DRAFT REPORT

24th meeting of the GRVA informal working group on

Automatically Commanded Steering Function (ACSF)

Venues: 08028 Barcelona, Spain
Aula Capella of the ETSEIB (Industrial Engineers School of Barcelona)
Av. Diagonal, 647
for details see ACSF-24-01
Chairman: Mr. Hiroshi Morimoto (Japan) and Mr. Christian Theis (Germany)
Secretariat: Mr. Rudolf Gerlach (TÜV Rheinland)
Duration of the sessions:
Monday, 18. November 2019: starting at 1:30 p.m.
Wednesday, 20. November 2019: ending at 5:00 p.m.

1. Welcome and Introduction

- Chair (J) welcomed the attendees and thanked IDIADA for hosting the meeting.
- IDIADA and ETSEIB gave a welcome speech and introduced their activities.

2. Approval of the agenda

Document: ACSF-24-02 (Chair) Draft Agenda of the 24th session

- The IWG adopted the agenda with no changes/comments.

3. Adoption of the report of the 23rd meeting of the IWG on ACSF

Document: ACSF-23-11 - (Secretary) Draft Report 23rd session

- The IWG adopted the report with no changes/comments.

4. Discussion and finalization of functional requirements for ALKS

Documents: ACSF-23-02r4 (SDG) Base document_for_low_speed_ALKS
ACSF-24-03r1 (Germany) ALKS Requirements - low speed – tracked
ACSF-24-05r1 (co-chair) revised (consolidated) proposal_tracked
ACSF-24-06 (co-chair) 2.3 2.4 Proposal with Jusification_rev
ACSF-24-07 (Secretary) web ex meeting notes (all)
ACSF-24-08r1 (EC) draft proposal ALKS regulation based on ACSF-23-02r4
ACSF-24-09r1 (NL) action point par 2.6.1. _191115
ACSF-24-10 (FR) Functional boxes
ACSF-24-14 (EC) ALKS Function Diagram - 15 11 2019 - EC version (A3 size)
ACSF-24-15 (Industry) Revised Draft_clean (co-chair)_commentsIndustry_v3
ACSF-24-16 (Germany) Summary slides introducing ACSF-24-03r1

Chair (DE) explained that with GRVA chair it was confirmed that an official document should be submitted for March 2020 WP29. The current draft reserves different sections for EDR/DSSAD, etc. so before the Feb GRVA the work from each IWG shall be consolidated into the draft document. The Chair (DE) mentioned the possibility of holding a special GRVA session before February.

- Chair (DE) confirmed the target as to focus on fixing the technical requirements (without test requirements, which to be finalised in the January IWG meeting) by the end of the IWG session, if necessary having a small drafting goup working on individual sections.
- EC and DE introduced the documents they prepared.
- Chairs/Secretary explained some additional concepts that were confirmed during the morning CP session: automatic deactivation and manual deactivation do not need to be differentiated; 'driver availability' and 'driver absence' is the same concept so use one term for this condition.

2.3 Secretary explained the suggested changes from the morning CP session:

- Introduce additional requirement regarding manufactures responsibility to implement measures to avoid misuse,
- Introduce additional requirement regarding manufactures responsibility to implement measures so the system to adapt to the traffic law updates. It must be also clarified that when the system cannot be updated to the new traffic law due to the end of lifetime, etc. the system shall not be able to be activated anymore.
- Introduce additional requirement regarding manufactures responsibility to ensure that the system functions properly over lifetime. When the system cannot, the system shall not be able to be activated anymore.
- Reword 'continuously' to e.g. 'permanently'
  - ➢

2.3.1 – 2.3.2

EC commented current 2.3.1 (detecting failure) text should not be placed here since it is not the main feature of the system. SW recalled the background that it was coming from the point that readiness shall be checked before activation.

➔ **the text to be refined**

EC Proposal (5.1.x):

EC proposed (5.1.x) to add the text to require the system to prevent 'rationally foreseeable and preventable' accident. Industry asked how to assess 'rationally foreseeable and preventable.' Chair(J) explained that the matter in under VMAD discussion.

DE raised the concern on the wording 'accident'. UK agreed and suggested to use the word 'collision.' Industry suggested changing 'the vehicle shall' to 'the system shall.'

➔ **EC proposal is agreed, with the wording change from 'accident' to 'collision,' and 'vehicle' to 'system'.**

OEM to ensure operation over the Lifecycle of the vehicle

- Australia: comments regarding that the function must have safe operation over the lifecycle of the vehicle (ie: whilst it's in the field). Text to be drafted on this. This is a concept which has been introduced by Cyber Security.
- EC: support the view of Australia.

Action: need to add some reference to lifecycle (UK & Australia)

Rationally foreseeable vs preventable?

Industry: How do we define what is rationally foreseeable and preventable? How can a technical service determine this requirement? Our hope was to define what dynamic driving tasks the vehicle can cope with.

- EC: this could be included in the ANNEX CEL defining what is rationally foreseeable and preventable. This was not taken forward.
- Co-chair: the vehicle shall not cause an accident. This is a fundamental principle and is in the German document.

Discussion regarding traffic rules:
OICA: Discussion regarding traffic rules vs traffic regulations – what applies to the AV vehicle?
There are different requirements, not all of them are applicable to the AV system. For example, a human driver if broken down will be required to put out an emergency warning triangle (this could be termed traffic Regulations). The system clearly cannot complete this task. Therefore it needs to be clear.

