

DRAFT REPORT

2nd meeting of GRRF Informal Working Group on Automatically Commanded Steering Function

Venue: Jasic Office Tokyo, Japan.
Chairman: Mr. Christian Theis (D) and Mr. Hidenobu Kubota (J)
Secretariat: Mr. Jochen Schaefer (CLEPA)
Dates: 16.-17. June 2015
Website: <https://www2.unece.org/wiki/display/trans/ACSF+2nd+session>

1. Participants:

see special attachment

2. Welcome and Introduction

3. Roll call of delegates

4. Approval of the report of the 1st Session

The report of the 1st Session was approved by the delegates

[ACSF-01-14 - Report 1st session](#)

5. Approval of the agenda

The agenda was adopted and confirmed by the delegates without amendments.

[ACSF-02-02 - Provisional Agenda for the 2nd meeting](#)

6. List of Documents:

ACSF-02-03 - (D) Proposal for amendments to Regulation No. 79 to include ACSF > 10 km/h
ACSF-02-04 - (D) HMI concept of ACSF - background knowledge from research
ACSF-02-05 - (J) Research on HMI Homework item 1 (ACSF-01-13)
ACSF-02-06 - (OICA/CLEPA) Homework Part I: HMI, Driver in/out of the Loop
ACSF-02-07 - (OICA/CLEPA) ACSF Test Procedure Draft proposal – For discussion
ACSF-02-08 - (OICA/CLEPA) ACSF - Traffic Jam Assist on all roads
ACSF-02-09 - (OICA) Evaluation of ACSF during periodic technical inspection
ACSF-02-10 - (D) Identification of regulatory needs for ACSF

ACSF-02-11 - (D) Basic sketch of dependencies to identify regulatory needs
ACSF-02-12 – (J) EDR and OBD.docx
ACSF-02-13 - (B) Comments to Document ACSF-02-03

7. Identification of regulatory needs for ACSF

[ACSF-02-10 - \(D\) Identification of regulatory needs for ACSF](#)

D presented their view on the necessary amendments within the UN R79 to support ACSF above 10 km/h. This document reflects the following items:

- Basics of ACSF
- HMI (Human Machine Interface) (references see ACSF-02-04)
- General Requirements
 - Normal driving with activated ACSF
 - Transition from ACSF to manual steering
 - Drivers attentiveness
 - Unexpected critical events
- Possible Tests
 - Test of functionality
 - Test of transition request
 - Emergency Tests

Comments:

OICA: Welcomes the presentation, despite a lot of questions are still open.
Deceleration requirements should not be part of the regulation

D: Confirmed a question from CLEPA, that Vmax should not be higher than 130 km/h.

S: Good proposal. Mentioned that in Sweden the transition back to the driver is seen as an important issue. The main question is: “How can it be realized?”

OICA: Is the timing to have a draft version of the amended Regulation 79 realistic to finish until GRRF81? D: This is still the target.

J: The document is a good basis for the start of the discussion. Also items like longitudinal control has to be considered.

Discussion result: It is not complete clear, how all the features of autom. Driving - like “ACC-function, when approaching a preceding vehicle - can be mapped in the current regulations. A new regulation, maybe the best solution, would take too much time to realize. Nevertheless the quality should be more important than speed (NL)

8. Proposal for amendments to Regulation No. 79 to include ACSF > 10 km/h

[ACSF-02-03 - \(D\) Proposal for amendments to Regulation No. 79 to include ACSF > 10 km/h](#)

D presented their document ACSF-02-03 which includes the amendments to UN R79 proposed by Germany.

Comments/amendments to this document, which have been discussed/defined, but not necessarily already confirmed, are amended (red)/highlighted in the document **ACSF-02-03 – Rev1**

Discussions:

1. Categories (2.3.4.1ff):

D explained the different categories proposed in this document:

- CAT1: Parking operations <10 km/h
- CAT2: Lane change commanded by the driver, surround monitoring unique by the driver
- CAT3: Lane change confirmed by the driver, surround monitoring by the system
- CAT4: Continuous lane change in case the system was activated by the driver

CAT2...CAT4 are only permitted under "Highway Conditions"

Result of the discussion was, that a new category CAT2 (ACSF - lane keeping only) should be inserted. Consequence: CAT2 => CAT3; CAT3 => CAT4; CAT4 => CAT5

Homework:

OICA to define CAT2 - CAT5

OICA to make a proposal for new naming „LKAS with ACSF“

2. "Motorway" (2.4.8.1):

Discussion about the right naming of these kind of road and the criteria (number of lanes, speed, separation...)

UK: How will the vehicle identify the road? Wish that the system is able to detect highways.

Homework: OICA to rework „Motorway“ definition (WP.1)

3. Transition...

2.4.8.8 and 2.4.8.9 amended. See [ACSF-02-03-REV1](#)

4. System boundaries (2.4.8.11)

Homework: OICA to rework

5. Attention recognition (2.4.8.13)

OICA: Attention of the driver cannot be detected.

