

Special Interest Group on UN-R 157- 10th meeting

- Date and time: 8 & 9 November 2021, 09.00-12.00 (CET/ Geneva time)
- Attendance: Leadership (EC, UK, DE), Group attendees (~61)

Summary:

- Notes of 8th meeting adopted, adoption of the notes of the 9th meeting postponed. Agenda of 10th meeting approved without changes.

- Lane change (LC) and speed increase:

a. Higher speed (UNR 157-09-03):

JRC, leading the ‘task force on testing’, briefly presented an update of the current exchange with experts on Annex 5 for track testing (UNR157-10-08) and new Annex 6 for public road tests (UNR157-10-09). Due to time constraints no in-depth discussion took place in the meeting. JRC noted that they are waiting for the LC requirements to be completed before finalising the annexes in relation to those. It was also highlighted that clarification is needed on what would be the requirements for not changing control strategy. Group conclusion: Point will be taken under the clarification section of the agenda. JRC announced further meetings in the upcoming week of the aforementioned ‘task force’ and invited all interested members to join. Further updates on testing expected in next SIG meeting.

Beside the review and intended finalization of the testing provisions, the focus of the next meeting will also be the consolidation of the speed increase proposal with the lane change proposal (in particular MRM LC in relation to the speed increase).

b. Lane Change (UNR157-10-04)

Industry presented a visualization of the lateral detection range (UNR157-10-06) as would be necessary under the current requirements. They noted that Japanese proposal would not deal with the case where the other vehicle does not indicate and would also prevent potentially legitimate lane changes. JP reiterated their request for the sensing to fully cover the lane beyond the adjacent as the ALKS needs to be able to judge the other

vehicle's movements in second next lane before initiating a lane change to avoid moving into the same space. JP mentioned that they are internally gathering data for proposal on scenario validation, which they intend to present at the next SIG in December, and thus asked to reserve this issue, in particular on detection of direction indicator, until the next meeting.

DE had sympathy for JP's request of wider detection range as this would be in line with the established principle of "anticipatory behaviour". DE asked industry why it is difficult to agree on the requirement, if detection range is technically possible already today?

OICA stated the difficulty is the detection of the direction indicator of the vehicle in the second to next lane and it is not technology neutral. Detection of vehicle movement in second to next lane is possible. Industry proposed new wording to address the concern over vehicles .

Group conclusion: for the time being proposed wording from industry included (a location to be found), sensing requirements would cover the full width of the second to next lane, and reference to direction indicator in para. 7.1. would be deleted; Final conclusion to be taken when JP comes back with results of their scenario generation study in next meeting.

Amendments proposed by JP (UNR157-10-11) and OICA/CLEPA (UNR157-10-05) were considered during the meeting. Detailed

Lane crossing

Industry presented a new proposal for para. 5.1.2. SE stated that the wording was too imprecise and needed to be more concrete in terms of when it would apply. JP questioned what "slightly" and "sufficient" meant in this context. OICA replied that to be more specific for all possible situations was exactly the difficulty, so could only produce a general clause. JP thought that the requirement for lane crossing should be the same as regular LC. JP was also in favour of clarifying evasive manoeuvre with imminent collision risk covered in emergency manoeuvre section first, before discussing lane crossing. DE asked for clear entry conditions and requirements for evasive manoeuvre without imminent collision risk and repeated their understanding: evasive manoeuvre with imminent collision risk is covered in emergency manoeuvre section. Leadership proposed

to keep proposal under consideration for another section once evasive manoeuvre requirements had been agreed upon.

MRM LC

Discussion took place regarding the requirement of 5 s delay before MRM lane change procedure starts after MRM intervention (para. 5.2.6.5.2.3.; coming from UN-R 79 RMF). OICA proposed to delete the time requirement and argued that the 5 s are not needed. JP were in favour to keep requirement as it stands in order to alert surrounding traffic. SE saw inconsistency with LC during transition phase and will look into this for next meeting. UK questioned the necessity to have delay in MRM LC case since for regular LC it is not required, yet the situation that surrounding traffic needs to be sufficiently be informed is the same. DE supported view expressed by UK. JP requested to come back with justification for the 5 s.

Industry noted that the provisions in para. 5.2.6.5.2.4. appear to be repeating the requirements of para. 5.5.1. JP felt that the text covered something more and that the priority should be to LC in that circumstance. Agreed that if it is difficult or dangerous to change lane then the vehicle can stop in lane. Industry highlighted that the system failure would also need to be taken into account when deciding to change lane or not.

JP presented a proposal concerning hazard warning lights (UNR157-10-11) stating that the priority of the signalling was currently not clear. Agreed and confirmed understanding in the group: when MRM starts, hazard warning lights are activated; when LC happens the hazard warning lights are replaced by direction indicator for the time of the LC.

Leadership would look to include clear provisions on activation of direction indicator and hazard warning for MRM LC.

Distance to the rear when no vehicle detected

Group agreed to include assumption of 160 km/h as maximum travelling speed of rear vehicle for regular LC (para. 5.2.6.7.2.3., b)) and MRM LC (para. 5.2.6.7.3.2., b)), in order to include proposed safety margin of +30 km/h by JP also for countries with maximum allowed speed of 130 km/h.

LC during transition demand

JP noted that they could accept JRC proposal, but not the additions proposed by OICA.

DE asked what the aimed safety target is and if industry has knowledge about human interaction in these situations. JRC confirmed they fear a safety risk because the situation is difficult for human to resume manual control during an on-going LC.

Discussion to be resumed in next meeting, industry will come with new text to address the safety target of keeping the manoeuvre controllable for human driver during transition phase with lane change.

EM

Group agreed to keep emergency manoeuvre limited to imminent collision risk. Evasive manoeuvre (understood as lane crossing) will be introduced in a separate section in the Regulation.

Leadership will prepare a revised version of the lane change document for the upcoming meeting, incorporating all discussion results of this meeting.

c. Horizontal

No discussion.

- Consideration of amendments clarifying current UN-R157:
 - a. Open issue on “detectable collisions”: Topic will be revisited as soon as revised input has been provided.
 - b. No new revision of proposal GRVA/2021/2 was provided by OICA; topic will be revisited as soon as input has been provided.
 - c. Improvement in the audit and in-use requirements: Proposals by JRC/EC proposals for this topic were not discussed due to time constraints.

- AOB:
 - Request of IWG EDR/DSSAD to review proposal on ALKS data elements for EDR (UNR157-10-07) briefly presented by SIG leadership. No comment was made in the

meeting. SIG members invited to review and send leadership comments in writing, so SIG leadership could provide IWG EDR/DSSAD with consolidated response.

Action points for next meeting:

- Everyone requested to review proposals on lane change and speed increase and contribute with further input.

Next meetings:

- 9th & 10th December 2021 (12.00-15.00 CET)
- 17th & 18th January 2021 (09.00-12.00 CET)