Action: Need a declaration as to which countries traffic rules the system is designed to operate within and reference to this updating – Annex CEL seems appropriate.

Germany gave the example in certain countries when it's raining the speed limit is reduced on highways (will be applicable for high speed systems). This requirement of meeting the traffic rules must be fulfilled.

2.3.3 Industry asked the reason to change 'rules' to 'regulations', and if there are any differences in the meaning by changing the wording and expressed concern that it may lead to different understanding. Chair (DE) explained the wording is following the framework document.
➔ **No change in the concept**

DE Proposal ACSF-24-03r1 (2.3):

- DE introduced their proposal. EC in principle supported the document. Industry commented 2.3.4 (controllability) may cause confusion.
- EC agreed that 2.3.6. (self-check) is necessary but could be placed in the difference section.
- As for 2.3.7. (EMC) EC commented that it is necessary to state under which condition (on/off) the test shall be conducted in test section.
- Concern from Industry about the vehicle storing failures
- OICA: OK with detecting but not storing failure codes. Ie: what happens when the radar at the front of the vehicle becomes covered? Should the vehicle have to store the code? Industry commented that 'storing' failure (2.3.3) is OBD relevant.
- SW commented that 'implement safe strategies' is unclear, and SW/EC questioned the need of defining 'severe' failure.

Action: to delete 2.3.3.
General agreement that 'severe' failure differentiation is not necessary in this section and if necessary in later section decide if 'severe failure' definition is necessary.

The severe failure concept comes from the fact that in some scenarios industry may want to go to an EM rather than an MRM instantly. So this definition was introduced to provide some clarity when that was acceptable to perform that EM.

➔ **2.3 to be revised inserting the agreed EC/DE proposal**

2.3.4. Activation of headlamps and wipers (if appropriate)
Industry: are there any other items in paragraph 2.3.4 that need to be considered – industry cannot think of any.
UK: What about demist?

Action: may need to think about this wording in 2.3.4. – could it be interpreted that the demist function must be on max whilst ALKS is active?

Action: UK to submit new wording

Suggest the following:
2.3.4. The activated system shall maximise driver controllability. As a minimum the wipers must be on in case of rain, headlamps must be on in case of darkness, fog lamps (if fitted) must be on in case of fog.

2.3.7. UN-R 10.05 – is the system activated or not during this test?
France: should the system be active or inactive during R10 testing?
OICA: suggest use wording from other Regulation:

UN- R13H
4.3. The operation of the anti-lock system shall not be adversely affected by magnetic or electrical fields. This shall be demonstrated by compliance with Regulation No. 10, as required by paragraph 5.1.1.4 of the Regulation

5.1.1.4. The effectiveness of the braking equipment shall not be adversely affected by magnetic or electrical fields. (This shall be fulfilling the technical requirements and and respecting the transitional provisions of Regulation No. 10 by applying:
(a) The 03 series of amendments for vehicles without a coupling system for charging the Rechargeable Electric Energy Storage System (traction batteries).
(b) The 04 series of amendments for vehicles with a coupling system for charging the Rechargeable Electric Energy Storage System (traction batteries).

Action: reword UN-R 10 reference with some more clarity

2.4.
Chair (DE) explained the additional outcome from the morning session:
- Manual/Automatic differentiation is not necessary
- After deactivation going back to [B1] AD mode is not acceptable

Driver override
- Industry: the driver presses the brake pedal – what happens to the lateral control?
- Industry requested to confirm the meaning of 'override,' and explained that the general understanding was that override influences the vehicle manoeuvres but does not cancel the system. EC pointed out the concept that driver input (override) will initiate TD.
- EC suggested to keep the general wording on avoiding mode confusion but pointed out that referring to B2/B1 is difficult.
- Germany: No continuous lateral or longitudinal control (ACC, ACSF B1) shall be activated once ALKS is off. However, systems like Lane Departure warning, ESF, AEB, CSF shall be on.

Design life of the system
The system continuing to behave in its original type approval.
Action: UK and Australia to draft wording.

2.4.3 (activation conditions)
SW requested to add 'confirm capability to detect failures' under 2.4.3. Industry pointed out that there is another specification exists requiring that 'no failure is present,' which is a stronger statement. EC agreed and pointed out that 'self-test' covers the same aspect as well. AU added that continuous functioning (maintaining the same system performance) confirmation shall be included as well.

Discussion if EDR is also part of ALKS?

EC: in Europe EDR will be part of the requirement for automated vehicles.

- Concerning the EC proposal to add EDR/DSSAD, Industry commented that EDR should not be included (at this point at least). EC explained that EDR/DSSAD data elements are not finalized yet so should not eliminate the possibility of need at this point. Industry pointed out that the link between DSSAD and ALKS was already identified but it is still not clear on EDR (not discussed yet). EC raised a question if EDR availability needs to be checked before the ALKS activation, and if it is necessary to differentiate from DSSAD. Chair (DE) pointed out that EDR is going to be required for all vehicles so it is not necessary to add specifically to the ALKS requirement. JPN agreed with the comment.
- Industry: this was not the understanding. DSSAD operational will be a requirement of activation. EDR may be triggered due to airbag inflation (for example) – it has a wider application.
- Chair (DE): DSSAD (for ALKS) and EDR (event of a collision) is a 2 step approach
- Japan: EDR is for all of the vehicle, not for partial automated driving. DSSAD is sufficient for this partial automation.

