

DRAFT Report

22nd session of the GRVA informal working group on Automatically Commanded Steering Function (ACSF)

Venues: Brussels (Belgium), FEBIAC, Boulevard de la Woluwe 46 – for details see ACSF-22-02
Chairman: Mr. Hiroshi Morimoto (Japan) and Mr. Christian Theis (Germany)
Secretariat: Mr. Rudolf Gerlach (TÜV Rheinland)
Duration of the sessions:
Tuesday, 9. April 2019: starting at 1:30 p.m.
Thursday, 11. April 2019: ending at 5:00 p.m.

Note: Any comments or documents relating to this meeting should be sent to the secretariat (gerlach@de.tuv.com) in e-format, so that meeting documents can be made available to the UNECE secretariat for publication on the website of WP29.

1. Welcome and Introduction

Chair (Morimoto-san) – opens the session and thanks CLEPA for hosting the meeting.
Chair (Morimoto-san) – explained the agenda.

2. Approval of the agenda

Document:
ACSF-22-04 (Chair) Draft Agenda of the 21st session
ACSF-22-04r1 (Chair) Agenda of the 21st session

Revised Agenda ACSF-22-04r1 adopted.

It was concluded to use informal document ACSF-22-03 as a basis for the discussion during the session.

3. Adoption of the report of the 21st session of the IWG on ACSF

Document:
ACSF-21-11 - (Secretary) draft report 21st session

Adopted without modifications.

4. Discussion on requirements for an automated lane keeping system

Documents: ACSF-22-03 (Chair) Base document_for_low_speed_ALKS
ACSF-22-05 - (Canada) Self-Certification Comments
ACSF-22-06 - (Canada) Other Comments
ACSF-22-07 - (Industry) ALKS Activation Deactivation and Driver Input
ACSF-22-08 - (Japan) Requirements_for_low_speed_ALKS
ACSF-22-09r1 - (ROK) Minimum Safety Distance to the front
ACSF-22-10 - (France) Comments on Base document_for_low_speed_ALKS -FR
ACSF-22-12 - (UK_Canada) homework 58+98 Agreement
ACSF-22-13r2 - (Industry) ALKS behaviour examples slow speed up to 60kph V5

ACSF-22-13r2 - (Industry) ALKS behaviour examples slow speed up to 60kph V5

OICA Started the discussion with their presentation.

Detailed presentation with animations showing under what conditions the system is activated, deactivated, overridden and a transition demand issued.

Main discussion centred around these Points 1 to 5:

On 'Definition of manual control' slide

Point 1

This will be safe guarded about unintentional deactivation of the system. This is to be determined by the OEM (ie: safety case will be put forward to the TAA such as driver monitoring to ensure driver has not accidentally pushed the deactivation button)

Point 2

No concerns with this. The vehicle is in a safe state at a standstill.

Point 3:

No transition demand is issued by the vehicle; the driver wants to override the system. A dual action is required to override.

Action 1: hands detected on the steering wheel. This could be for a period of x seconds if desired.

Action 2: brake or accelerator depressed.

RDW: in China there was discussion regarding the driver needing to take over longitudinal control, lateral control and driver monitoring. The monitoring should be a part of that criteria.

Chair: Driver monitoring; is the driver available? This is still part of the criteria. The slide details the driver input to take over manual control so the slide does not address the driver monitoring because this is applicable for points 1 to 5.

RDW: Request to add a reminder to this slide so that it is clear and that driver monitoring is not forgotten.

Point 4:

Option 1: when the vehicle is steered within the lane the system is 'overridden' and subsequently a 'transition demand' is given to the driver. If the steering input is such that it causes the vehicle to leave the lane due to a large steering input the system is 'deactivated'.

Option 2: any steering input leads to the 'deactivation' of the system.

Chair: DI must be activated to change the lane?

OICA: If the driver wants to take over control then they should be able to do so intuitively.

Requiring DI activation in certain situations may not be intuitive. CP's asked to evaluate the options 1 and 2 – OICA believe only one solution should be possible.

Point 5:

In this case the transition demand is issued by the vehicle. OICA confirmed no input of torque is required. The steering control can detect hands on detection (ie: mandating this technology). A lot of discussion that this is only one action and not two actions. How do you ensure that the hands on is the same as intentionally taking over manual control. Discussion regarding holding the steering wheel for a minimum period of time or a steering input (depending on the road condition).

