the collaboration between both groups. He clarified that he expected that objectives, targets, deadlines and plans be defined at Working Party level to support collaboration.

35. GRVA agreed not to rush and review items in scope of GRVA. GRVA noted the third item "Electronic format of traffic rules" listed and recalled the corresponding offer of ITU to host all traffic rules in a central database. GRVA commented that the workload would be on the Contracting Parties in order to secure the necessary data quality.

36. GRVA noted the ongoing activities of AC.2 regarding the collaboration between WP.1 and WP.29, and some delegations stressing the importance to structure such activities.

37. GRVA noted the outcome of the joint IGEAD and FRAV workshop (GRVA-15-47) and recommended WP.29 to provide guidance on the next steps regarding the collaboration between WP.1 and WP.29.

F. Other business

Documentation: Informal documents GRVA-15-15/Rev.2 and GRVA-15-34

38. The expert from ITU presented GRVA-15-15/Rev.2 on the identification of the status of a vehicle with ADS, based on radio communication, as an alternative to the light-signalling option currently reviewed by the Working Party on Lighting and Light-Signalling. He recalled the discussions at the IWG on FRAV and IGEAD workshop (see para. 31 above), which indicated that an external light signal would not be the preferred option, at this stage, to identify the status of a vehicle with ADS.

39. GRVA agreed to transmit GRVA-15-15/Rev.2 to the IWG on ITS, so that this can be considered under the activities related to vehicular communications.

40. The expert from OICA presented GRVA-15-34, welcoming on the one side the work done by the IWGs on FRAV and VMAD and calling on the other side for a regulatory action plan. He proposed that GRVA identifies: (a) contents from FRAV and VMAD that would be potentially useful for developing a UN Global Technical Regulation; (b) contents that would be useful for drafting a UN Regulation; and (c) additional contents not yet covered by FRAV or VMAD that would be needed for the sake of rulemaking. He stressed the importance of planning and executing and therefore proposed the establishment of a task force to perform these tasks.

41. The expert from the Netherlands, Co-Chair of the IWG on VMAD, did not oppose to meet these targets in general. He pointed at the ambitious plan of the industry to develop a global certification scheme for ADS and expected delays due to the lack of input by industry. He expected that the establishment of a new Task Force would distract the ongoing work of FRAV and VMAD.

42. The expert from France shared the concerns expressed by industry regarding potentially missing items and timetables. He expressed his thought that developing a regulatory package would imply establishing a drafting group. He highlighted the importance of addressing vehicle categories and asked if industry could share their needs on this.

43. The expert from Canada, Co-Chair of the IWG on VMAD, proposed to keep the current approach, which was generic, technology neutral and agreement neutral. He confirmed that Canada would not be supportive of establishing an additional task force.

44. The expert from the European Commission wondered how much resource (time) would be needed to address the request by industry and if industry could organize a small group meeting to discuss these items. She mentioned that the VMAD subgroup 3 discussed this matter but did not conclude in absence of a mandate to do so.

45. The expert from OICA welcomed the responses received. He answered to the question related to vehicle categories and indicated that industry already identified vehicles that would

not fit under the current categories in the future and was finalizing proposals on how to map requirements to specific vehicle categories. He answered to Canada that there was still no commitment nor clear way forward regarding regulations on ADS. He stated that without corresponding regulations, these vehicles cannot be on the road. He welcomed the development of a matrix (see para. 18). He advocated for the development of a plan to address questions such as auditing requirements, and requirements for a safety management system. He welcomed the proposal by the European Commission and stated that a clear commitment from the contracting parties was needed on the future activities based on the deliverables from FRAV and VMAD.

46. GRVA recalled that the current outcome of FRAV and VMAD so far was not mature enough for the purpose of regulation and that the time provided under the two-year mandate was used to deliver a mature text.

47. GRVA stood ready to collaborate with GRSG on activities related to the definition of vehicle categories in the context of ADS.

VI. Connected vehicles (agenda item 5)

A. Cyber security and data protection

Documentation: ECE/TRANS/WP.29/GRVA/2023/5
Informal documents GRVA-15-05, GRVA-15-06, GRVA-15-18, GRVA-15-21, GRVA-15-27, GRVA-15-28, GRVA-15-42, GRVA-15-45 and GRVA-15-46

1. Status report of the IWG on CS/OTA

48. The expert from Japan, Co-Chair of the IWG on CS/OTA, presented GRVA-15-42 (status report) introducing GRVA-15-05 (amendment proposal to UN Regulation No. 155) and GRVA-15-06 (amendments to the interpretation document to UN Regulation No. 155). The expert from France supported both proposals. The expert from OICA mentioned the questionnaire regarding the handling of software updates for vehicles already registered, distributed among the group's participants. The expert from Germany informed GRVA that his country already had defined software updates categories for already registered vehicles (see more details in para. 73 below).

49. GRVA adopted GRVA-15-05, as reproduced in Annex V, and requested the secretariat to submit it to WP.29 and AC.1 as draft supplement to UN Regulation No. 155 for consideration and vote in June 2023.

50. GRVA recalled that WP.29 extended the mandate of the IWG on CS/OTA until November 2024 and discussed the work plan for the group.

51. The expert from Canada recalled his suggestion under agenda item 3. The expert from Germany supported the idea to enlarge the scope of the group. The expert from France expressed France support for the activities of the informal working group as well as for the workshops organized by the expert from Japan and the Secretary. The expert from OICA also expressed support for the activities of the informal working group.

52. The expert from Japan, Co-Chair of the IWG, noted the decisions of GRVA to develop a work plan to update the Terms of Reference (ToR) of the group.

53. GRVA noted that Mr D. Handley would no longer be Co-Chair of the group and agreed that Mr. D. Hannah would replace him.

54. GRVA requested the IWG on CS/OTA to elaborate updated Terms of Reference, with a list of work items and a corresponding timeline (until November 2024 and possibly beyond) until the next session of GRVA and invited all delegations to prepare for this discussion.