Summary: for the UN Regulation DSSAD seems sufficient for ALKS. EC mandate EDR (through the General Safety Regulation)

Note: EDR is on-board the vehicle, DSSAD may be off board.

➔ **In conclusion, it was agreed to keep it as DSSAD (not including EDR at this point)**
➔ **2.4.3. agreed as DE proposal (adding 'positive confirmation of system self-check')**

2.4.4 (manual deactivation)

Discussion about what the vehicle should do when the deactivation control is pressed

- EC referred to their proposal and stated that manual deactivation shall always initiate TD. DE explained when the driver uses the 'dedicated mean' it shall automatically deactivate the system. Industry recalled that the discussion in the last IWG and pointed out the risk of making cancellation too difficult. EC questioned if single control (pressing button) can be enough to confirm that the driver is ready to take lateral control of the vehicle. Chair (DE) agreed with EC and stressed the importance of the next clause on protection against unintentional manual deactivation. Placing the button on the steering wheel is very simplistic, therefore is it sufficient to just press a button on the steering wheel? Chair (DE): 2.4.4. second sub paragraph is key, exceeding threshold etc. Once the system is active the dedicated control to deactivate the system must be present to the driver.

Conclusion: no TD after the dedicated control is activated.

- There was a suggestion to delete the last section of e.g. (placing the deactivation means on the steering control…) but Industry preferred to keep the current text.

➔ **Agreed with the current text**

2.4.5 (automatic deactivation (driver input))

Manual deactivation vs automatic deactivation (driver input)

The deactivation with both methods (manual deactivation and automatic deactivation) was seen as too confusing.

Conclusion: only the concept of manual deactivation is kept.

2.4.5. (Automatic deactivation)

- OICA: the first paragraph is written to only permit certain conditions for deactivation and not permit a whole host of deactivation means.
- OICA: presentation is given in Brussels to cover section 2.4.5.1. The override has to be according to para 2.4.8. which is dependant on driver attentiveness.
- EC reiterated that override shall lead to TD. Chair (DE) agreed, and suggested deleting the automatic deactivation (2.4.5), introducing 'override shall always lead to TD,' and keeping 'deactivation by TD'. Industry pointed out 2.4.5 shall be kept because system deactivation condition shall be specified. EC agreed and suggested to keep the points of TD initiated by the system and initiated by the driver.
- UK recalled that agreed change was to delete automatic and manual differentiation. UK also pointed out that there was a demand to differentiate what initiated the TD. Chair (DE) stated that the differentiation was the condition on deactivation, not what initiated the TD. Industry agreed with the UK comment and stressed that most important point is to confirm that lateral control is taken over by the driver. Industry recalled, even though simple solution is of course the best, discussion on this had taken more than couple of days in the past and expressed the concern that trying to simplify may again prolong the discussion.
- Industry questioned that when the driver override (e.g. steer off the lane) the system will not provide any lateral support/control, so it is the same as the system cancellation?
- Chair(J) asked the IWG if standstill condition under 2.4.5.1 shall be kept (as in Chair(J) document) or deleted (as in DE document).

➔ **There was no objection on deleting standstill condition**

2.4.5.1. Is a TD required after deactivation by input to the driving controls

- DE: No – not if braking+hands or acceleration+hands is provided. The German summary document aims to help with this.
- OICA: If only one of these elements is provided (ie: only braking or only acceleration) then a TD is issued. Important to note they may not be done simultaneously (hands and braking), in this case a TD is issued initially.
- Chair (DE): any input shall initiate a transition demand. The only means to deactivate without a TD is using the dedicated control. This is because the input to steering control and longitudinal control will not occur at exactly the same time as mentioned by OICA. Chair (DE) explained that the cases are manual deactivation (dedicated mean) and the other cases (any other driver input), and TD initiated by the system. Unless it is done by dedicated mean, every deactivation occurs after TD. Industry commented that during the last IWG it was agreed that overriding steering function shall lead directly to deactivation.

Conclusion: If 'braking+hands' or 'acceleration+hands' is used to deactivate the system then no TD required. Note: they need to occur simultaneously for this to be true.

Support for the driver during a TD?

OICA: How do you support the driver if they override the vehicle via the lateral control out of the lane?

Germany: agreed can't support the driver in this case

➔ **Agreed point: 2.4.5.1. with no further changes**

2.4.5.2 (DE proposal ACSF-24-03r1)

JPN asked which was initiated by driver, and which was by system. Chair (DE) pointed out this section specifies how to deactivate. Industry stated the current statement is clear enough to meet their need.

2.4.5.3 (DE proposal ACSF-24-03r1)

CND pointed out that it should be clarified that EM does not lead to automatic deactivation without TD. Industry pointed out the concept is cover in the later section.
Para 2.4.5.3. Deactivation during an ongoing EM

Action: Amend 2.4.5.3. to the following:
In case of ongoing EM, the deactivation of the system may be delayed until the emergency manoeuvre has completed.

Continuing support for the driver during an EM
Emergency braking inside your lane, the driver puts his hands on the steering control and brakes. Under 2.4.5.2 the system is deactivated. However, if an EM is detected then 2.4.5.3. permits that the system still supports the driver in case they have misjudged the level of braking required.