Sweden: Requires a second action under the conditions of point 5.

OICA: Gave the example of the lane markings being missing and the vehicle issuing a transition demand. In this case the driver does not need to press either the brake or accelerator; it would be unnatural to do so. So why require an input to the brake or accelerator?

Chair: In the last ACSF meeting in China it was agreed that the single button should not be the only solution.

CLEPA: Driver monitoring is not able to tell if the driver is looking and engaged in the road ahead.

US: Point no. 5 is only in relation to the vehicle issuing a transition demand. Therefore should be considered separately, perhaps with different requirements.

Chair: Agreed. Industry to prepare 2 slides separating driver taking over manual control vs the driver responding to a transition demand.

Nb. The driver drowsiness is detected. If the vehicle detects this then a transitional demand is issued.

What is Override?

- A system can only be overridden once it is active.
- A brake or acceleration pedal activation can only override the system within the system boundaries (Ie: within the lane, respecting the safe zone)
- In the above case the function (ALKS) is still active.

Overriding with holding the steering wheel.

If the driver brakes without holding the steering wheel the vehicle will slow down and issue a transition demand.

If the driver brakes whilst holding the steering wheel the system is deactivated (2 actions required to take back manual control).

When the system is deactivated what support systems are active?

OICA: Only the support systems that are active before activating ALKS are active afterwards – this would be the proposal. There is no current activation strategy that automatically activates optional vehicle features if they haven't been pre-selected by the driver.

OICA: it could be discussed if ACC and LKAS need to be activated before ALKS can be activated. Currently this is not the intention.

CP's: ACC and LKAS could be deactivated once ALKS is deactivated either by manual override or after issuing a transitional demand.

Deactivation of the system:

When the vehicle is moving: 2 inputs are required; steering wheel and brake or accelerator.

When the vehicle is at a standstill: only 1 input required.

Driver Monitoring Systems:

This is not specifically in the Regulatory text. The OEM has to explain the safety concept to the TS and TAA. Driver recognition can be part of the safety system but OICA do not view it as a pre requisite for installing ALKS.

Driver ability

There is still a section on this for driver ability.

What happens to support systems (ACC and LKAS) when ALKS is deactivated?

One argument says that why would you deactivate the safety support features. However, this may discourage drivers to regain control if they think that they have some additional time due to the support features extending the automated driving task.

How do we define when the driver is looking ahead?

OICA: defining driver gaze direction will be difficult. For example the driver looks over their shoulder to make a lane change. In this instance the driver is not looking forwards but they are still engaged in the driving task.

Chair (CT): the driver monitoring system can detect when the driver is clearly not engaged in the driving task (ie: reading a newspaper). Therefore it can be used to identify unintentional operation of the steering wheel or pedals.

OICA: Some time delay could ensure that the driver is engaged in the driving task intentionally. This could be a way forward.

CLEPA: If the driver monitoring system is required to confirm that the driver is engaged in the driver task before manual override is allowed this is a dangerous situation because the driver monitoring will be required to interpret many scenarios of the driver behaviour (It may misinterpret the situation). If the DM system reports 'not engaged' does the system not allow manual override? How shall such a system be type approved?

Should the driver be able to steer the vehicle out of the lane (ie: override) with ALKS active with only input to the steering?

OICA: Should the driver be able to steer the vehicle out of the lane with the system active? With only input to the steering.

Chair (CT): How important is this question for low speed questions?

OICA: It is as important because there should be no difference between low vs high speed.

OICA: Would ALKS need an EM functionality?

Chair (CT): If a vehicle beside is detected it should be avoided that the vehicle can change the lane because the vehicle is assessing the environment. Can sensors be required to the rear?

UK: It could be possible but only if intentional action of the steering activation can be assured.

One rationale could be both hands on the steering wheel, not just a single hand. This could be for a set duration.

France: A minimum torque input threshold could be used.

Japan: Steering input should initiate a transitional demand.

UK: The initial question related to overriding or deactivating the system (like an emergency situation such as an oil spill in the OICA example).

US: look to research to support any decision. This should be the task of the group.

Chair: No objection from CP's. However, it would come with some provisions. Suggest a small drafting group to develop the text between OICA and CP's to develop this text. Netherlands, UK, Germany, France, Sweden, Japan & US will join with OICA.

Should driver monitoring influence the deactivation or override of the system?

