

DRAFT REPORT

GRRF Ad-hoc Meeting

Lane Keeping Assistance System (LKAS) Automatically Commanded Steering Function (ACSF) Remote Controlled Parking Assistance System (RCP)

Dates: 16-17 December 2014
Venue: European Commission
Meeting room BREY 5/A (ground floor)
Avenue d'Auderghem 45
B-1000 Brussels - Belgium

1. Welcome and Introduction – Chairman

a. Purpose and tentative time line of this ad-hoc group

The Chair shared his view of the purpose of the meeting:

- For LKAS: finalizing the official document GRRF/2015/02, in particular with regard to the warning strategy
- For ACSF: J will introduce the outcomes of the ITS/AD discussions
- For RCP: agreement in principle on possible provisions for RCP

This was endorsed by the experts.

2. LKAS

a. Improvement of the wording of GRRF-2015-02

Documents: GRRF/2015/02 (LKAS adhoc group)
LKAS-03-03 (CLEPA/OICA)
ITS-AD-01-04 (J)

Industry presented the document LKAS-03-03 they prepared for the warning strategy:

- Driver's involvement: the systems today detect driver's activity rather than his attention. The former proposal of "driver in primary control of the vehicle" was fine but was in conflict with the PAS (Park Assist Systems) currently on the market where the driver is in primary control with no hand on the steering wheel. Hence Industry proposed "driver's involvement in the driving tasks". This proposal is open to sophisticated systems as well as basic systems and future technology. The other changes follow the same idea.
D questioned the automatic de-activation of LKAS as it cannot be considered as driver in the loop again.
- For the warning themselves, the OICA representative informed that there is a need for some flexibility for keeping consistency among the different assistant systems (AEBS, LDWS, ACC, etc.).

Industry suggested to delete the word “effective”. NL could also live with or without “effective”.

ROK had the following comments:

- The wording “distinctive” is already used in the regulation (Paragraph 5.1.6.1.). The expert proposed that this wording be used in paragraph 5.1.6.6.
- The wording “tactile” is existing in UN R79. ROK proposed to change the word to “haptic” into “tactile” for consistency within the regulation.

There was general support for these changes.

F raised that paragraph 5.1.6.1. requires one visual signal first, with tactile warning.

D supported the original wording. The delegate could not accept the possibility of “missuse” such that the vehicle can continue without control. The expert had the concern that the systems of step 1 (up to level 2 in ITS-AD-01-04) are not confused with systems of step 2 (above level 2 in ITS-AD-01-04). The concern was that the driver could take LKAS as an automatic system.

The European Commission could support Industry proposal.

ROK said that “primary control” can be seen 4 times in the current text of UN R79, hence was welcome to keep that text for LKAS.

J could accept the proposal from Industry as both proposals (former and Industry) are aligned on the Vienna Convention.

The Chair recalled that the group has the aim of providing provisions under level 2 of automation, i.e. assuming that the driver is always in primary control of the vehicle.

Debate on “primary control” vs. “involved in the driving tasks”.

- “Primary control” is mentioned in the Vienna Convention. Means that the driver has the intention of driving.
- “Primary control”
 - is hands-off for PAS, while hands-off should not be promoted for LKAS. This wording is subject to interpretation. Not yet defined at the ITS-AD informal group
 - “driver’s involvement” is part of ITS-AD.
- The regulation cannot regulate the driver’s behaviour and cannot avoid wrong behaviours.
- The adhoc group only focuses on LKAS as an assistance system.
- It is easier to detect a driver’s action than a lack of action.

Debate on warning of de-activation

- D supported a warning when the system automatically de-activates.
- Proposal for a new wording

Debate on the wording: “likely to be in control”

- Aims at addressing that it is impossible to be sure that the driver is “in control of the vehicle”
- Challenged by D because either the driver is in control or not.
- Conclusion: wording adopted and to be thought about

Debate on alignment of last sentence of paragraph 5.1.6.1. (tactile vs. haptic)

- Paragraph 5.1.6.1. : 2 warnings of which one is optical, and
 - the haptic must be on the steering control
 - below 10 km/h
- Paragraph 5.1.6.5.: 2 warnings, of which one is optical and
 - in a cascade
 - above 10 km/h

- F questioned the reason for different logics for the different contexts
- OICA questioned the necessity to align the wordings.

The Chair requested OICA to amend the justifications for better fitting the new text.

Conclusion for paragraph 5.1.6.5.:

- Text adopted
- OICA to improve the justifications.