UK: is it still necessary if AEB is still operational?
Industry: AEB only operates until 42km/h (and is if fitted requirement) therefore it may be necessary to still support the driver.

2.4.5.4 (DE proposal ACSF-24-03r1)

CND stated 'efficiency' should be worded differently as it is difficult to assess. It was suggested to refer to CEL. NL asked if the definition of 'severe' failure is to be retained. Industry pointed out that single sensor failure is not covered in this case, and single failure shall maintain the vehicle function, and for 'severe' failure shall lead to the different strategy. Chair (DE) asked what happens in case of complete loss of power supply, and Industry replied asking in such situation if the dedicated means should continue working (i.e. how much redundancy is required here?) SW pointed out 2.7.4.1.1. covers this concept. Industry mentioned since the second part of 2.7.4.1.1 does not cover sever ALKS failure, 2.4.5.4 shall be kept as it is.
➔ **2.4.5 agreed as DE proposal with some changes**

2.4.5.4. Severe vehicle failure

Example: primary supply to the vehicle fails. Different strategies such as new threshold levels for example could be used. However, brakes circuit failure, or power assistance failure; then thresholds may be altered. These will be different for different systems.
Conclusion: for Annex CEL/declaration to the technical service
➔ **make reference to Annex CEL in 2.4.5.4. rather than reference the technical service.**

【DAY 2】

2.4.5.4. Chair (J) started with confirming the conclusion of the 2.4.5.4. It overlaps with 2.7.4.1.1 and suggested adding 'severe failure' to 2.7.4.1.1.and delete 2.4.5.4. UK pointed out that 2.4.5.4. concerns applying different strategies, while 2.7.4.1.1. refers to MRM initiation only.
➔ **Keep the current text**

2.4.6. Industry commented CSF shall be limited to those 'avoid lane departure' for clarity.

2.4.8. System override

2.4.8.1. UK: Should include the rationale for any variation in the 2.4.8.1
France: Better to use the word demonstrated rather than declared.
➔ **Agreed with the changes suggested**.

2.4.8.3 Industry suggested deleting 'if….steering wheel.' Industry confirmed that when the vehicle reaches the max speed or max following distance the system shall supress the override. It was agreed to add the cross reference to clarify those conditions.

→ Agreed with the changes suggested. Delete "if the driver simultaneously has his hands on the steering wheel".

2.4.8.4 UK commented that the circumstances where the driver's request to intervene was supressed by the system are rather complex situation, so the interactions there should be recorded on DSSAD. Chair (DE) suggested adding this as a reminder

→ add the UK comment as a reminder

2.4.8.5

- Override by acceleration lead to TD. Chair (DE) asked if the override means changing manoeuvre or input itself. Industry explained that if the override is suppressed due to exceeding the boundary condition, there is no override hence no TD. DE commented that DE understanding was that driver input with no dynamic change shall still initiate TD. Industry noted the need for good wording.
  → Industry will prepare better wording after coffee break

[After coffee break]

- Industry explained that the current text does not differentiate the constant input and the input changing the behaviour of the vehicle, and suggested that when there is an input beyond the threshold, and the input is not suppressed by the system it shall initiate TD (override generates TD, not input). DE acknowledged the importance of clarifying the meaning of 'input.'
- Industry pointed out the need for setting threshold for 'input.' DE/EC agreed with the Industry comment. Chair (DE) suggested to modify the text as 'Any driver input… [when the input exceeds a reasonable threshold.]'
- Several members raised a question if small inputs (e.g. driver foot touching the brake pedal) initiate TD, and the relationship between 2.4.8.2 & 2.4.8.3. SW pointed out override definition under 2.2.12 can be interpreted differently, so need to modify the definition as well.

→ [To be revised]

UK: 2.4.8.5. is only about longitudinal control. However, it's about issuing a transition demand on input to the braking or accelerator pedal when the system is overridden. Nb. 2.2.12 : override is defined

The driver accelerates (but the system suppresses this). The current text states that at TD is only given when the system is overridden.

OICA: input could be any input by the driver. So there should be caution about using this.

→ There needs to be consideration to the text that any input to the controls leads to a TD (German wish) – industry need to provide suitable text. Big discussion on input (Not an override!) to the accelerator or brake initiating a TD vs not initiating a TD.

Action point: Any driver input to the accelerator of brake control shall immediately initiate a transition demand as specified in paragraph 2.7. when the input exceeds a reasonable threshold designed to prevent unintentional override. – UNDECIDED ON THE PRINCIPLE

2.4.8.6.

- Chair(J) suggested to delete 'It is recognized'.
- UK asked the meaning of 'efficiency,' and suggested to use 'effectiveness'

→ Agreed with the changes suggested. Change the text to: "their effectiveness"

2.5.1 EC suggested to add general sentence before the detail condition specified.

➔ **Agreed as suggested**

2.5.2. Reaction to other vehicles also in its lane

- EC asked about the situation where a motor cycle tries to go through the vehicle. EC suggested adding the wording to 'it shall leave the time and space for all lateral manoeuvre'.
  OICA :The obligation regarding what to do comes in 2.5.5

➔ **Agreed as suggested, some modification of wording – not clear what that wording will be.**