Point 3 is still up for discussion. DM should not influence point 1 and 2.

Chair (CT) asked to proceed with the discussion on base of document ACSF-22-03

ACSF-22-03 (Chair) Base document_for_low_speed_ALKS

Paragraph 2.1.

Japan proposed text: ACSF-22-08

Concept of following a lead vehicle

This is a new concept introduced by the Chair (MO). Under this condition without a leading vehicle ALKS cannot operate.

RDW: why is a leading vehicle necessary?

France and Germany: in support of raising the speed to 70km/h.

Sweden: Under Japan's proposal the ALKS system would only be assessing if a leading vehicle (in lane) was present. All performance outside of the lane has been excluded by the Japan text. Therefore concern is the limited field of view the vehicle would have.

OICA: the scope should be simplified to only 'the following set of requirements applies to "Automated Lane Keeping System (ALKS) for low speed application". The remainder of the sentence can be added to the requirements.

OICA: are unsure about the limitation of the following vehicle concept.

Conclusion:

Chair: after CP discussion before the 22nd ACSF meeting and OICA's input the chair suggests deleting the 'following a frontal vehicle' requirement because it is not widely supported.

Section 2.1.1.

Category of vehicles under the scope of ALKS

France: support M1 & N1 within scope.

Chair stated that category of vehicle covered by the Regulation is a 1958 agreement item.

UK: think N1 requirements should be the same as M1.

Conclusion:

Not too much time spent on discussing this item. Seemed willingness from the group to add N1 vehicle category. No definite decision taken.

Paragraph 2.4.3.

Japan proposal on this paragraph

Readiness of the system

Should the system indicate to the driver that it is in a state that conditions exist for it to be in ALKS mode? Discussion regarding bullet point 3 and expanding this to include an indication to the driver:

- 'All functions needed for the operation of ALKS are working as intended and the system status is [permanently] indicated to the driver'

Conclusion:

All CP's agree on the principle of indicating the readiness of the system.

Paragraph 2.5.1.

How to evidence that the vehicle is capable of analysing any situation in the driving task

US: The US questioned how an authority would know that the system operated in all dynamic driving tasks. If there is an exit on the highway that the driver wants to take but the vehicle is in automated mode, does the vehicle issue a transition demand before the exit for the driver to take over?

Germany: The system does not require map data in GPS system to be set, so the vehicle would continue in the lane if a destination in the satellite navigation had not been set.

Paragraph 2.6.

Driver Availability Recognition System – how to define available?

Sweden: need some confirmation that the system is tamper proof.

RDW: The system should be able to detect that the driver is also not in a position to take over the driving task.

OICA: they could handle this by driver instruction rather than construction.

RDW: cannot regulate the instruction. Example given regarding the seating position that maybe heavily reclined.

OICA: the driver is likely to want to adjust the seating position so that they can perform another task other than driving, so will not necessarily be in the seating position for driving.

RDW: the text (in 2.6.2) says only awake and this is not sufficient. The driver should be in a position 'close' enough to take over control of the vehicle. How to define this?

OICA: could monitor inputs to the infotainment system or driver movements.

Chair: Anti tampering could be handled in the test section.

OICA: Complex electronics system should and could handle the anti-tampering, manipulation of the system not in the requirements section.

Conclusion:

Some CP's requested that the system is able to detect when the driver is clearly not in a position to resume the driving task, ie: the seat back heavily reclined. This is to be considered further under 2.6.2.

Section 2.6.1.

Japan proposal:

Driver presence and the permitting of the seat belt to be removed for a short period

Japan: propose to delete the 3 seconds warning. Why should it be allowed for a short period to unfasten the seat belt without a consequence of vehicle action?

France: there are already requirements in R16 seat belt reminder.

Chair: if the driver opens the seat belt the vehicle will start a transitional demand seems logical.

France: in addition the seat belt reminder requirements must be observed.

OICA: not in favour of deleting the 3 second requirement.

Chair: is this in line with the traffic rules to allow the seat belt to be removed for a short period?

Where does the 3 seconds come from?

Japan: it is illegal to have seat belt not engaged in Japan.

OICA: If we delete the requirement of 3 seconds from the text then the information of all driver warnings must be considered because there are 3 possible warnings that the driver could be exposed to:

- 1) Driver is detected not to be present
- 2) Seat belt reminder
- 3) Transition demand

Conclusion:

Generally accepted to delete 3 seconds requirement as proposed by Japan. OICA will consider the warning level priorities

Section 2.6.2

Discussion resumed on how to define when the driver is available.