2. Implementation of cyber security provisions

55. The expert from Japan, organizer of the workshops on the implementation of UN Regulation No. 155 presented GRVA-15-28, listing the questions raised as well as the

provided answers and comments by the participants. He proposed that the table could be turned into an official working document in the near future. The experts from France, Germany and Italy expressed support for these activities and suggested that the table could be appended to the interpretation document on UN Regulation No. 155.

56. The expert from Canada mentioned that his Country issued Canada's Vehicle Cyber Security Assessment Tool (VCAT), a voluntary self-assessment tool developed to help vehicle manufacturers and Tier 1 and 2 suppliers assess the cyber security performance and resilience of their vehicles and vehicle components.

57. GRVA expressed its hope for the development of a UN GTR in that field and welcomed insights and experience sharing.

58. The expert from China recalled the purpose of the workshop on cyber security organized with the contracting parties to the 1958 and 1998 Agreement which provided useful information. He suggested to continue such an exchange.

59. GRVA welcomed the report (GRVA-15-27) on the outcomes of the workshops on implementation of UN Regulation No. 155, provided by the expert from Japan.

60. GRVA welcomed the continuation of workshops related to the implementation of UN Regulations Nos. 155 and 156. Given the existing document (GRVA-15-28) for the purpose of the 1958 and 1998 Agreement and the increasing global cooperation in the field of cyber security and software management, GRVA also encouraged the organization of workshops for the contracting parties of both Agreements.

3. Interpretation document of UN Regulation No. 155

61. The expert from France introduced ECE/TRANS/WP.29/GRVA/2023/5 aimed at clarifying the possibility to recognize the Cyber Security Management System Certificate of compliance delivered by other contracting parties. He mentioned the work done during the last workshop to update the initial wording of the explanation. He presented the outcome of the workshop reproduced in GRVA-15-21.

62. GRVA adopted ECE/TRANS/WP.29/GRVA/2023/5, as amended by GRVA-15-21 as well as GRVA-15-06. GRVA requested the secretariat to submit them as an amendment to the Interpretation Document for UN Regulation No. 155 to WP.29 and AC.1 for consideration and vote at their June 2023 sessions.

63. The expert from SAE International presented GRVA-15-46 and GRVA-15-18 related to a potential design restriction depending on the interpretation of Annex 5 to UN Regulation No. 155. He acknowledged the review of this matter by the IWG on CS/OTA but called on GRVA to reconsider this matter. He explained that cryptographical authentication may be a good solution to mitigate the spoofing of Global Navigation Satellite System (GNSS) signals (e.g. V2X, GNSS messages), but that this example should not be listed before this technology was broadly deployed at production level.

64. The expert from ITU explained the technical matter again and reconfirmed that the technology was not yet deployed.

65. The expert from the United Kingdom of Great Britain and Northern Ireland thought that there were some misunderstandings as UN Regulation No. 155 was not mandating any technology.

66. The expert from the United States of America recalled the points made so far: (a) the method listed was not available for use, (b) alternatives were not mentioned, and (c) other technology could reach the same level of performance.

67. The expert from the European Commission agreed to review this issue.

68. The expert from SAE International confirmed that the Regulation itself did not mandate the technology but he explained that in practice the example may become a requirement, as this already happened to a Tier 2 supplier.

69. GRVA agreed to resume consideration of this matter at its May 2023 session.

4. Agricultural vehicles

70. The expert from CEMA introduced GRVA-15-45 and updated GRVA on their activities regarding cyber security. He informed GRVA on the European situation regarding UN Regulation No. 155 and the European Union (EU) Cyber-Resilience Act (CRA) passed in 2022. He compared both legal instruments and stated that CRA put more responsibility on the supply chain than UN Regulation No. 155 and that CRA was based on self-certification.

71. The expert from Germany noted significant differences between the two acts, one being general/horizontal and the other one being vertical/for the sector. The expert from the United Kingdom of Great Britain and Northern Ireland agreed with Germany and stated that he liked to see an appropriate cyber security regulation covering agricultural vehicles. He stated that a horizontal regulation was very appropriate for domestic appliances and connected toys but not for agricultural vehicles. The expert from Denmark agreed with this statement too. He recommended to include vehicles of Category T. He suggested to exclude towed vehicles of Category S. The expert from Italy proposed to postpone that item until May 2023.

72. GRVA agreed to resume discussions in May 2023 on the inclusion of agricultural vehicles in UN Regulation No. 155. Some European parties agreed to evaluate the impact of the EU CRA on the agricultural vehicle and machinery sector until the May 2023 session.

B. Software updates and Over-the-Air issues

73. The expert from Germany explained that software updates for vehicles already registered might require activities at national level. He informed that the German Type Approval Authority defined six relevant cases for software updates in the case of vehicles already registered as well as the corresponding handling. He provided the Uniform Resource Locator (URL): https://www.kba.de/EN/Themen_en/Typgenehmigung_en/Typgenehmigungserteilung_en/Cyber_SoftwareUpdate_en/Cyber_SoftwareUpdate_node_en.html

C. Data and vehicle communications

Documentation: Informal documents GRVA-15-13 and GRVA-15-40

74. The expert from Japan, Co-Chair of the IWG on ITS, recalled that the expert from China proposed at the September 2022 session, that GRVA harmonize technical requirements for vehicular communication. He presented GRVA-15-40, explaining that WP.29 tasked the IWG on ITS to explore the potential role of WP.29 and its subsidiary bodies regarding vehicular communication. He detailed the discussions of a dedicated session of the IWG on ITS that took place on 17 January 2023. He explained that the Co-Chairs of the IWG on ITS would suggest to WP.29 in March 2023 that a task force under the IWG on ITS should be established to further detail the potential role of WP.29 in that field.