2.5.3.2 Detection of the distance to the road user in front

- EC suggested adding 'obstacle.' Industry mentioned it does not make sense to add it here.
- Chair (DE) and several other members asked what the 'another road user in front' is (a motorcycle in front? pedestrians?).
- EC commented the issue is not so much about detection time and reaction time but reaction around the confronting vehicle making it unable to keep the appropriate following distance, referring to the EC proposal. Industry pointed out that the third paragraph of this section covers the concept. Chair (DE) suggested EC proposal is easier to understand so introduce the EC version. Industry pointed out that the EC statement 'maximize overall traffic safety' changes the expectation, so not exactly the same contents. Japan also pointed out that for TS it is difficult to assess 'maximize overall traffic safety.'
- Chair(J) explained the changes in co-chair document based on the web meeting (add 'adapt the vehicle speed in order to avoid collision,' and add a new column as 1 meter in the list).
- Chair (DE) suggested to add a column of minimum following distance in the table.
- EU Comm has an alternative proposal. Discussion between Industry and EU Comm to find alternative wording.

➔ **2.5.3.2. detect the distance to the next vehicle in front located….. and shall adapt the vehicle speed to avoid collision.**

- EU Comm: what about pedestrian? Should we use the word vehicle to cover cars and motorcycles?
- The scenario about vehicles cutting in
- Discussion about 'appreciable time difference' and the ambiguity of this sentence. This covers the realistic scenario where another vehicle will cut in and cause the stopping distance to not be respected initially. Therefore the vehicle must adjust the speed.

➔ **The third sub paragraph is discussed – EU Comm has an alternative proposal. Discussion between Industry and EU Comm to find alternative wording. This is only for moving vehicles and not for foreign objects**.

2.5.4

- Industry pointed out the concern on 'obstacle,' since there is no clear definition on the term. Chair(J) recalled that discussion during the web meeting that 'obstacle blocking the lane' shall not apply to small obstacles. UK asked if 'stationary vehicle' includes MC fell and laying on the road.

➔ Industry to come up with the counterproposal during the coffee break.

[After coffee break]

- DE explained they intentionally used the word 'road user.' Several commented that road closure situation can be considered being managed by 'following traffic rules.' Chair (DE) suggested changing 'obstacle blocking its lane' to 'blocked lane' Better to address obstacle in 2.5.5.

➔ **Agreed to include 'stationary vehicle', 'road user' and 'blocked lane'.**

2.5.5

- EC pointed out the cases where an ego is crushed by another vehicle and suggested to cover those situations under EM by adding to the e.g. list. Industry suggested that the e.g. items shall be the minimum requirement (also 2.10.1 'only' should be deleted).
- Germany: This will ensure that a collision with another road user is avoided. A collision avoidance manoeuvre is not properly defined. This paragraph is linked with paragraph 2.10.1. In 2.5.5 propose to revert back to the original text and reinstate the emergency manoeuvre because this is defined (rather than collision avoidance).
- EC propose to delete 'after a lane change of a leading vehicle'
- Co-chair want to add in 'hard' decelerating and 'sudden' lane change
- UK: Suggestion to define 'hard' decelerating – what does this mean vs just decelerating? Suggestion to draw some similarities with R13H. Suggestion: Addition to 2.5.5 "However, the collision avoidance manoeuvre shall not lead the vehicle to collide with another road user."

➔ **Agreed as reworded based on the suggestions.**

2.5.6.

- JPN pointed out the figure is confusing as it only covers the front range. EC agreed with the concern and raised the need for adding surrounding detection.
- Industry suggested changing 'operating range' to 'distance defined by the operation speed.'
- Chair (DE) asked what should be covered under this paragraph (sensing areas which should be covered by the system?). EC stated it is detection capability, to enable detecting the object required under the regulation.
- Chair (DE) suggested rewording the first para to describe the general requirement and insert few paragraphs for the detection for the front, side and rear (in case of equipping lane change function for MRM/EM). UK referred to the definition and pointed out that minimum range is 46 m but on top of that the detection range shall count in the deterioration and environmental condition. SW suggested deleting the first paragraph as minimum range is defined based on the condition. DE asked if detection range and operation range both are needed. Chair (DE) explained his understanding that when the minimum range cannot be satisfied the system will detect the condition and initiate TD. Industry explained that the system is designed to fulfil the required detection range through lifetime test, etc. so there is no need to set the buffer. Industry added that this matter can be dealt with by testing section which provide the necessary requirement to meet, and what important is that detection range of 46m is not affected by aging, etc.
- Chair (DE) suggested not changing the current text as starting new discussion can trigger 'never-ending' discussions.

[Lunch Break]

2.5.6.1:

- CND suggested taking everything after 'annex [x]' to the test section.
- CLEPA: we don't need an extra buffer for ageing and environmental conditions because it is already ensured when the sensor is supplied to the OEM that this parts performance is ensured over the lifetime of the vehicle. If it is raining and the radar detection system is detecting the something in 50m it can still operate.
- EU Comm: are industry planning on some systems not operating up to 60km/h? Is that why there is a proposal to delete the 46m?

EC proposal

- UK pointed out that detection range and degradation factor shall be taken into account.

