

Draft Report

17th meeting of the GRRF informal working group on Automatically Commanded Steering Function (ACSF)

Venues: Ivry-sur-Seine (France)
Chairman: Mr. Hiroshi Morimoto (Japan) and Mr. Christian Theis (Germany)
Secretariat: Mr. Rudolf Gerlach (TÜV Rheinland)
Duration of the sessions:
Wednesday 11. April 2018: starting at 10:00
Thursday 12. April 2018: starting at 09:00
Friday 13. April 2018: ending at 12:00

1. Welcome and Introduction

2. Approval of the agenda

Agenda approved as modified in document:
ACSF-17-01rev01 - (Chair) Agenda of the 17th session

3. Adoption of the report of the 16th meeting of the ACSF IWG

Report approved unchanged as in document:
ACSF-16-12 - (Secretary) Report of 16th session

4. Report of 86th GRRF / WP.29

The Chairman of GRRF gave a report about the outcome of the 86. GRRF session (see ECE-TRANS-WP29-GRRF-86e-2 (Report 86th GRRF)) and 174. WP.29 session (see ECE-TRANS-WP.29-1137e (Report WP.29))

He pointed out that:

- GRRF agreed that the Category B2 shall be considered in the context of SAE level 3 or 4 as a first priority.
- GRRF recognised the interest from industry regarding an additional option for Category C (C2) and noted that the industry may work separately on this (see point 7 of this report)
- Noting the ambitious deadline for the group and the number of tasks, GRRF recommended the establishment of subgroups, which organize themselves and use Web Conference in order to make progress (see GRRF-86-36e (GRRF recommendations to the IWG on ACSF on the basis of GRRF-86-20-Rev.1)):
 1. General considerations / establish the limits of the system
 2. Operational design domain (ODD)
 3. Dynamic driving tasks
 - a. Dynamic control of the vehicle
 - b. Manual override
 - c. Transition procedure (and period), linked to driver monitoring
 4. System reliability (“Annex 6” + testing + redundancy considerations)
Focal point: United Kingdom
 5. Minimal risk maneuver (once limits of system are established)
 6. Information to the driver

7. Driver availability recognition / Driver monitoring
8. Recording of information / DSSA – (Consult GRRF)
9. Cyber-security – Focal point: ITS/AD TF on CS/OTA
10. Periodical technical inspection (PTI) – Focal point: Sweden

Topics 4, 8, 9 and 10 separated, not under IWG-ACSF

Topic 10 already working as Task Force under IWG ITS/AD

Topic 8 WP.29 referred this task to GRRF

Topics 1, 2, 3, 5, 6 and 7 to be covered within work of IWG-ACSF

For all subgroups, work needs to be finalized until GRRF in September 2018, to be able to produce a formal working document to be adopted during GRRF in spring 2019.

- The Inland Transport Committee had indicated that WP.29 should establish a dedicated group to handle all items belonging to automated/autonomous vehicles. However, no additional resource was offered and the total number of working days for all GR's shall be the same. WP.29 discussed whether to create a new GR or to restructure the responsibilities to permit an existing GR to take forward this specific work stream. It was suggested that GRRF may take up this work stream and be renamed so as to reflect its new responsibilities and the importance that ITC/WP.29 placed upon this activity.

5. Discussion on structure and plan of work of ACSF IWG until February 2019

In order to finalize the work in time, the next meetings of IWG-ACSF will take place:

18th IWG-ACSF meeting 05.-08. June 2018 (NL, Den Haag)

19th IWG-ACSF meeting 04.-07. September 2018 (F, Paris)

20th IWG-ACSF meeting 06.-09. November 2018 (UK)

An additional meeting will take place before GRRF in early 2019. Date and venue of this meeting will be fixed after the announcement of the GRRF dates at the June 2018 session of WP.29

Next GRRF session will take place:

87th GRRF session 25.-28. September 2018, Geneva

6. Discussion on requirement of Category B2

Discussion took place on basis of document “ACSF-17-03 - (CP-WEBEX-20180322) Reference Document - Development ACSF of Category B2” prepared during two CP-only webex-meetings before the 17. ACSF IWG session.

The objective of the document is to serve as a reference document for the IWG on ACSF to develop a technical regulation for ACSF systems of Category B2 that align at least with the SAE Level 3 categorisation or with the SAE Level 4 categorisation. For the purposes of the technical regulation, references are made to specific functions of the technology and not to SAE levels.