75. The expert from the Netherlands appreciated the outcome of the IWG on ITS at its January session. He inquired whether Vehicle-to-Vehicle (V2V) communication and vehicular communication in general would go beyond the scope of WP.29 because of the role of infrastructure in that field.

76. The expert from Germany stated that guidelines for vehicular communication would not be sufficient and that a regulation would be necessary. He also suggested that the priority should be to address V2V.

77. The expert from China agreed with Germany and mentioned the Vehicle-to-Everything (V2X).

78. The expert from OICA agreed that V2V could be considered first. He stated however that it would be useful to keep V2X in mind while working on V2V, as it could be helpful in the future.

79. The expert from ITU proposed to consider the Chinese proposal, acknowledging that V2V was in the remit of WP.29. He proposed that the Terms of Reference of a group should concentrate on V2V.

80. The expert from ITU presented GRVA-15-13, informing GRVA of activities of the Radio division of ITU regarding V2X.

D. Other business

Documentation: Informal documents GRVA-15-16, GRVA-15-16/Add.1, GRVA-15-16/Add.2 and GRVA 15-16/Add.3

81. The expert from ISO introduced GRVA-15-16 (and addenda) regarding automated driving systems and traffic regulations. He asked how an automated vehicle should know traffic rules at all times, at a particular location on the road, on a particular day, at a specific time and for a specific vehicle category. He stated that several road administrations had reached the conclusion that in order to make this possible, the traffic regulations must be made electronically available. He introduced the Management of Electronic Traffic Regulations (METR) concept.

82. GRVA inquired if this matter would be presented to WP.1 too.

83. The expert from Norway asked if electronic traffic regulation was a prerequisite for the industry to develop ADS.

84. The expert from OICA stated the importance of traffic rules for developers and vehicle manufacturers, as they had to be embedded in algorithms. He estimated that the deployment of ADS and the central availability of traffic rules would happen progressively.

85. The expert from the Netherlands noted that having a set of rules stored in a central place would certainly help the certification process but that it was not a pre-requisite for ADS deployment.

86. The expert from ITU supported the statement by OICA.

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

A. Advanced Driver Assistance Systems

Documentation: Informal documents GRVA-15-43 and GRVA-15-44

87. The Chair of the Task Force on Advanced Driver Assistance Systems (ADAS), reported on the progress made by the group on the drafting of a new UN Regulation on Driver-Control Assistance Systems (DCAS). He details the potential benefits of “hands off systems” complemented by “eyes on” considerations. He described the progress made by the group on the drafting of the master document and on the development of DCAS validation. He noted that there were still open issues to be solved and therefore proposed amendments to the ADAS Task Force deliverables and timings (see GRVA-15-43). He also reported on the substantive presentation ADAS-17-05 of the German Association of the Automotive Industry (VDA), member of OICA, on their research on ADAS.

88. The expert from ITU, speaking on behalf of FISITA, stated that the work stream on DCAS was currently one of the most important deliverables of GRVA.

89. The expert from OICA offered to answer to any question related to the VDA study, if any. The expert from the Netherlands reiterated the interest of his country regarding the separation between ADS and ADAS.

90. The expert from Japan stated that the “eyes on” was an important topic and hoped to receive more information. He welcomed the outcome of scientific research in that field and

encouraged experts to perform analysis of accidental data, as it would ease the work of contracting parties. He agreed to discuss Driver Monitoring System (DMS) at the Task Force.

91. The expert from Denmark cautioned that DMS might imply cameras and expressed concerns about persons monitoring and other privacy related topics. The expert from OICA mentioned that driver-facing cameras had been implemented in vehicles as a consequence of the 2019 General Safety Regulation in Europe, and stated that they were in line with the data privacy regulations valid in EU.

92. The experts from Germany, Japan, Russian Federation, United Kingdom of Great Britain and Northern Ireland and AVERE debated the strategies to deal with similar provisions in UN Regulation No. 79 and in the new DCAS regulation, to make sure that one regulation is not used to circumvent the provisions in the other (more recent) regulation. The expert from France compared this discussion to the one at the Working Party on Passive Safety (GRSP) regarding Child Restraint Systems regulated in UN Regulation No. 44, then in UN Regulation No. 129.

93. GRVA agreed to resume consideration of this topic at its next session. GRVA also agreed with the revised timeline in the Terms of Reference for the group, as reproduced in Annex III.

B. UN Regulation No. 79 (Steering equipment)

Documentation: (ECE/TRANS/WP.29/GRVA/2021/9,
ECE/TRANS/WP.29/GRVA/2021/10,
GRVA-14-24/Rev.1 and GRVA-14-25)
Informal documents GRVA-15-09, GRVA-15-30, GRVA-15-52,
GRVA-15-53 and GRVA-15-54

94. The expert from OICA offered to withdraw ECE/TRANS/WP.29/GRVA/2011/9, even though the content of the proposal was still relevant and important for his organization. Similarly, the expert from AVERE withdrew ECE/TRANS/WP.29/GRVA/2011/10. GRVA agreed that the Task Force on ADAS would aim at addressing the matters, too.

95. The expert from OICA introduced ECE/TRANS/WP.29/GRVA/2023/6, as amended by GRVA-15-30. He recalled the context of the proposal, already discussed at the fourteenth session of GRVA. He mentioned that their proposal received comments (GRVA-15-09) and that he addressed them with the amendment included in GRVA-15-52. The secretariat read the letter of the expert from Sweden, absent, who expressed support for ECE/TRANS/WP.29/GRVA/2023/6, as amended by GRVA-15-09.

96. The expert from OICA presented GRVA-15-53 with further provisions for an automatic change to a standby mode. GRVA agreed that a “suitable time delay” was one option to ensure that the vehicle has already reached a regular lane of travel, but GRVA could not identify a fixed time value and therefore agreed that such value could be subject to agreement between the manufacturer and the technical service during the approval process.