Only "secondary criteria" e.g. closed eyes, looking to the side, can be detected

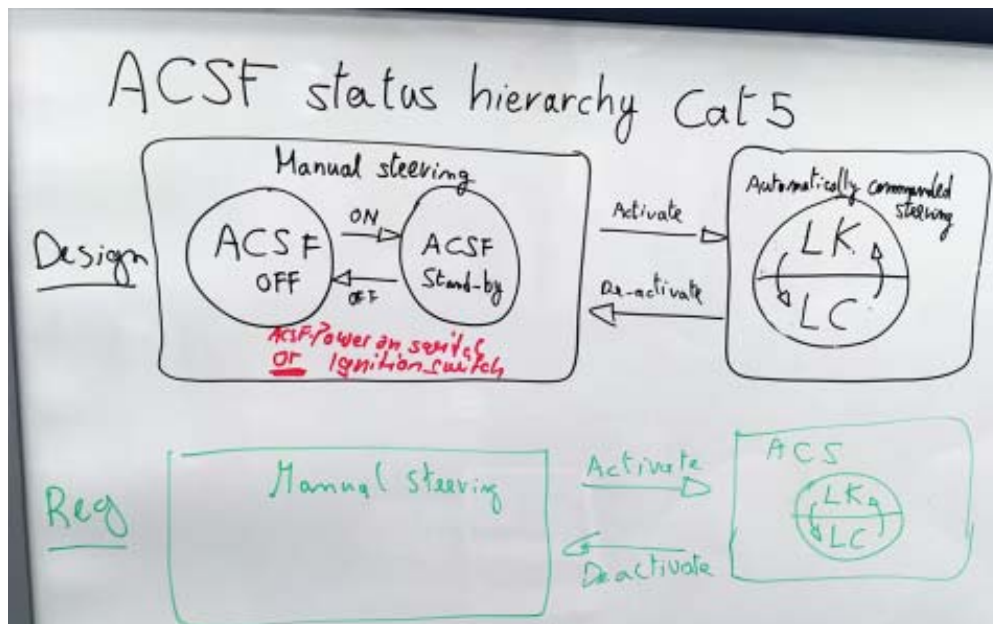
6. Minimum risk manoeuvre (2.4.8.14)

Heart attack should not be considered, this is not dedicated to automatic driving

7. Warning Provisions (5.4.3)

Homework: D to rework

8. Activation/Deactivation (5.6.1.1.1, 5.6.1.1.2) (5.6.1.4)
OICA: Attempt to explain a possible scenario:



Homework: ACSF-Status Hierarchy (Whiteboard) – OICA to rework

9. Termination of a lane change manoeuvre (5.6.1.2.3)
Discussion, what should happen if a termination is required/necessary while execution this manoeuvre.

Homework: D to rework and considering the B comments

10. Transition to manual steering (5.6.1.2.6)
It seems, that the position of the paragraph should be modified

Homework: D to look for correct position of this §

11. Emergency manoeuvre (5.6.1.2.7)
Is it necessary to specify emergency manoeuvres in this regulation?

Homework: D to rework

12. Attention recognition (5.6.1.2.8)
How long should the warning remain, if there is no driver reaction?

Homework: OICA to rework, including the B comments

13. System boundaries – technical documentation (5.6.1.3)
UK: This is an information package only. Confidential information should remain at the OEM

Which documents are necessary?
How should be the “handling” (confidentiality)?
What is covered by ANNEX CEL?

Homework: D to check with J+NL+OICA documentation

14. Transition request (5.6.1.5ff)

Homework: D to check with CLEPA the § incl. B comments

9. **Human Machine Interface (HMI)**

9.1. **HMI concept of ACSF - background knowledge from research**

[ACSF-02-04 - \(D\) HMI concept of ACSF - background knowledge from research](#)

Document is only for for further information and was not discussed

9.2. **Research on HMI Homework item 1 (ACSF-01-13)**

[ACSF-02-05 - \(J\) Research on HMI Homework item 1 \(ACSF-01-13\)](#)

Result: Drowsy drivers are ~50% slower than normal drivers.
Further test will be performed by J until E2015

9.3. **Driver Reaction Time**

[AEBS-LDWS-07-05 - \(CLEPA\) Driver reaction time](#)

CLEPA recalled the discussion on Driver Reaction Time in the Informal Working Group on AEBS/LDWS and presented the document of the 7th session.
This shows the manifold factors of influence on driver reaction time

9.4. **HMI, Driver in/out of the Loop**

[ACSF-02-06 - \(OICA/CLEPA\) Homework Part I: HMI, Driver in/out of the Loop](#)

D : System activity and information should be clearly displayed to the driver

On board infotainment systems may be used for this.

OICA: The turn indicator telltale can be used for this.

Driver should be informed before the action is taken.

UK: We should have something in the regulation and should not leave it alone to the manufacturer.

Interface to ITS/AD should be considered, but we should try to fulfil our task alone.

IG should focus on functions.

CLEPA: Items should be covered by this group.

10. ACSF Test Procedure Draft proposal

[ACSV-02-07 - ACSF Test Procedure Draft proposal – For discussion](#)
[ACSF-02-10 - \(D\) Identification of regulatory needs for ACSF](#)

D : Lateral acceleration should be limited

UK : Tests may be missing, e.g. what does the vehicle see if a vehicle driving behind is obscuring a vehicle in the other lane?

D : Good starting point, values in the proposal are appreciated

UK : Must low- μ be considered, especially in a curve test?

OICA : Simulation could help, because not all test scenarios can be covered by a driving test.

J : Tests should be simplified. OEM should provide a documentation

S : If simulation is used, these tools must be validated.

Parameters have to be reviewed, not to jeopardize high performing systems

UK : Min. risk manoeuvre only if really necessary

OICA : we cannot define min. risk manoeuvre for each scenario. ANNEX CEL could here be helpful

D : Should the test be defined category specific?

UK : Could it be helpful, that the technical Service may select e.g. 5 tests out of a list of 20 ?

*Homework: D to review Testscenarios with NL, UK, EC, J, OICA, CLEPA
incl. Performance requirements for each CAT*

11. Next meetings:

3rd session IWG ACSF: 2.-3. September 2015
(location tbd.) 1. September 2015 Drive event (contracting parties only)

80th session of GRRF : 15.-18. September 2015 in Geneva (CH)
Secretary to present the report of the IWG ACSF

4th session IWG ACSF: Mid/End of November 2015 in Japan

Rev.	Date	Content
Rev1	22.July 2015	Head of document: Link to website corrected