US: Define driver availability – it is too vague? Present, seat belt buckled etc.

OICA: Present, buckled and driver recognition. Thought this was decided in Liverpool meeting?

OICA: 2 independent means to detect if the driver is there and available to take over manual control.

US: the wording indicates that a redundant system may be needed for each separate criteria (Independent means) – is this the intention?

Japan: One technical check (eg via camera) but check 2 criteria ie: the eyes and head movement – this was the original intention of the paragraph. 2 independent systems was not the original intention.

Sweden: thought that the understanding was 2 independent systems (ie: not just all through the camera system but camera and buckle).

OICA: Liverpool meeting homework was to justify the robustness in the systems to detect driver availability whilst also being technology neutral.

How to monitoring the eyes of the driver

OICA: There might be conditions where the driver's eyes cannot be detected. (ie: polarised glasses). Therefore other checks need to be made.

US: Infotainment and climate can be done by anyone in the vehicle. What controls would be driver exclusive? The US can't think of any except for maybe vehicle lighting functions, steering and brake/accelerator controls.

OICA: If only one occupant (driver) is detected then any controls be used because it can only be the driver using them. Perhaps this is not clear from the text and needs further clarification.

Head movement: large head movements, not nodding off would need to be calibrated. The intention of the text is that if the result is determined from the camera that the driver is asleep (ie: positive confirmation that eyes are closed) the system issues a warning & transition demand.

Chair (CT): concern over driver sleeping (eyes are shut for 30 seconds) then the OICA proposal permits a warning. The driver is disturbed (head movement detected – criteria met) then the system resumes. How many times can you do this?

OICA: Need to think about the list of movements/sequence and work on this for the next meeting.

OICA: in an interval of how many seconds can the system be 'snoozed' – maybe this could be limited.

UK: Is there any limitation regarding how often the ALKS system can be activated in a short period?

OICA: No, this was discussed previously and it is felt that if the system is safe to go into AV mode this should be permitted.

Germany: We need to make sure it is clear that when a transition demand is required (I.e.: driver not present a TD must be issued) but not immediately for driver availability (a warning will be issued before a transition demand).

OICA: Agree. OICA propose that reference to driver presence should be deleted from section 2.6.2. because it is just duplication.

ACTION: US to draft wording on 2.6.2. for the next session taking into account comments.

ACTION: OICA to work on list/sequence for driver sleeping and subsequently woken by vehicle warning but does not take over manual control.

Section 2.7

Planned event transition demand vs unplanned transition demand

In a planned event there is at least 15 seconds warning. However, no such criteria for unplanned (just upon detection). This explained by OICA and accepted.

OICA propose adding paragraph 2.7.4.2. from document ACSF-21-04

OICA: Example: battery vehicle a really severe failure of the electrical system may require the vehicle to stop immediately – the AV should behave in the same way. In this case a MRM is carried out immediately without 10 s transitional demand. Importantly this is more than just ALKS system failure, this is critical vehicle failures also.

Sweden: the concept could be acceptable with appropriate definitions. Sweden need an appropriate definition of severe system failure. What kind of failures do we expect redundancy on and what failures can we do without?

UK: severe classification could already be defined within individual Regulations (ie: red warnings) and also within R121.

ACTION: OICA, Sweden, NL and UK to work on wording for this as these CP's have been involved in the discussion.

Deletion of haptic warning in paragraph 2.7.5.

Germany and UK: Opposed to this change.

OICA: Propose to delete. A lot of focus on haptic warning being brake jerk and under low speed this may not be suitable.

Conclusion:

It was not accepted to delete the haptic warning.

Hazard warning Lamp activation in 2.7.3.

France: raised the question regarding the activation of the hazard warning lamps. Why only activate the hazard lamps once the vehicle is at a standstill. Why not before to indicate to other road users?

ACTION: France to work on revised wording for the next session.

Section 2.8 and 2.8.1

Japan text is shown below with suggested deletion of paragraphs:

What icon/symbol should be used to inform the driver that the ALKS system is activated and what properties should it have?

OICA: The driver needs to activate the function (it is not automatic). Therefore OICA does not see the need to standardise the icon because the driver will know that they have activated the feature.

Chair: OICA invited to propose something more powerful.