97. Following discussions, GRVA reached agreement on GRVA-15-54 and agreed to note in this report the justification and context related to GRVA-15-53, as summarized in para. 96 above.

98. GRVA adopted ECE/TRANS/WP.29/GRVA/2023/6, as amended by GRVA-15-54, and requested the secretariat to submit it as a supplement to the 03 series and 04 series of amendments to UN Regulation No. 79 (steering equipment) to WP.29 and AC.1 for consideration and vote at their June 2023 sessions.

C. Other business

Documentation: Informal documents GRVA-15-07/Rev.3 and GRVA-15-22

99. The expert from Japan presented the outcome (GRVA-15-22) of the preliminary meeting organized to develop draft terms of reference for a new IWG on Acceleration Control

for Pedal Error (ACPE). He introduced GRVA-15-07, containing the draft Terms of Reference prepared by the group.

100. The expert from OICA announced that he would support it, if there was a positive decision regarding the establishment of the group. He invited the group to reflect on the differences between Autonomous Emergency Braking System (AEBS) and ACPE, on the need to include N₁ vehicles (often driven by professional drivers) in the scope of the group, on the compatibility of such system with the road traffic safety conventions of WP.1 and on the need to further review data from other contracting parties. The expert from the United Kingdom of Great Britain and Northern Ireland supported GRVA-15-07. He encouraged experts to share and review data to support the work at the IWG. He mentioned that a first review of data in London led to identify that professional driver could also benefit from such systems and therefore recommended to not immediately exclude certain vehicle categories.

101. The expert from Japan explained that the speed of operation was the main discriminant between AEBS and ACPE. He pointed at paragraph 3 to the draft ToR mentioning a review of the Geneva and Vienna Convention on Road Traffic safety, if necessary.

102. Informal document GRVA-15-07/Rev.1 reflected the nomination of Japan and Germany as Co-Chairs, as well as OICA as Secretary to the Group. GRVA-15-07/Rev.2 included an attempt by OICA to guide the group regarding other vehicle categories than M₁ and N₁.

103. GRVA agreed to request the approval for the establishment of the IWG on Acceleration Control for Pedal Error at the WP.29 session in March 2023. GRVA adopted GRVA-15-07/Rev.3, prepared by the secretariat, and reproduced in Annex IV to the report, as the ToR and Rules of Procedures for the IWG on ACPE.

VIII. Advanced Emergency Braking Systems (agenda item 7)

Documentation: (ECE/TRANS/WP.29/GRVA/2022/24)
Informal documents GRVA-15-19, GRVA-15-20, GRVA-15-50 and GRVA-15-51

104. The expert from France presented GRVA-15-20 introducing GRVA-15-19, with an amendment proposal to UN Regulation No. 152, aimed at introducing provisions for computer simulation of dynamic tests. He explained the history of the proposal. The expert from Japan commented that real driving conditions had to be considered in this context and that the validation requirements for AEBS would potentially require more physical tests than currently required.

105. GRVA reviewed the draft consolidations of UN Regulation No. 152 prepared by the secretariat (GRVA-15-50 and GRVA-15-51) and provided comments.

106. GRVA agreed to keep ECE/TRANS/WP.29/GRVA/2022/24 (proposal for a new UN Regulation for Urban Emergency Braking System) as well as GRVA-15-19 and GRVA-15-20 (AEBS virtual testing) on the agenda for its next session.

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/GRVA/2023/2
Informal documents GRVA-15-55 and GRVA-15-56

107. The expert from France introduced ECE/TRANS/WP.29/GRVA/2023/2, a proposal to mandate the fitment of an electronic stability function on N₃ concrete mixer trucks with four axles. He highlighted that, given the difficulty to refer to “concrete mixers” in the Regulation, the current proposal was to refer to and include all vehicles with four axles and

two power driven rear axles in the scope of the mandatory installation of electronic stability function.

108. GRVA adopted ECE/TRANS/WP.29/GRVA/2023/2, as amended by GRVA-15-56 as draft proposal for the 13 series of amendments to UN Regulation No. 13 (heavy vehicle braking) and requested the secretariat to submit it to WP.29 and AC.1 for consideration and vote in June 2023.

109. The expert from OICA introduced GRVA-15-55, an amendment proposal to UN Regulation No. 140 to adapt technical provisions for steering systems with low steering gear. The expert from Canada announced that their delegation would contact OICA for further exchange.

110. GRVA requested the secretariat to distribute GRVA-15-55 with an official symbol at the May 2023 session.

B. Electromechanical brakes

Documentation: Informal documents GRVA-15-17 and GRVA-15-49

111. The expert from CLEPA presented GRVA-15-49, informing GRVA on their activities related to drafting provisions for the approval of Electro-Mechanical Brakes (EMB). He mentioned GRVA-15-17, reflecting the current status of their work on the development of an amendment to UN Regulation No. 13.

112. The expert from the United Kingdom of Great Britain and Northern Ireland supported the principle of developing regulatory provisions to bring this technology on the market. He called for more transparency on similar activities for passenger cars and UN Regulation No. 13-H.

113. The expert from CLEPA mentioned OICA's involvement in these activities. He added that similar activities for passenger cars were indeed in preparation, that exchanges among stakeholders existed to keep definitions aligned. He explained that the systems layout could differ between light and heavy vehicles. He highlighted the complexity of UN Regulation No. 13 compared to UN Regulation No. 13-H.

114. The expert from Germany welcomed the activities and noted the high frequency of meetings on that topic. He suggested that GRVA organize a workshop to review the activities and update the contracting parties not yet involved. The experts from Czech Republic, Denmark, Netherlands and United Kingdom of Great Britain and Northern Ireland expressed interest for such a workshop. The expert from Japan suggested the workshop to be organized as an informal and hybrid meeting.

115. GRVA noted the activities of the Working Party on Pollution and Energy (GRPE) regarding battery durability. GRVA agreed to host an informal workshop on EMB open to all GRVA stakeholders, including contracting parties to the 1958 and 1998 Agreements.

