Submitted by the expert from IMMA

Informal document **GRVA-04-25**
4th GRVA, 24 - 27 September 2019,
Provisional agenda items 5 (a) and 5 (b)

Proposal for amendments to ECE/TRANS/WP.29/GRVA/2019/2 (and TFCS 15-34) and ECE/TRANS/WP.29/GRVA/2019/3 (and TFCS-15-36) and

Proposal 1 (Draft Regulation on Cyber Security)

The amendments to the text contained in documents ECE/TRANS/WP.29/GRVA/2019/2 and TFCS 15-34 are in bold for new and in strikethrough for deleted text.

Annex A

Paragraph 1.1., amend to read:

"**1.1.** This Regulation applies to vehicles**,** with regard to cyber security, of the categories ~~[L] [L6, L7],~~ M, N, O [and, R, S and T].

1.2. This regulation also applies to vehicles of the categories L6 and L7 if equipped with automated driving functionalities from SAE Level 3 onwards.*

*** As defined in the Reference document with definitions of Automated Driving under WP.29 and the General Principles for developing a UN Regulation on automated vehicles (ECE/TRANS/WP.29/1140)**"

Proposal 2 (Draft Regulation on software update processes)

The amendments to the text contained in document ECE/TRANS/WP.29/GRVA/2019/3 (and TFCS-15-36) are in bold for new and in strikethrough for deleted text.

Annex A

Paragraph 1.1., amend to read:

"1.1. This Regulation applies to vehicles of the categories ~~[L],~~ M, N, [O, R, S and T] that permit software updates"

Justification:

1. IMMA requests to postpone the inclusion of category L in the draft new UN Regulations on Cybersecurity and on Software Update Processes.

2. IMMA suggests extending the scope of the new UN Regulations with category L in steps, after experience with and analysis of the application of the requirements for M and N vehicles, through a new Series of Amendments.

3. In a first step, the scope of the draft UN Regulation on Cybersecurity could be extended with vehicle categories L6 and L7, if equipped with automated driving functionality of SAE Level 3 and onwards, as defined in the Reference document with definitions of Automated Driving under WP.29 and the General Principles for developing a UN Regulation on automated vehicles (ECE/TRANS/WP.29/1140).

4. In a second step, the scope of the UN Regulation on Cybersecurity could be extended with further L-category vehicles, if equipped with autonomous driving system functionalities of Level 3 and higher, in line with the Framework document on automated/autonomous vehicles (ECE/TRANS/WP29/2019/34/rev1e). In further steps, the scope could be further broadened, as appropriate.

5. For what concerns draft UN Regulation on Software Update Processes, IMMA reiterates the need to postpone all vehicles of category L from the scope in the first step to allow collecting experience on the impact on vehicles of categories M and N. A proposal was

raised during the TF CS/OTA-meeting of 28 August 2019 to postpone/exclude applying the UN Regulation for vehicles with *"software update processes not affecting performance of type approved systems or any of the legally defined parameters of that vehicle",* but discussion resulted with*"vehicles that permit software updates".* IMMA request that GRVA reviews the initial concept specified above, and in a second step, consider to extend the scope with vehicles of category L.

6. IMMA will evaluate the application of the new UN Regulations for M and N vehicles and develop necessary proposals so that the requirements can be made applicable for L-category vehicles, as necessary and meaningful, at the appropriate timing.

7. Short history of discussions related to category L on SU / CS:

- IMMA has been monitoring the work of the Task Force on Cybersecurity and Over-The-Air issues and the drafting of the new UN Regulations. During the process, IMMA raised various questions (TFCS-12-15), but they could not be properly considered, due to priority on issues for M and N-category vehicles. As a result, the TF agreed to keep category L between brackets.
- At 2/GRVA, IMMA's request to postpone inclusion of L-category (GRVA-02-18) was recognised, concluding that a special consideration for L-category vehicles should be taken into account. This is also consistent with what is explicitly stated in ECE/TRANS/WP.29/GRVA/2019/2 (Page 14, paragraph 7.5.6).
- At 3/GRVA, the representative of UK raised attention to the possible emergence of autonomous driving functions on L6 and L7 vehicles and need to include vehicle of these categories in the draft UN Regulation on Cybersecurity. A proposal to address the issue can be found in paragraph 1.2.
- At 3/GRVA, a number of Contracting Parties supported IMMA's request to postpone vehicles of category L from the two draft UN Regulations, though this support was not unanimous. Hence, additional justification is provided below.

8. Experience should first be gained with the application of the requirements on vehicles of categories M and N, before extending the scope of the new UN Regulations to vehicles of category L. Feasibility and guidance for application on category L would require a comprehensive review through an additional ~~a~~nalysis.

9. Conventional software updates for L-category vehicles are mainly through wired solutions. Today, there are no OTA software update application solutions on motorcycles applicable at least regarding safety related functions. The requirements were developed with 4-wheelers in mind and require further analysis for application on motorcycles, e.g., the limited display space on vehicles of category L, available for informing the driver on OTA update processes.

10. Cyber security is most critical for autonomous driving vehicles, because the control of the vehicle is performed by the Automated Driving system as specified in Framework document on automated/autonomous vehicles (ECE/TRANS/WP29/2019/34/rev1e. Since SAE Level 2 autonomous driving is unrealistic in the near future on motorcycles, the application to vehicles of category L (except certain automated L6 and L7 vehicles) is considered less urgent.

11. Vehicles of category L are very different in design and use from vehicles of category M and N. Hence, risks and threats related to cybersecurity are also different. After assessment of the application of the new UN Regulations for vehicles of category M and N, IMMA will study the specific risks and threats and introduce as required a proposal to extend the scope addressing necessary considerations.

12. Most vehicles of category L have limited bodywork protection impeding unauthorised use compared to cars. Therefore, digital protection would hardly prevent such vehicles from illicit physical manipulation and may not be meaningful. Excessive defence functions to the electronic architecture and interfaces should be avoided.

13. Due to none or very limited connectivity technology available on motorcycles, the risk of remote large-scale cyberattack inflicted by third parties is generally absent.