UK and Germany: Want to standardise the HMI. It should be easily recognisable from one vehicle to another that automated mode is selected. Consistency is the most important. CP's don't have a strong view on the final solution (ie: which colour etc).

OICA: Green colour is not special enough. Clear indication between an automated mode vs an assist mode is required.

Japan: to distinguish between ACSF B1 and B2 is important – it needs to be clear enough. A green symbol and 'A' is not seen as enough.

Korea: support Japan's opinion.

France: support one colour to avoid confusion of the mode.

Should the system active status be displayed continuously or intermittently?

France: Continuous vs intermittent signal – what is required for the system status icon from the current text?

Chair (CT): understanding is that the system status icon is continuous. Is this the same as for B1?

UK: ACSF B1 status needs to be permanently displayed to the driver so the same philosophy should be used for B2.

Conclusion:

The system active status should be displayed permanently.

Paragraph 2.8.2.

Japan: request to delete the second sentence (as indicated by red text).

UK and Germany: require some standardisation; do not support deletion of the second paragraph.

OICA: Paragraph 2.8.2 OICA can live with the content as it was originally drafted.

Conclusion

Keep the 2nd sentence of 2.8.2.

Paragraph 2.8.2.1 and 2

ACSF 21-04 (OICA & CLEPA) – proposed text from the last session. Replace 2.8.2.1. and 2.8.2.2. with the following:

How to indicate to the driver during a transition demand and MRM that the driver needs to take over manual control?

How escalate the warning during a transition phase or MRM?

OICA: made proposals to the text in ACSF-21-04 so that the warning is compatible/ the same as a B1 system.

OICA: think optical

Germany: need to understand what will happen during to the HMI during the ‘override function’ so that we can decide how to specify the transition demand HMI requirements.

OICA: Propose to move paragraph 2.7.5 under 2.8 because the requirements are linked. This would be a better structure for the regulation. This was accepted by the group.

OICA: strong request that ‘take back control’ between a B1 and B2 system to be the same. The task is the same for the driver in both situations for the hands to be placed back on the steering wheel. OICA stated that in the case of B1 system the requirement to take back control could be more urgent as the system will stop operating with no concept of a MRM. A lot of discussion on this point. OICA thought that the yellow to red could lead to an overload of information to the driver when we are trying to get them engaged with the driving task and looking on the road ahead.

Germany: Germany state that B2 is automated driving. Therefore the task to resume driving is different when compared with a B1 because the driver with an ALKS system would not be involved in the driving task for perhaps up to 1 hr. Whereas in a B1 where the driver is always expected to be engaged in the driving task, the warning system is if the system is misued. We have to question is a warning the same as a request to take back control? How does the driver know whether he is in B1 or B2 mode?

OICA: The mode symbol indicates B1 or B2 (as per the previous discussion), so OICA believe this is clear.

Conclusion:

Para 2.7.5 moved under para 2.8.2. Consequently we have discussed OICA’s alternative wording for 2.8.2.1 and 2.8.2.2. – this is still to be agreed. OICA to make a proposal on this regarding the warning optical symbol during a transition phase. The key question is it ok to have the optical symbol of B2 when the driver is requested to take back control the same as B1 take back control? Germany would like more consideration regarding the optical signal for a B2 system.

ACTION: OICA to make a proposal on 2.8.2.1 and 2.8.2.2.

Paragraph 2.9.1.

ACSF 21-04:

What is the justification for limiting 4m/s² deceleration during a MRM?

Korea: what is the reason/justification behind 4m/s²?

OICA: There are 2 reasons a vehicle will stop:

1) When the driver does not take back control after the request of a transitional demand – in this case a MRM is issued Paragraph 2.9

2) Emergency manoeuvre when vehicle detects imminent danger (EM) Para 2.10

Therefore a maximum of 4m/s² comes from the fact MRM is not an emergency case and should be more ‘gentle’ braking. For AEBS it is 5m/s² and this is an emergency situation. So it is natural to have some differentiation between the two regulations.

Korea: AEBS Regulation imminent collision 5.2.1.2.

Chair: AEBS is an emergency case, not an Minimum Risk Manoeuvre.

Conclusion

No change to 4m/s².

Paragraph 2.9.3.

France: Paragraph needs rewording to make it clear that if the function is fitted and not that the function must be fitted (as indicated in the text today).

