REPORT

15th meeting of GRRF Informal Working Group on Automatically Commanded Steering Function

Venue:	Two Ministries in Bonn, Germany
Chairman:	Mr. Hiroshi Morimoto (J) and Mr. Christian Theis (D)
Secretariat:	Mr. Jochen Schaefer (CLEPA)
Dates:	22. – 24. November 2017
Website:	ACSF 15th session

1. Participants:

see special attachment

2. Welcome and Introduction

The chairmen welcomed the delegates to the 15th session of the IWG ACSF.

3. Approval of the report of the 14th Session

The report of the 14th Session was approved by the delegates
ACSF-14-12-Rev.1 - (Secretary) Report of 14th session.pdf

4. Approval of the agenda

The agenda was adopted and confirmed by the delegates without amendments.
ACSF-15-02-Rev.1 - (Chair) Agenda 15th session.pdf

Abbreviations used in this document :

LC: Lane Change
DI: Direction Indicator
TS: Technical Service
VM: Vehicle manufacturer
IWG: Informal Working Group

5. List of Documents:

IG ACSF - 15. Meeting (Bonn, 22. - 24. November 2017)	UNECE WEBSITE (editable)
ACSF-15-01 - (Germany and Secretary) Information to the 15th session of ACSF	Doku
ACSF-15-02 - (Chair) Provisional Agenda 15th session	Doku
ACSF-15-03 - (Republic Of Korea) Verification of detection range (55m for L3)	Doku
ACSF-15-04 - (Republic Of Korea) Reaction time Safety time gap	Doku
ACSF-15-05 - (Republic Of Korea) Data filtering method	Doku
ACSF-15-06 - (OICA) - ESF Working Document	Doku Rev.1
ACSF-15-07 - (OICA) - Proposals on ACSF C - amends GRRF-2017-27	Doku Rev.1
ACSF-15-08 - (OICA) - Lane change reaction time	Doku
ACSF-15-09 - (OICA) - Maximum allowable override force	Doku
ACSF-15-10 - (Japan) Proposal for amendments to GRRF-84-36	Doku
ACSF-15-11 - (Japan) CAT C Tests.pdf	Doku
ACSF-15-12 - (NL) Proposal description motorcycle in footnote.pdf	Doku
ACSF-15-13 - (Japan) ACSF-C - tests - Vapp adjust	Doku
ACSF-15-14 - (Sweden) CAT C amendments	Doku

6. Target of the meeting

Target of the meeting was to finalize the ACSF of Category C and ACSF-ESF. This target could not been finally reached, as there was not enough time to finalize ESF. The chairmen encourage industry to make a proposal for the next GRRF session in December. They also would appreciate to have a web-meeting before the next GRRF session.

7. Video from BASt

Before start of the discussion BASt showed a video they have recorded to show a lane change manoeuvre out of the view of the driver coming from the rear.
The parameters for this video were:
- The movement of the ego vehicle from center of the lane until the lane change manoeuvre starts,
- When the lane change manoeuvre has started the target vehicle starts the deceleration after 0,4s
- The target vehicle decelerates with 3 m/s²
- After the deceleration (the target vehicle has the same speed as the ego vehicle) there is a remaining “distance” of 1 second between the vehicles

(Chair-D, in the following C-D): For him this is an absolute uncritical situation. He is not happy, that the vehicle should be centered in the lane, which was proposed by some CPs in previous meetings.
(SE): This is a good video, but he still thinks, we have to assure, that a lateral movement of the ego vehicle is visible before the lane change manoeuvre starts.

8. Amendments which results in the consolidated documents ACSF-15-16

8.1. ACSF of Category C (C1)

8.1.1. 5.6.4.2.1. Disclaimer

(OICA): Proposes to delete the disclaimer
(D): Would like to have the disclaimer
(UK): Prefers to stay with it
(Chair-J in the following C-J): If we insist on the disclaimer, it should be clear, when it should occur.
(D): After every engine start
(J): Supports the opinion of D
(OICA): Timing is difficult:
- At every engine start it is confusing the driver, especially if he does not use the system or does not drive on an “highway”;
- At the first activation, e.g. at 130 km/h, it could be dangerous for the driver if he would concentrate on the message

(C-D): Supports this view and proposes to delete the disclaimer.

Conclusion: Disclaimer is removed.