- Industry questions on ‘detect, recognize and respond,’ what is meant by ‘detection range’ and the intention of the latter paragraph. EC replied (it needs to be further discussed, but) those other cases (overall scenarios happen during AD mode) shall also be covered.
- Chair (DE) pointed out that fundamentally we need to agree on if detection range also should cover deterioration and environmental condition. Chair (DE) suggested to have a fixed value for front, side and to the rear, as a system minimum capability for the speed up to 60 km/h, and reword the document accordingly in small group.
- EC asked if [46] is minimum value or nominal value. Chair (DE) commented that it should be minimum, and if it is not met, the system shall initiate TD.
- Industry explained 2.5.6.2 and 2.5.6.3. are not relevant as manufactures (CLEPA) will provide the sensors with some margin, and the sensors are provided to satisfy their performance for the lifetime, hence ‘strategies’ requirement is not applicable; As for 2.5.6.3, taking enough margin can be the solution as well. Chair (DE) pointed out that environmental condition (snow, etc.) must be considered separately.
- UK questioned the need for ‘technical’ in 2.5.6.2. DE agreed that technical refers aging and agreed to delete in 2.5.6.2. and stay with age/wear description under 2.5.6.3. EC reiterated the differences, 2.5.6.2 explains the fallback strategies when [46] m cannot be met, and 2.5.6.3. is to specify that [46] m shall be guaranteed over the lifetime.

→ **Agreed as proposed? TBC**

2.5.7

- EC asked the purpose of this paragraph and suggested to delete completely. SW recalled that the [46] m value comes from this formula. UK recalled that it may be needed for future work, when regulating higher speed range. Chair (DE) suggested taking this section out, as we have the [46]m, and to eliminate the discussion. UK suggested not to take out the formula until we complete the drafting work. SW agreed with UK.
- Sweden: suggest when the environmental conditions are reducing the sensing distance (ie: to 30m) this formula provides confirmation what speed the vehicle should be reduced to. Rather than just referring to 46m

→ **Delete this section. Keep the /formula for reference**

2.5.8

- To be discussed later where to place reference to CEL
- EC asked the intention of the second paragraph. DE explained that the same requirement exists in AEBS.

EC Proposal (5.3.x)

- EC explained their proposal on the design strategies to be used by the manufacturer (5.3.x), not rely on one sensor to make system decision.

→ **EC proposal was adopted**.

2.6

- CND suggested changing the wording ‘that’ to ‘if’
- UK suggested changing ‘driver seat’ to ‘driving position according to 2.6.1,’ and ‘available to take over the driving task according to 2.6.2.’

NL Proposal ACSF-24-09

- NL introduced their proposal. Industry pointed out that 10 seconds is the time driver needs to respond, and extensive criteria deeming driver is available is going to be necessary. Chair (DE) suggested that general requirement of avoiding misuse can cover the aspect. NL commented that ‘driver not in the driver seat’ is an extreme case and should not be regulated. UK suggested if the driver comes back within 10 seconds it should not be considered misuse. EC asked if detecting seating position is difficult. Industry replied that it

may lead to prohibiting any seating adjustment so need to be careful with the wording. EC: if you can detect eye blink rate is this a problem to detect this?

- OICA: You would have to prohibit any seating adjustment because otherwise what is acceptable to take back control within 10s? It is a problem to detect how far away the feet are from the pedals. You can do it in different ways:
  1) Measure the seating position on activation of the system. Ensure only limited adjustment from this.
  2) Monitor the driver and seating position via a camera.
- Industry pointed out that 'the driver goes to the other driving position' can be handled by owner's manual as it specifies the things drivers should not do, so not remaining in the position can be considered misuse. CND stated OM instruction is not enough since the driver will go against it. DE reminded that driver fallback is the basic concept of the system.

2.6.2

- UK suggested including 'driver position in the seat' in 2.6.2. CLEPA commented that 'driver in the driving position' is driver behaviour so falls under traffic law. OICA: we are talking about intended misuse here, there will always be a solution to misuse the system. Chair (DE) reminded the misuse case in the US and insisted that it is still necessary to insert driver position requirement. Industry asked how to define the 'correct driving position' (there is not technology to detect e.g. 'driver's foot on the dashboard'). Chair (DE) pointed out that the driver was in manual control i.e. in the 'correct' position before switching on the system.

[After coffee break]

- UK suggested the revised wording. Industry suggested the manufacturer demonstration requirements can be consolidated into one section.
- The technical service will need to see what measures are in place by the OEM to check that they are available to take over the driving task.

2.6.2.2

- Industry pointed out the outcome of the web meeting is reflected in co-chair (J) document.
- DE confirmed that DE is ok to delete the detailed criteria but raised concern on the difficulty of TS assessment. Industry explained the background of introducing the intervals and explained the difficulty of justifying the values.
- EC in principle agreed on the concept of dealing with this matter in CEL
- Industry requested to confirm that availability criteria is to determine that the driver is not sleeping. EC replied that it also includes the driver is in a 'good state'. Industry (CLEPA) pointed out currently no system can determine if the driver is daydreaming or not.
- DE pointed out that in addition to requiring two criteria, it may be necessary to add demonstration of the combination of the criteria and strategies.
- EC pointed out that 'driver is available to take over the driving task' is the same as driver attentiveness description. Industry agreed to make it simple and state in 2.6.2. 'ready to respond to a TD.'
- UK requested to confirm the meaning of 'rolling interval.' Industry replied that two criteria need to be observed within 60 seconds, and the assessment completes within 60 seconds and repeats every 60 seconds. Industry pointed out judgement timing depends on the criteria, and if it is positive confirmation or negative confirmation. If two criteria cannot be confirmed within 60 seconds, the system issues warning.
- JPN explained that JPN does not have strong intention to establish interval but according to the earlier study result eye closure occurs every 20 seconds so 20 seconds could be an alternative proposal.
- UK expressed its position against the 'rolling interval of [60] s' requirement. Chair(J) requested to confirm the group's agreement on the basic principle that under certain interval

two criteria needs to be met, and the rational of the criteria needs to be explained to TS. DE volunteered to come up with the better wording.
- UK asked what happens if the system cannot assess driver availability anymore. Industry explained their proposal (the system will issue TD).