OICA: Have a proposal

Japan: propose to delete para 2.9.3.

UK: If fitted the expectation is for the vehicle to use the lane change technology if safe to do so.

OICA: ACSF 21-04 with some paragraphs presented.

Chair: is this traffic Jam assist or low speed lane keeping?

OICA: propose to delete 2.9.3.

UK: Oppose to this, deleting this all together.

Conclusion

There was acceptance from OICA on the UK explanation. Request from the chair is to update the text of 2.9.3 to reflect the discussion.

ACTION: UK to reword paragraph 2.9.3. keeping in mind ‘if fitted’. (Also review 2.9 as a section).

Paragraph 2.9.4.

Reference to manual control

OICA: Nb. The drafting group working on manual control needs to also consider 2.9.4 because manual control is also mentioned here.

Paragraph 2.9.6.

Discussion regarding clarification of the text.

OICA: We have wording already from R79 that we should use.

Paragraph 2.10

Japan: suggest renaming paragraph 2.10 as collision mitigation because the collision avoidance cannot always be guaranteed.

Also 2.10.1 Japan proposes to delete the word ‘unplanned’. When would the vehicle ever be in planned imminent danger?

This is accepted by the group.

France: support the first comment from Japan regarding renaming the paragraph as collision mitigation. Discussion then leads to review of paragraph 2.2.5. and 2.2.7.:

Chair (CT): section 2.10.1 states only if the vehicle has detected (ie: it is not obligatory to detect) – is this the intention?

OICA: Paragraph 2.5.6. requires that the vehicle shall detect cases of imminent danger. Therefore OICA does not see that this needs to be restated in paragraph 2.10.1. The intention of 2.10.1 was to ensure that an EM was only carried out by the vehicle upon detection of a situation that would lead to imminent danger and not for any other reason. However, perhaps this can be read another way.

Suggestion: Para 2.10.1 could read:

It is not permitted to initiate an emergency manoeuvre for any other reason than the detection of an imminent collision as specified in paragraph 2.5.6.

Paragraph 2.10.3

Japan proposed text:

After an Emergency Manoeuvre should the ALKS system just deactivate or still be active but issue a transition demand to the driver?

Japan: Japan concern is that in the case of an Emergency manoeuvre and ALKS switches off the driver may not know why this happened if the vehicle has stopped in lane. Therefore suggest that after all EM the vehicle issues a transition demand.

Discussion when the vehicle is at standstill after an emergency manoeuvre what should the status of the system be? Active or inactive?

Conclusion:

Current wording states that the system shall be deactivated. This is proposed to be changed so that the system is active after and a transition demand is issued. Para 2.10.3 needs some rewording.

What about a lane change manoeuvre during an emergency manoeuvre?

UK: What if the emergency manoeuvre was to be mid lane change and then the EM terminated – what should happen?

OICA: Currently this is not allowed for the vehicle to change lane during an EM (by paragraph 2.10.2). After an EM the vehicle is only permitted to stop in the lane.

Chair: as per the discussion on 2.9.3. for MRM if the vehicle is equipped with the capability to perform a lane change why is this possibility not permitted?

OICA: Agree it would be a good idea to permit this in line with the comments made earlier on a MRM. OICA will look at drafting some wording.

ACTION: OICA to draft some wording for 2.10.3.

ACSF-22-05 - (Canada) Self-Certification Comments

Document not reviewed.

ACSF-22-06 - (Canada) Other Comments

Document not reviewed.

ACSF-22-07 - (Industry) ALKS Activation Deactivation and Driver Input

Incorporated into the discussion with document ACSF 22-03.

ACSF-22-08 - (Japan) Requirements for low speed ALKS

Incorporated into the discussion with document ACSF 22-03.

ACSF-22-09r1 - (ROK) Minimum Safety Distance to the front

The Korea proposal was introduced briefly at the meeting. This will be reviewed more closely in the next meeting.

ACSF-22-10 - (France) Comments on Base document for low speed ALKS -FR

Incorporated into the discussion with document ACSF 22-03.

ACSF-22-12 - (UK_Canada) homework 58+98 Agreement

Paragraph : 2.5.9.2.

Sweden: 2.5.9.2. it would be good to compare the environmental consequences. Declared controlled strategies should be made under those environmental conditions.

Paragraph : 2.5.9.2.