8.1.2. 5.6.4.3 Overriding Force

(C-D): We have 50N at the CAT B1 system. Proposes to use the 50N here as well.

Conclusion: Overriding force is limited to 50N

8.1.3. 5.6.4.4. Lateral Acceleration

Conclusion: remove […] – lateral jerk.

8.1.4. 5.6.4.5.6. "hands off" detection

Conclusion: Stays at it is.

8.1.5. 5.6.4.6 Lane Change Procedure

There was a long discussion with PROs and CONs to centre the vehicle before starting the lane change manoeuvre and to complete the lane change manoeuvre in "one continuous movement"
(C-D): Proposes to keep 5.6.4.6.4 and to remove 5.6.4.6.10. (g)
(UK): Supports the centring of the vehicle before starting the lane change manoeuvre
(C-D): It should be enough, that the vehicle will remain in the same direction in the lane

ACSF-15-14 – Proposal SE
(SE) Introduces his proposal

> **Amend 5.6.4.1.1. to read:**
> A vehicle equipped with an ACSF of Category [C1] shall also be equipped with an ACSF of Category B1 complying with the requirements of this Regulation **and in addition aiming to be in the center of the lane.**

This proposal was supported by NL and OICA

Conclusion: The delegates concluded to amend paragraph 5.6.4.1.2 to following wording:

5.6.4.1.2. When the ACSF of Category C is activated (stand by) the system shall aim to centre the vehicle in the lane. This shall be demonstrated to the technical service during type approval.

8.1.6. 5.6.4.9.1.4. and 5.6.4.9.1.5. – valid software version

(OICA): Proposes to delete these two paragraphs.
(C-D): Would like to keep this in the regulation, as long as we have nothing better. To add a footnote is ok .

Conclusion: Implement a footnote (see consolidated document ACSF-15-16)

8.1.7. Adjust V_{app} to country specific requirements

(J): proposes to calculate the V_{smin} in paragraph 5.6.4.8.1 to country specific requirements by adjusting V_{app} (currently fixed to 130 km/h) to local "general" speed limits.
(Secr.): UK has mentioned in a previous meeting that it might be difficult for the Technical Service to verify the "selection" of the correct V_{app} in each country.
(ROK and OICA): Supports this proposal.
(D-TÜV): There are technical solutions available to simulate different countries by e.g. simulation another GPS-signal.

It followed a detailed discussion, how this can be reached.

Conclusion: Proposal of J was accepted by the delegates. The amendments of the regulation are mainly done in Annex 8 (Test section) – see consolidated document ACSF-15-16. A limitation of V_{smin} to e.g. 50 km/h is regarded as not necessary.

8.1.8. Detection range

ACSF-15-03 – Proposal ROK
(ROK): Introduces his proposal, that running a calculation with the 10 dBm² for a passenger vehicle and a distance of 63m would lead to a corresponding calculation with 5 dBm², used for motorbikes, to 48m and not the always used 55m. Should we amend this value?

(C-D): No, we have agreed to the 55m in the past and we should remain to it.
55m are fixed to detect every vehicle, which is allowed to drive on the "highway" (means all roads where ACSF of Category C is able to be activated)
It must be clear, that every vehicle must be detected, not only that one in the test.
(OICA): Not all motorbikes, especially prototypes can be detected to 100%.
(C-D): CPs cannot accept systems which are not able to detect all objects on the highway – this should be clear.

Conclusion: the minimum distance to detect vehicles on the "highway" is 55m

8.1.9. Consolidated Document

Within the discussion the document was amended at many places. The final wording can be find in the consolidated document ACSF-15-16.

8.1.10. Annex 8 – Tests

In the discussion a lot of amendments have been made in the wording of Annex 8.
The final version can be found in the consolidated document ACSF-15-16.

8.2. Filtering

ROK presented document ACSF-15-05
(C-J): Does this proposal affects only CAT C?
(ROK): No, this should be used for every category

Conclusion: D will prepare a proposal for GRRF86 in February, dedicated especially for CAT B1 and proposes to make a joint proposal with ROK for all other categories. OICA will support D + ROK in this.

8.3. ESF

Due to timing reasons, ESF could not been discussed in depth.

Conclusion: See point 6 of this document.

9. Next meetings

GRRF-85, Geneva (CH)	11. December 2017
ACSF16, Tokyo (J)	23.-25. January 2018
GRRF-86, Geneva (CH)	12.-16. February 2018