FR Proposal from ACSF-23-09
- FR introduced their proposal on non-driving activities that are only allowed when the system is activated.
- JPN asked FR interpretation on 'non-driving activities' and asked if those not provided by the vehicle, e.g. using cell phone are excluded. UK pointed out about ongoing discussion in WP1 and suggested taking the WP1 outcome into consideration.
- EC introduced the similar proposal and explained the focus is how to design to forbid the use of non-driving devices when the system is not in use.
- Chair(J) suggested to put this point in note or square brackets and see the outcome of WP1.
- NL pointed out the wording should be changed to 'infotainment', etc. Industry pointed out the need to clarify the activities as 'only become available when ALKS is in operation.'
- Industry tried to make it clear that the vehicle has control of the other activities because the wording states that 'provided by the vehicle'

➔ **Keep the FR proposal in square bracket, with the note to refer to WP1**

2.7.2.1&2.7.2.2(planned/unplanned event)
- UK: why are 2.7.2.1 and 2.7.2.2. deleted?
- Co-chair: also would propose to keep the 2 paragraphs but maybe change the 15seconds to 10 seconds.
- Chair(J) explained that the co-chair proposal was to keep the paragraphs and align the time to 10 seconds.
- DE explained that the reason to delete was there was no need to differentiate planned and unplanned. EC pointed out that the sections are about when the TD should start, within 10 seconds, or immediately. Industry also pointed out the differences as duration and when to give the TD.
- CND suggested changing the word 'timing' to 'initiation.'
- Chair(J) acknowledged that 2.7.2. 'sufficient' can be confusing with 2.7.4.1.
- UK pointed out 'sufficient time' applies to planned even, so 15 seconds could be better, We don't want vehicles stopping at the point of motorway exit. DE pointed out what is sufficient is unclear. EC asked the fundamental questions if TD timing should be differentiated and suggested it could be the same. UK recalled it is not the length but the timing.
- OICA: in the case of a closed lane the MRM should be completed before the lane ends – this was the intention. But maybe it needs to be reworded.
- **Keep the original 2.7.1 & 2.7.2, and Industry to consider better wording.**

TD in the event of a failure
- In the case of any failure…
- OICA: this should really be about failures that impair the performance of the system
- SW: I think this already states this.
- OICA: want to be clearer about this

➔ **OICA to provide some wording**

2.7.3.
- EC commented that it is to 'continue to operate in automated driving mode including EM,' and maximizing drivability is relevant in this section.

- Chair(J) explained the fundamental philosophy is stopping the vehicle in the lane on motorway is not always the best option (it is better to continue moving), so it is specified as 'may'. NL pointed out that the system should continue at least for 10 seconds to fulfil MRM. Industry raised the point on the relevant section 2.7.2.1, suggesting the section applies to failure impairs the operation of the system.

2.7.3.2 To be discussed under HMI

2.7.4.

2.7.4.1

- Chair(J) explained that based on the earlier discussion 'manual' and 'automatic' description is not necessary so to be reworded accordingly.
- UK suggested deleting 'earliest, there is no limit to the duration of the transition demand.' Chair(J) explained that the system shall continue during the phase coping with the situation. CND agreed with UK, pointing out the situation can be abused. Industry clarified that most of the driver will resume control after TD, so it will be a rare situation to experience, and it the system is capable of continuing operation, it shall continue for vehicle safety.
- CND agree with the concept, but suggested to set upper limit, pointing out the situation of the medical emergency was given. It is not good if the driver in incapable of taking over control but the vehicle keep on driving. EC agreed that too much time should not be provided to the driver to avoid over-relying on the system. Industry commented, it is situation dependant. Although there are others (like a tunnel) where it may be better to continue. Upper limit is not necessary as manufacturer will not make such design that TD continues longer than it should considering safety aspects. CND insisted on having upper limit. NL pointed out that TD also comes with escalation. After 4 seconds an escalation is required. Therefore it is uncomfortable for the driver and so do not think an upper limit is necessary.
- Co-chair: fundamental principle is that during the TD safe operation is ensured.

2.7.4.1.1.

- NL recalled the discussion on the definition of 'severe,' questioning the situation with power supply failure, NL questioned the term 'aim.' Industry explained there are types of vehicle failure (e.g. tyre explosion) that simply can be dealt with by 'making the best effort', and this does not apply to 'severe ALKS failure.'
- Industry: Tyre burst may be a difficult situation to maintain.
- Industry suggest this paragraph may be best in the general requirements rather than in this section.

[Day 3]

2.8

2.8.1

- Industry remarked linked to the failure:
  'any failure affecting the operation of the system' rather than 'any failure' – also linked to para 2.7
- DE explained that principle was already agreed, different structure is fine with DE. Chair(J) confirmed that other than structure the contents of the co-chair proposal are the same.
- Industry suggested rewording to 'any failure affecting the operation of the system' in line with the discussion took place yesterday.
- UK pointed out haptic warning is part of the TD, considered very effective to get the driver's reaction. NL recalled the web meeting outcome that considering the cases with surrounding noises or older driver, acoustic is not as effective as haptic.