C. Clarifications

Documentation: ECE/TRANS/WP.29/GRVA/2023/3
Informal documents GRVA-15-08 and GRVA-15-33.

116. The expert from CLCCR recalled the purpose of ECE/TRANS/WP.29/GRVA/2023/3. He requested (GRVA-15-33), following discussions with OICA, to postpone the consideration of this topic to the next session of GRVA. GRVA gave its consent.

117. The expert from the United Kingdom of Great Britain and Northern Ireland introduced GRVA-15-08, with a proposal to amend Annex 18 of UN Regulation No. 13, aimed to align where appropriate the text in UN Regulation No. 13 with that of Annex 6 to UN Regulation No. 79 (Steering Systems) and to improve consistency in the interpretation of the requirements of that annex. Following discussions, GRVA requested the secretariat to distribute the document with an official symbol at its May 2023 session.

X. Motorcycle braking (agenda item 9)

Documentation: Informal document GRVA-15-32

118. The expert from China introduced GRVA-15-32, presenting a new braking concept for electric motorcycles. He clarified upon request that this new braking system would only include an electric brake on the rear wheel, without friction brake. The expert from CLEPA asked if the concept would include a resistor for that case where the battery would be fully loaded. The expert from IMMA explained that this concept was not in line with the definitions of UN GTR No. 3 and UN Regulation No. 78. GRVA noted that this concept could be presented at the EMB workshop, if desired.

A. UN Global Technical Regulation No. 3

119. No document was submitted under this agenda item.

B. UN Regulation No. 78

Documentation: ECE/TRANS/WP.29/GRVA/2023/4
Informal documents GRVA-15-29, GRVA-15-41 and GRVA-15-57

120. The expert from the Netherlands presented GRVA-15-29 introducing ECE/TRANS/WP.29/GRVA/2023/4, an amendment proposal to UN Regulation No. 78 aimed at inserting requirements for Complex Electronic Control Systems and aligned with those for passenger cars. He recalled the context of the proposal tabled, following the adoption of brake light activation criteria for automatically commanded braking functions at the last session. He announced that the alignment (GRVA-15-41) of the proposed text with those developed for UN Regulation No. 13 would be performed in a second step.

121. The expert from United Kingdom of Great Britain and Northern Ireland presented GRVA-15-41, proposing amendments to ECE/TRANS/WP.29/GRVA/2023/4 and aimed at introducing the new provisions for the audit of electronic control systems that have been developed for UN Regulation No. 13 and its Annex 18 (see GRVA-15-08).

122. Following discussion, GRVA adopted ECE/TRANS/WP.29/GRVA/2023/4 as amended by GRVA-15-57 and requested the secretariat to submit it as a proposal for the 06 series of amendments to UN Regulation No. 78 (braking of Category L vehicles) to WP.29 and AC.1 for consideration and vote at their June 2023 sessions.

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

Documentation: Informal documents GRVA-15-14, GRVA-15-24, GRVA-15-25 and GRVA-15-48

123. The expert from Italy presented GRVA-15-48, introducing GRVA-15-14, which includes the proposal to allow the use of a digital medium (e.g. QR-code, website) as an alternative to the existing information requirements in paragraph 6.1.3.4 in the regulation.

124. The expert from CLEPA provided comments (GRVA-15-24 and GRVA-15-25).

125. The expert from FEMFM agreed in general that digital media could be used but he argued that some information, provided in the packaging of the replacement parts, should not be replaced by information provided via digital media.

126. The expert from Germany explained that there was already a precedent with UN Regulation No. 129. He explained that UN Regulation No. 129 specified a duration of 10 years and wondered if there was a justification for a lower duration (five years) as proposed by Italy.

127. The expert from France explained that, in the European Union context, information provided via a QR-code would be acceptable provided that this is specified in UN Regulation No. 90. The expert from the European Commission confirmed this interpretation.

128. The expert from Italy volunteered to submit a revised proposal for consideration at the next session. The expert from FEMFM also volunteered to submit an alternative proposal.

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

Documentation: Informal document GRVA-15-23/Rev.1

129. The expert from Germany presented GRVA-15-23/Rev.1, informing GRVA on the German Legal Framework related to Automated Valet Parking (AVP) and reporting on the first national approval granted to an AVP. GRVA experts raised questions related to the role of infrastructure and the way infrastructure was taking into account in the approval process. He explained that the national requirements covered the whole AVP, including the infrastructure side, which was under the responsibility of the approval applicant. He detailed that the first approval covered a private communication infrastructure and that the approved AVP did not rely on the public network. The expert from Denmark asked, in the case a competitor would install a similar system, if there would be a second infrastructure in parallel and if it could create interference risks. The expert from Germany could not share information on this as they did not gather experience on that case.

130. GRVA thanked Germany for sharing information on national activities and invited other experts to do so at next sessions.

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)
Informal documents GRVA-15-10 and GRVA-15-11

131. The expert from Germany presented GRVA-15-10 with the request from the IWG on the Database for Exchange of Type Approval documentation (DETA) to the WP.29 subsidiary bodies to clarify which UN Regulations would allow the use of the Unique Identifier (UI) as an alternative to the type approval mark. He also presented the template (GRVA-15-11) prepared by the group that can be used by GRVA to clarify considerations related to UI.

132. The expert from the Russian Federation clarified that UN Regulations Nos. 102 and 142 should be, according to him, under the purview of the Working Party on General Safety provisions (GRSG). He volunteered to fill out the template prepared by the IWG on DETA. The experts from CLEPA and CITA offered to support the expert from the Russian Federation. GRVA agreed to review the complete template at its May 2023 session.

133. GRVA requested the Chair to consult AC.2 at its March 2023 session regarding the assignment of UN Regulations Nos. 102 and 147 to GRSG (or keep it in the purview of GRVA).