OICA: Sensor monitoring; self-monitoring of the system should be built in and this is critical for the system. Is PTI checks behind the logic of 2.5.9.3

UK: PTI is not the primary driver, in service compliance testing is.

Germany: What is involved in sensor monitoring?

OICA: self-checking needs to be included within the proposal.

Sweden: Monitors should be declared to the technical service for review.

OICA: Document ACSF-21-04 previously presented from OICA.

3 approaches, these 3 items will be merged into the safety case.

- safety margin
- self-diagnostic
- control strategies (environmental conditions)

Sweden: positive towards the concept of self-diagnostics. However, we need to ensure it is included in complex electronic/control strategy annex.

ACTION : UK/Canada to have further discussion with OICA regarding the introduction of self-diagnostic requirements in addition to the current text.

5. Other business

DSSAD

Documents: GRSG-116-43r1e – ToR Informal Working Group on EDR/DSSAD

The Secretary gave an overview about the discussion on DSSAD at 116th GRSG 1–5 April 2019. During 116th GRSG The expert from the Netherlands suggested establishing an informal working group under GRSG and GRVA to develop draft regulatory proposals for new UN regulations on EDR for conventional and automated/autonomous vehicles, and on DSSAD. The experts from China and Japan welcomed that initiative and offered to contribute to the activities. GRSG agreed on the need to establish an IWG on EDR/DSSAD (possibly under GRSG and GRVA). The expert from the Netherlands introduced a first draft of the terms of reference and rules of procedure for the new IWG on EDR/DSSAD. GRSG considered the document in detail and noted some amendments to the proposal and also noted several concerns on the feasibility of the tasks within the timeline as stipulated in the proposal. GRSG requested the secretariat to transmit the proposal for the ToR to GRVA for further consideration at its special June 2019 session. Following the intervention of some delegations on the urgency of these new activities, GRSG agreed to proceed,

in the meantime, on the basis of a TF on EDR. GRSG agreed to resume consideration of this subject at its next session in October 2019 based on the outcome of TF meetings. The Chair of GRSG announced that he would inform the World Forum WP.29, the Coordination Committee AC.2 and the Executive Committee AC.3 at their forthcoming sessions in June 2019.

(Chair) Welcomes the establishment of an IWG, as a requirements for a DSSAD are needed for the adoption of the ALKS regulation in spring 2020 in WP.29.

6. List of action items

- **All members of the IWG on ACSF are asked to check if they can host one of the meetings mentioned below. Please send your feedback to the secretary asap.**
- Delegates prepare homework as mentioned in document “ACSF-22-03 after 3rd day (Chair) Base document_for_low_speed_ALKS” to be presented at a meeting of a small drafting group in week starting with 27th of May.
- Setup a small drafting group (not more than 15 members in total, including 2 participants OICA and 2 participants CLEPA) for a meeting in week 27th of May to prepare the base document for the 23rd meeting of ACSF .
- Delegates, who wish to attend the small drafting group meeting should contact the secretary by 26th of April at the latest.
- Small drafting group shall prepare the base document for the 23rd meeting of ACSF and distribute the document by mid of June at the latest.

Agenda No.	Topic	Action Point
2.6.2	Driver availability to take over the driving task	Action: US to draft wording on 2.6.2. for the next session taking into account comments.
		Action: OICA to work on list/sequence for driver sleeping and subsequently woken by vehicle warning but does not take over manual control.
2.7.4	Identification of a severe system failure to the driver and MRM	Action: OICA, Sweden, NL and UK to work on wording for this as these CP’s have been involved in the discussion.
2.7.3	Hazard warning lamp activation in 2.7.3.	Action: France to work on revised wording for the next session.
2.8.2.1 2.8.2.2	How to escalate the warning during a transition phase or MRM	Action: OICA to make a proposal on 2.8.2.1 and 2.8.2.2.
2.9	Lane change performance during an MRM	Action: UK to reword paragraph 2.9.3. keeping in mind ‘if fitted’. (Also review 2.9 as a section).
2.5.8 and 2.5.9	Sensor performance over time	Action: UK/Canada to have further discussion with OICA regarding the introduction of self-diagnostic requirements in addition to the current text.

7. Schedule for further meetings

- meeting of a small drafting group in week starting with 27th of May 2019
 - 23rd meeting of the IWG on ACSF in week starting with 29th of July 2019
 - 24th meeting of the IWG on ACSF in week starting with 18th of November 2019
- Venues to be determined.