To speed up the work and to fulfil the given time frame the focus of the development of the requirements for ACSF of Category B2 is (at present) mainly on vehicles of Categories M1 and N1. Later, it shall be reconsidered whether the developed technical requirements are applicable to the specific needs of trucks and buses or whether the requirements need further modification.

The results of the discussion during the 17. ACSF meeting are published on the ACSF website under “ACSF-17-03-Rev.1 - Reference Document - Development ACSF of Category B2”. The

final wording of this document has been prepared after the session and needs still to be confirmed during next session. The requirement “road with one lane” should be discussed again after the requirements are laid down.

Document (ACSF-17-04-Rev.1 - Industry input for B2.xlsx) sorts the input given in the different relevant documents (GRRF-86-36, ACSF-16-11, WP29 table of automation, ACSF-06-28) following the structure given in GRRF-86-36. Industry used this document as a basis for their preparation meeting of March 28-29. It reflects the main outcome of the OICA meeting.

Document (ACSF-17-05 -industry preparation for B2.pptx) is summarizing industry proposed approach for the 17. ACSF next meeting and is providing a cross reference analysis between GRRF-86-36 and ACSF-16-11.

On basis of the last column (Industry input to ACSF-17) of ACSF-17-04-Rev.1 and the discussion during the 17. ACSF meeting revised reference document ACSF-17-03 the group created the document ACSF-17-10 (table of tasks).

ACSF-17-10 reflects the main outcome of the 17. ACSF meeting and contains also the homework to be done for the 18. ACSF meeting.

As it is currently not clear whether ACSF of Category B2, the first autonomous system, will be part of UN Regulation No 79 or if it will lead to a new separate Regulation for autonomous systems, each homework should have its own numbering, which does not necessarily reflect the actual structure of the UN Regulation No. 79.

OICA presented “ACSF-16-08 - Rev.1 - (OICA) Take Over Request for Level 3_systems”. The presentation reflects the outcome of an investigation of the driver’s behavior after a take-over request. As a result of the investigation the proposal of OICA for the take-over reaction is 4s.

Japan also presented their take-over-time investigation. Details see “ACSF-17-07 - (J) Results of the Study”. The Japanese investigation shows a take-over reaction time of about 10s.

The discussion on an appropriate take-over time will be continued during the next session of IWG-ACSF.

With document “ACSF-17-09-Rev.1 - (OICA) Operational conditions for ACSF B2” OICA presented the industry view on operational conditions for ACSF B2. Germany, NL and UK pointed out, that they can’t accept the proposal made by the second part of the last paragraph of the document as task of the driver, which reads:

“retake control whenever the driver recognizes, or must recognize due to obvious circumstances that the conditions for using the B2 system are no longer met (e. g. already recognizes that an enforcement officer is redirecting the traffic, icy roads ahead, etc.)”

Other open items to be discussed during the next sessions:

- road classification “road with one lane” decision will be reviewed after the requirements are laid down
- for type approval manufacturer should present a declaration which situations the system can handle and in which situation a transition demand will be given
- France asks IWG-ACSF to consider requirements regarding a clear indication of automated vehicles which shall be visible for other road users (e.g. the police) during automated operation → to be forwarded by France to GRE

- influence of the design of autonomous driving cars may influence other existing regulations (eq. seats with sleeping position) → Information should be given to other GRs’)
- what type of minimum risk manoeuvre is appropriate
- are CPs’ able to accept vehicles approved under an UN Regulation not able to cope with national traffic regulations → mutual recognition
- industry should prepare an overview of sensor technologies at present on the market and their detection range/areas. If due to compliance not possible, BAST could take over this job.

7. Other business

In accordance with GRRF the group decided, not to discuss ACSF-17-06 - (OICA-CLEPA) - ACSF C2 V1. This may be presented as an industry proposal directly for the 87th session of GRRF in September 2018.

8. List of action items

Homework, see table ACSF-17-10 (all) Table of tasks.

Homework should be sent to the secretary not later than 2 weeks before the next ACSF meeting (23rd May 2019).

9. Schedule for further meetings

18th IWG-ACSF meeting 05.-08. June 2018 (NL)

19th IWG-ACSF meeting 04.-07. September 2018 (F?)

20th IWG-ACSF meeting 06.-09. November 2018 (UK)

Always:

CP meeting on Tuesday start 01:00 pm

ACSF meeting start on Wednesday 10:00 am end on Friday 12:00 am