134. GRVA agreed that the experts from the Russian Federation, CITA and CLEPA would fill out the table in GRVA-15-11 (Unique Identifier) and requested the secretariat to support that process.

B. International Whole Vehicle Type Approval

135. No document was submitted under this agenda item.

XIV. Other business (agenda item 13)

A. Arrangement of meetings

136. GRVA noted that the next session of GRVA would take place during the same week as WP.1.

137. GRVA discussed the organization of sessions outside of Geneva. GRVA agreed that, if such session would be organized, the possibility for remote participation must be provided.

B. Any other business

Documentation: Informal documents GRVA-15-12, GRVA-15-12/Add.1 and GRVA-15-12/Add.2

138. The expert from ITU presented the outcome of the Focus Group on AI for autonomous and assisted driving (AI4AD). He presented the liaison statement to GRVA contained in GRVA-15-12, the reports GRVA-15-12/Add.1 (including a proposal for an automated driving safety data protocol with a nomenclature of data that could be used to monitor automated driving systems in use) and GRVA-15-12/Add.2 (describing the setup of three projects on three existing sites that monitor automated vehicles and evaluate their compliance with the results of the FG AI4AD “Moley Problem Public Consultation”).

C. Tributes

139. GRVA learned that Anthony Ainsworth (CLEPA) would no longer attend GRVA sessions. GRVA acknowledged his contributions to GRVA and wished him a happy retirement.

Annex I

[English only]

List of informal documents (GRVA-15-...) considered during the session

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>
1	(Chair) Running order of the fifteenth session of GRVA	A
2/Rev.1	(Secretariat) Consolidated and updated provisional agenda for the 15 th GRVA session	A
3	(Secretariat) General information and highlights from the November 2022 sessions of WP.29/AC.1/AC.2/AC.3/AC.4	C
4	(FIA) Input on A.I. in GRVA	D
5	(CS/OTA) Proposal for a supplement to UN Regulation No. 155 (Cyber Security and Cyber Security Management System)	C
6	(CS/OTA) Proposal for amendments to the Interpretation Document of UN Regulation No. 155 (Cyber Security and Cyber Security Management System)	C
7/Rev.3	(GRVA) Informal Working Group on Acceleration Control for Pedal Error (ACPE)	A
8	(UK) Proposal for amendments to UN Regulation No. 13	B
9	(Germany) Proposal for amendments to document ECE/TRANS/WP.29/GRVA/2023/6	C
10	(DETA) Request of the IWG on DETA to GRs to provide clarity on the UN Regulations for which the UI marking may be applied	C
11	(Secretariat) 1958 Agreement - Unique Identifier Proposed actions for the IWG on DETA, GRs and WP.29	C
12	(ITU / FG on AI4AD) Liaison Statement on final list of approved Technical Reports from ITU-T FG-AI4AD	C
12/Add.1	(ITU / FG on AI4AD) Copy of ITU-T Technical Report FGAI4AD-01 "Automated driving safety data protocol –Specification"	C
12/Add.2	(ITU / FG on AI4AD) Copy of ITU-T Technical Report FGAI4AD-03 "Automated driving safety data protocol – Practical demonstrators"	C
13	(ITU / ITU-R WP 5A) Liaison Statement to GRVA on Connected Automated Vehicles	C
14	(Italy) Proposal for amendments to UN Regulation No. 90	C
15/Rev.2	(ITU) Identification of the Status of a Vehicle with ADS	C
16	(ISO/CEN) Automated Vehicles and Traffic Regulations	C
16/Add.1	(ISO/CEN) Management of Electronic Traffic Regulations (METR)	C
16/Add.2	(ISO/CEN) METR intro - Secure Digital Traffic Regulations	C
16/Add.3	(ISO) Copy of Intelligent transport systems - Mobility integration - 'Controlled Zone' management for UVARs using C-ITS	C
17	(CLEPA) Proposal for a supplement to the 12 series of amendments to UN Regulation No. 13 (Heavy vehicle braking)	C
18	(SAE International) Proposal for amendments to the interpretation document of UN Regulation No. 155 (Cyber Security and Cyber Security Management System)	C
19	(France) Proposal for a supplement to UN Regulation No. 152 (Advanced Emergency Braking System for M1 and N1)	C
20	(France) Virtual testing method Use case application	C
21	(Secretariat) Proposal for amendments to ECE/TRANS/WP.29/GRVA/2023/5	C
22	(Japan) Report of preliminary meeting for ACPE and discussion points in GRVA	C
23/Rev.1	(Germany) Automated Valet Parking (AVP) - Legal Framework and National Approval	C