Debate on transitional provisions

- OICA requested transitional provisions for adapting systems under development (warning strategy and driver's annoyance, software validation etc.)
- NL wondered the necessity of transitional provisions because at the start of the meeting it was decided that LKAS should be addressed only for clarification for approving LKAS.
- European Commission also supported the need for transitional provisions because some existing products would not comply with the new provisions.
- Japan understood the need for transitional provisions. Yet the modifications would be minor compared to current production, and suggested 24 months, but could accept 48 months.
- D proposed different times for different categories (24 months for M1/N1 and 48 months for others).
- CLEPA supported transitional provisions, at least for manufacturers that are about to produce new products.
- OICA informed that the budgets dedicated to the development of a system are not provided before the WP29 session adopting the text. The expert added that for trucks, with the possible confusion of the LDWS/AEBS, transitional provisions of 48 months for CVs would be acceptable.
- ROK supported the necessity of transitional provisions, proposing 12 months for all categories. Yet ROK could introduce LKAS in their territory with national transitional provisions as ROK did not yet sign the Regulation No.79.
- Proposal:
 - Transitional provisions of [24/36] months for M1/N1
 - Transitional provisions of [48] months for CVs
 - All transitional provisions to address new types only
 - Industry to provide transitional provisions for GRRF-79 (February 2015)
- D was keen for transitional provisions for existing types (i.e. 24 months NT/36 months ET for M1/N1). The expert informed that one vehicle in D can be driven with hands off with no time limit.
- OICA recalled the beginning of the discussions: current LKAS has no safety problem on the field, there is only a need for clarification, UN R79 can cover most of the aspects thanks to the CEL annex. The current exercise addresses future systems arriving on the market.
- J found reasonable to have transitional provisions for existing types in order to avoid old technology for long period (20 years). J could accept long time for existing types.
- NL could accept transitional provisions for existing types, if transitional provisions are necessary.
- ROK proposed 24 months for existing types
- F supported transitional provisions, supported 24NT/36ET for M1/N1. The expert had no opinion on the time needed for the other categories.

- The European Commission could live with the D proposal, unless Industry convinces that no transitional provisions for existing types is necessary. The expert suggested that further discussions take place at GRRF-79. The expert also mentioned that dates for existing types could be a safeguard for Industry as it provides harmonization of the acceptance dates.
- Conclusion:
 - Transitional provisions of [24/36]NT months for M1/N1
 - Transitional provisions of [48] months for CVs
 - Proposal to include dates for NT/ET in []
 - Industry to provide transitional provisions for GRRF-79 (February 2015)

Debate on optionnality of LKAS in R79

- OICA questioned whether it is clear that LKAS is optional
- The group confirmed that LKAS is an “if fitted” equipment, i.e. optional to the manufacturer in the UN Regulation No.79.
- A debate took place on whether LKAS acting on the braking system of the vehicle are covered by UN R79.
 - Those systems dramatically reduce the speed of the vehicle, hence could be considered as emergency system to be regulated per the braking regulation.
 - On the other hand, the accepted definition for LKAS does cover those systems.
 - But the scope of the regulation clearly addresses the steering system, hence the definition of LKAS in UN R79 only addresses the systems acting on the steering system.
 - OICA recalled that the adhoc group in a previous meeting accepted that LKAS by braking is covered by UN R79 (Report of Small Drafting group on LKAS.doc). D did not share this opinion.
 - OICA acknowledged that LKAS by braking are not covered by UN R79
- D proposal:
Insert new paragraphs 5.1.6.2. to ~~5.1.6.5.~~ 5.1.6.6., to read:
“5.1.6.2. If LKAS is fitted on the vehicle, then LKAS shall meet the performance requirements contained in paragraphs 5.1.6 3. to 5.1.6.6. of this Regulation.”
- OICA was concerned that this proposed text would not cover the requirements contained in para 5.1.6., which should apply to LKAS as well.
- D informed that they would have no flexibility with regard to the voting abilities due to their national validation procedures if no decision was made at this meeting.
- Proposal:
 - Industry to produce a proposal before GRRF-79
 - Industry to circulate the proposal to the adhoc group before sending it to the GRRF Secretariat.
- Conclusion:
 - General agreement that LKAS is “if fitted” in the regulation.
 - Minutes to confirm that LKAS by braking system are not covered by UN R79
 - OICA to produce a proposal overnight
 - Adhoc group to adopt a final text on 17 December 2014

Discussions of 17 December 2014

Transitional provisions

- OICA presented the proposal for transitional provisions. The justification to the time of 36 months was for the validation of the adapted systems, needing several thousands of kilometres on open road for a system that is related to direct safety of the driver.
- D repeated their proposal for a leadtime, and did not support a fixed date for the transitional provisions. The expert found that an optional system can be introduced without delay.
- CLEPA informed needing at least 1,5 year for adapting production, hence mandatory compliance by 2017 is unrealistic for CLEPA.
- J was flexible on the transitional provisions, yet found them necessary.
- OICA recalled that short transitional provisions would be detrimental to the manufacturers currently proposing no LKAS because they must compete with the other actors of the market whilst would be obliged to change their development, i.e. postponing their new products by 2-3 years. The expert from OICA insisted that even small changes must be tested and validated. This position was shared by CLEPA.
- D, NL and the European Commission proposed no lead time for the new types.
- The Secretariat questioned the logic of ignoring the justifications and arguments given by Industry for transitional provisions.
- After internal consultation, OICA confirmed their position of 36NT/60ET for M1/N1 vehicles. The expert questioned the safety concern of current systems and repeated the justifications.
- D, supported by NL, did not want vehicles on the road which do not fulfil the requirements and hence did not want any transient period for M1/N1 NT
- S was flexible for the transitional provisions, and could not justify any precise time delay.
- D proposed that the position of each Contracting Party is present on the document.
- Conclusion:
 - No common agreement
 - Each Contracting Party to provide justifications for their position on lead time.
 - Document to be sent to Geneva containing all existing positions.