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>
24	(CLEPA) Proposal for supplement 12 to the 01 series of amendments to UN Regulation No. 90 (Replacement braking parts)	C
25	(CLEPA) Proposal for supplement 11 to the 02 series of amendments to UN Regulation No. 90 (Replacement braking parts)	C
26	(VMAD) New Assessment/Test Method for Automated Driving (NATM) Guidelines for Validating Automated Driving System (ADS) – amendments to ECE/TRANS/WP.29/2022/58	A
27	(NTSEL) Report of the workshop on UN R155 implementation	C
28	(NTSEL/secretariat) Questions and Answers/Comments derived from the Workshop on the implementation of UN Regulation No. 155 (Updated, 13 January 2023)	C
29	(Netherlands/IMMA) “Complex Electronic Control Systems” Annex in UN Regulation No. 78 (ECE/TRANS/WP.29/GRVA/2023/4)	A
30	(CLEPA/OICA) Proposal for amendments to UN Regulation No. 79 03 and 04 series (Steering Equipment)	C
31	(EDR/DSSAD) Activities/Deliverables of IWG on EDR/DSSAD	C
32	(China) Introduction of the MC electrical brake technology and regulation applicability discussion	C
33	(CLCCR/CLEPA/OICA) Proposal to postpone the consideration of document ECE/TRANS/WP.29/GRVA/2023/3	C
34	(CLEPA/OICA) Planning of next step in order to achieve the „Roadmap 2025“ target - View from Industry	C
35/Rev.1	(FRAV) Status Report	C
36	(FRAV) Terms and Definitions Developed under the Draft FRAV Guidelines on ADS Safety Requirements	A
37	(TF on FADS) Reviewing GRVA Regulations And GTRs On Their Fitness For ADS	C
38	(VMAD) Status Report of Informal Working Group on Validation Methods for Automated Driving	C
39	(France) PRISSMA - French « Grand Défi program » : AI Assessment pillar	C
40	(Secretariat) 5th Session of IWG on ITS	C
41	(UK) Proposal for amendments to ECE/TRANS/WP.29/GRVA/2023/4	C
42	(CS/OTA) Status report of the IWG on CS/OTA	C
43	(TF on ADAS) Amendments to the ADAS Task Force Deliverables and Timings	C
44	(TF on ADAS) Report of the TF on ADAS for the 15th GRVA Session	C
45	(CEMA) CEMA input for the evaluation of UN Regulation No. 155 and the EU Cyber-Resilience Act and the needs of the agricultural vehicle and machinery sector	C
46	(SAE International) SAE proposal to UNECE WP.29 GRVA related to CS/OTA	C
47	(Secretariat) Information on areas of common interests identified (during the FRAV-IGEAD workshop in November 2022)	C
48	(Italy) Proposal for amendments to UN Regulation No. 90	C
49	(CLEPA) Status report Electro Mechanical Brakes (UN Regulation No. 13)	C
50	(Secretariat) Draft consolidated version of UN Regulation No. 152 - Revision 1	C
51	Secretariat) Draft consolidated version of UN Regulation No. 152 - Revision 2	C
52	(CLEPA/OICA) Proposal for amendments to UN Regulation No. 79 series 03 and 04 (amendments to GRVA-15-30)	C
53	(OICA) Proposal for amendments to GRVA-15-52	C
54	(Secretariat) Proposal for amendments to ECE/TRANS/WP.29/GRVA/2023/6	C
55	(OICA) Proposal for amendments to UN Regulation No. 140 Electronic Stability Control (ESC) Systems	B
56	(Secretariat) Proposal for the 13 series of amendments to UN Regulation No. 13	A

<i>No.</i>	<i>(Author) Title</i>	<i>Follow-up</i>
57	(Heavy vehicle braking) (Secretariat) Proposal for the 06 series of amendments to UN Regulation No. 78 (Braking of Category L vehicles)	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 January 2023)

<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. Hannah ¹ Ms. M. Wondimneh ¹	Japan UK USA	November 2024
Event Data Recorder / Data Storage System for Automated Driving (EDR/DSSAD)	Mr. T. Nonaka ¹ Mr. T. Guiting ¹ Mrs. J. Doherty ¹	Netherlands Japan USA	June 2024
Acceleration Control Pedal Error	Tbd.	Germany Japan	May 2024

¹ IWG Co-Chairs

Annex III

Revised Terms of Reference of the Task Force on Advanced Driver Assistance System

A. Terms of Reference

1. The Task Force (TF) should focus on Advanced Driver Assistance Systems (ADAS), it shall address the simplification of UN Regulation No. 79 and if needed, develop a new ADAS UN Regulation with a focus on ADAS systems up to level 2¹.
2. The scope of the new UN Regulation shall in principle aim to cover vehicles of Categories M, N and O. It is recognised that technical limitations may require vehicle category or system-specific requirements.
3. The TF on ADAS shall develop a definition of ADAS clarifying the difference of ADAS to automated driving or conventional technologies. The TF on ADAS will consider existing definitions outlined in legislation (e.g. UN Regulation No. 79), standards and informal documents.
4. The TF on ADAS shall address the following issues:
 - a. Outline the use-cases that are expected to be available for the market now and in the next years.
 - b. Consider the definition, classification and scope of functions of ADAS,
 - c. Ensure that use-cases and functions are considered subject to a safety evaluation aimed at ensuring, maintaining and if possible improving traffic safety.
 - d. Review and solve current issues on ADAS systems in UN Regulation No. 79 and other relevant regulations, in particular taking into consideration existing proposals for Automatically Commanded Steering Function (ACSF) of Category A (Remote Controlled Parking), Category B1 (lane keeping) and Category C (lane changes and Risk Mitigation Function).
 - e. Consider and develop generic safety performance and assessment requirements for ADAS, as well as combinations of multiple ADAS, for which a manufacturer is applying for an approval.² General principles to identify differences and help distinguish between assistance systems and automated driving functions may be considered as a basis to derive generic requirements. Based on the outlined use-cases and on the review of current issues in Regulation No. 79, consider and propose specific requirements that may be relevant for specific use-cases in addition to the generic approach.
 - f. As for ADAS, the TF will pay special attention to the shared driving task between the driver and vehicle which puts specific demand on:
 - Human Machine Interface (HMI) (e.g. harmonization, saliency, unambiguity, responsibilities);
 - Human Factor (HF) issues (e.g. out-of-loop phenomena, driver engagement and vigilance, confusion, calibration of trust, ergonomics, misuse and overreliance);
 - Information to the user (e.g. system functioning, capabilities and limitations)
5. Based on the findings from item 3, the TF on ADAS shall consider if the development of a new draft UN Regulation focusing on ADAS systems for vehicle longitudinal and

¹ As defined in ECE/TRANS/WP.29/1140 on pages 3 up to 1

² Similar approach to what is being developed by FRAV/VMAD for automated vehicles (from SAE level 3).

lateral control and/or an amendment to UN Regulation No. 79 is appropriate, taking into account existing ADAS provisions from UN Regulation No. 79.

6. In developing its proposals, the TF on ADAS shall take into account existing data, research results, legislation and voluntary standards available.
7. TF ADAS shall take full account of developments and work in full cooperation with other informal working groups of GRVA, such as FRAV and VMAD.
8. The regulatory text shall, to the fullest extent possible, be performance-based and technology-neutral. The technical specification will attempt to be developed in a neutral manner to the compliance assessment system: type approval and self-certification.

B. Rules of Procedure

1. The TF on ADAS shall report to GRVA and is open to all participants of WP.29.
2. Two Co-Chairs and a Secretary will manage the TF.
3. The working language of the TF will be English.
4. All documents and/or proposals must be submitted to the TF Secretary in a suitable digital format in advance of one week of the meeting. The group may refuse to discuss any item or proposal submitted later.
5. An agenda and related documents will be communicated to all TF members in advance of all scheduled meetings by the means of publication on the dedicated UNECE website.
6. Decisions will be reached by consensus. When consensus cannot be reached, the Co-Chairs shall present the different points of view to GRVA. The Co-Chairs may seek guidance from GRVA as appropriate.
7. The progress of TF will be reported routinely to GRVA – wherever possible as an informal document and presented by the Co-Chairs.

C. Deliverables and Timings

1. As a first phase of activities, the TF on ADAS shall deliver regulatory texts intended to:
 - a. Finalize pending proposals to UN Regulation No. 79 taking into account existing proposals, for consideration and potential adoption by GRVA at the September 2021 session;
 - b. In parallel, consider and develop a first proposal for generic safety performance and assessment requirements for ADAS in the form of a new UN Regulation and/or amendments to UN Regulation No. 79, which will be submitted for consideration by GRVA at the May 2023 session and at the latest in September 2023, and;
 - c. Subject to GRVA agreement, finalize the new UN Regulation and/or amendments to UN Regulation No. 79 for review and possible adoption by GRVA at the January 2024 session or at the following session.
2. As a second phase, if desired by the Contracting Parties of the 1998 Agreement, the TF on ADAS could develop a Global Technical Regulation compatible with the 1998 Agreement for consideration and possible adoption by GRVA at the September 2023 session. The scope of activities of TF on ADAS may be extended as requested through endorsement by GRVA.

Annex IV

Terms of Reference of the Informal Working Group on Acceleration Control for Pedal Error

A. Terms of Reference

1. The Informal Working Group (IWG) shall develop a draft regulatory proposal to make a new UN Regulation for Acceleration Control for Pedal Error (ACPE) for M₁ and N₁ vehicles [, and possibly for other vehicle categories,] and related system to prevent or mitigate collision with objects or other road users.
2. In particular the IWG shall address the following issues:
 - (a) Take account of existing data and research in making its regulatory proposals. It should consider pre-existing standards, Regulations from other territories and NCAPs for making its proposals.
 - (b) Define state of the art performance requirements, especially for collisions involving objects, vehicles and/or pedestrians, activation speed, and the trigger of activation (e.g. detecting objects, detecting collision, operation speed of acceleration pedal) based on the results from the action item above.
3. The IWG shall take account of developments and work in cooperation with other subsidiary Working Parties (GRs) of WP.29 and their IWGs. The IWG shall check the coexistence with road traffic conventions (1949 Geneva convention and 1968 Vienna convention), if necessary
4. Text shall, to the fullest extent possible, be performance based and technology neutral.
5. The IWG shall deliver the complete regulatory text for Acceleration Control for Pedal Error (ACPE) requirements as new UN Regulation for the May 2024 session of GRVA.
6. After completing task above, if desired by the Contracting Parties of the 1998 Agreement, the IWG could develop a Global Technical Regulation compatible with the 1998 Agreement for consideration and possible adoption by 1998 Agreement.

B. Rules of Procedure

1. The IWG shall report to GRVA and is open to all participants of WP.29.
2. Two Co-Chairs (Japan and Germany) and a Secretary (OICA) will manage the IWG.
3. The Co-Chairs may invite experts (at their discretion), including non-participants of WP.29, to assist in the development of technical standards.
4. The working language of the IWG will be English.
5. All documents and/or proposals must be submitted to the Secretary of the relevant group in a suitable electronic format in advance of the meeting. The group may refuse to discuss any item or proposal which has not been circulated five working days in advance to the meeting.
6. An agenda and related documents will be circulated to all members of the IWG in advance of all scheduled meetings.
7. Decisions will be reached by consensus. When consensus cannot be reached, the Co-Chairs of the group shall present the different points of view to GRVA. The Co-Chairs may seek guidance from GRVA as appropriate.
8. The progress of the IWG will be reported routinely to GRVA – wherever possible as an informal document and presented by the Co-Chairs.

9. All documents shall be distributed in digital format. Meeting documents should be made available to the Secretary for publication on the dedicated website.
10. Final decision on proposals rests with WP.29 and the Contracting Parties.

Annex V**Adopted amendments to the original text of UN Regulation No. 155 (Cyber Security and Cyber Security Management System)**

Adopted on the basis of GRVA-15-05 (see para. 49)

Annex 5, Part A, second major row of Table A1, item 4, amend to read:

4.3.2 Threats to vehicles regarding their communication channels	4	Spoofing of messages or data received by the vehicle	4.1	Spoofing of messages by impersonation (e.g. V2X cooperative awareness or manoeuvre coordination messages, GNSS messages, etc.)
			4.2	Sybil attack (in order to spoof other vehicles as if there are many vehicles on the road)

Annex 5, Part B, first row of Table B1, amend to read:

<i>Table A1 reference</i>	<i>Threats to "Vehicle communication channels"</i>	<i>Ref</i>	<i>Mitigation</i>
4.1	Spoofing of messages (e.g. V2X cooperative awareness or manoeuvre coordination messages, GNSS messages, etc.) by impersonation	M10	The vehicle shall verify the authenticity and integrity of messages it receives

Annex VI

Statements by a Member State submitted to the secretariat for reproduction in the session report

[English only]

“At the outset, Denmark express 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.”