Optionality

The group adopted the wording:

“5.1.6.2. If LKAS is fitted on the vehicle, then LKAS shall meet the requirements contained in paragraphs [5.1.6.3. to 5.1.6.6.] of this Regulation.

Re-number the following paragraphs accordingly”

3. ACSF

a. Presentation for GRRF (Sweden / Japan)

J presented the document WP29-164-27

OICA informed to be in favour of the proposal to perform the discussions on ACSF in parallel to those of automated driving.

J in addition presented the document ITS-AD-01-06, providing draft guidances to GRRF for the subjects to be discussed at GRRF with regard to AD.

OICA confirmed support to the work of the informal group.

CLEPA also fully supported the J approach. The expert questioned which version of the Terms of Reference will be discussed at the telephone meeting of 19 December 2014.

J provided the background of the J proposal.

The document was proposed at last GRRF session and assuming functioning in very particular conditions. At the subsequent adhoc group meeting, J tabled amendments to the GRRF informal document, and the group had no time to finalize a position; some further amendments were tabled for this LKAS meeting of December.

A debate took place on the way to proceed with the document.
J and NL supported the establishment of a GRRF informal group.

Conclusion: the group acknowledged ITS-AD-01-06

4. RCP

Document: GRRF/2015/04 (J)

J presented the document GRRF/2015/04 on RCP

Industry informed that RCPs are currently under development, only one Chinese manufacturer produced a system similar to that of GRRF/2015/04, however not complying with the proposed text.

A debate took place between D and J on possible performance requirements for these systems. D was keen that a limitation of 2.5 m for the distance between the remote control and the vehicle.

The European Commission proposed to take as a basis the requirements present in UN R21 for remote windows, as windows are less dangerous than free moving vehicles (paragraph 5.8.2.8.).

OICA was of the opinion that the technology is currently not mature enough to be regulated, and proposed that only guidelines are given for the time being.

D proposal (restricted to M1 vehicles):

“A continuous activation of a remote control device by the driver during the parking manoeuvre is required. If the activation button is released or the distance between the vehicle and the remote control device exceeds 2.5 m, the vehicle shall stop safely and immediately.

System design shall prevent the activation and operation of the RCP system or interventions into the RCP system by unauthorized remote control devices.”

OICA welcomed some basic requirements, but challenged the value of 2.5 m, and also a precise value. 2.5 m would be too short as in the case of e.g. long vehicles the remote control device would remain in the vehicle (2.5 m between remote control and receivers). It was pointed out that the distance was to be measured from the skin of the vehicle. D had the impression that some parties in the group had the wish of delaying the discussions.

NL was keen that basic requirements be present, and that the remote control remains in proximity of the vehicle.

F also favoured basic guidelines but had no opinion on the correct distance.

ROK had no strict opinion.

The European Commission found there was a general agreement that basic requirements are welcome, but the expert had no opinion on the correct value.

D justified the distance from a study, taking into account a case where an accident happen. The expert suggested a compromise wording about general orientation.

J supported a distance with no opinion on the correct value. As the proposal is only addressing general guidelines (as a 1st step).

OICA stressed that the problem of the distance is related to the definition of the distance. The expert added that there is no wish within Industry to delay the discussion.

OICA subsequently had the following comments:

- Need for justifications for the value of 2.5 m
- Questioned the proposed value itself, as e.g. 3 m could be acceptable as well
- The proposed 2.5 m should not anyway be a strict value as it not measured in the D proposal
- The value may be too small for having a good overview
- Being too close to the vehicle could be dangerous as well
- The sensors around the vehicle should anyway be able to monitor the vehicle surrounding; yet this would lead the discussions to the definition of a “bird view” and all what is related, hence would extend the debate to a larger scope.

CLEPA and other experts proposed to postpone the amendments to after the February 2015 session for having internal discussions.

J and D were keen that amendments are adopted at the 79th session of GRRF, even as a separate joint proposal.

Yet it was recalled that the group had the mandate to reach a common position.

Conclusion:

- No common position reached by the group
- D and J committed to produce a document for GRRF-79
- If this D/J position is available in time, then the group may hold exchange of emails prior GRRF-79