- UK asked the evidence of 20 km/h. Chair(J) suggested to first confirm the principle is agreeable. Industry mentioned that speed can be flexible. TD cannot bring the vehicle to standstill, with an exception of haptic warning.
- The group confirmed the basic principle as that acoustic and/or haptic optical is mandatory, and then the manufacture can choose either to use acoustic and haptic, or haptic. After 4 seconds escalated haptic warning should be provided. UK suggested to clarify that haptic means brake jerk, but Industry preferred to keep the current text to keep design flexibility.
- Industry suggested for clarity adding 'from this point in time' for warning escalation by haptic warning. Chair(J) suggested Industry to prepare better wording and/or some justification.
- Korea asked 'escalation' can be any warning. Industry commented that optic and acoustic warnings are 'escalated' by adding haptic warning, not by every warning being escalated. DE pointed out after 4 seconds escalation continues until the driver takes control back. Industry commented that DE approach is not feasible considering another signal required for MRM; adding third channel should be considered escalation, or escalation in one channel.
- SW suggested to separate section for 'initiation' and 'escalation' and consider better wording.
- DE/UK expressed concerns that the focus is to get the driver's focus back, so adding another warning is not sufficient, maybe need more standardized (no different interpretation) approach.
- UK suggested using brake jerk should be most effective. Chair(J) commented that requiring only brake jerk is quite restrictive and require justification (study result) confirming the it is most effective and others are not effective enough. Industry also mentioned the need for design flexibility, protecting intellectual property as well. JPN commented mandating haptic seem quite strict, and since the key issue is escalation the method should be determined by manufactures. UK agreed escalation is the key but also pointed out that it is important to be effective. Chair(J) Confirmed that haptic is mandatory after escalation. Industry expressed the general agreement but expressed concern on the current text leaving rooms for different interpretation.
- Industry: when the vehicle is at standstill the haptic warning is an issue (because of the example of braking application).
- NL: In the second bullet point request not to delete the text in Red. This is agreed.
- OICA: Therefore haptic warning at standstill is not the only issue. During the transition phase you are not allowed to bring the vehicle to a stationary point. Therefore haptic braking could bring the vehicle to a standstill leading and this would not be in compliance with the regulation.

Discussion around bullet point 2

- Optical + (acoustic or haptic)
- Then after 4 seconds contain a haptic warning

➔ Possible text (not shared in the meeting); OICA working on some text
Transition demand by at least an optical and in addition an acoustic warning. The optical and acoustic warning shall be escalated latest after 4 seconds of the initiation of the transition demand. This can be done by increasing the frequency or volume of the signals. In addition after 4 seconds the warning shall be supplemented by a haptic warning when the vehicle is moving faster than [20km/h].

➔ **Concept was agreed; Industry to prepare better wording.**

2.8.2

2.8.2.1 UK suggested using the word 'optically'

2.8.2.2

- DE explained the DE proposal. Chair suggested changing ‘declare’ to ‘demonstrate.’ SW pointed out the cost comes from standardization. NL support standardization and suggested deleting ‘and equally’ in the last paragraph. Industry commented that standardization work is ongoing outside of the IWG so when the work is complete the IWG should incorporate the outcome of the standardization activity. Industry also pointed out that exclusive display could be confusing to the other system (Level2), and also questioned if ‘[40] % of the outer rim’ restriction is necessary. DE explained having something unique/dedicated for automated system is important aspect, and as for [40] %, it was proposed by the experts from their study result.
- UK questioned if the ‘exclusive’ signal can also be used for TD, also asked how to quantify ‘adequate size,’ suggesting it could be changed to ‘easily perceptible’
- Industry raised concern around ‘dedicated colour’, since it may require amending UN-R 48 to prohibit using certain colour. Industry also asked the background of the [40] %, commenting that technical restriction is not desirable.
- Chair(J) suggested to move the ‘dedicated optical requirement’ to 2.8.1 general requirement, so it can be used also for TD, etc., and remove the value [40] %
- [After coffee break]
- Chair(J) prepared a consolidate version, using ‘standardized symbol,’ considering the ongoing ISO activities. EC suggested adding ‘Internationally standardized symbols.’ FR suggested putting references to UN-R 121. JPN commented that UN-R 121 refers to ISO 2575, so it will refer back to A or AUTO. EC suggested to go back to co-chair text, or cross reference to ISO work, as currently what to use is not clear. Chair(J) incorporated all the comments into the paragraph as ‘A or AUTO or standardized symbol’
- Industry suggested placing the ‘dedicated signal’ requirement under system status section.
- UK: dedicated colour is only given in the example, so it cannot be mandated.
- UK: it is just written as the system status display – could this be used during a transition demand? As it is currently written it cannot be done.
- DE agreed, this is status symbol only.
- OICA: the dedicated symbol is only for the system status section. The transition demand (ie: hands on the steering wheel) will not be dedicated. So we need to think about the structure of this.

→ **Agreed in principle, to be reworded/restructured in the appropriate section**

2.8.2.3

- EC suggested changing ‘active mode’ to ‘automated driving mode.’ DE explained the ‘active mode’ comes from the other section. Industry suggested, to avoid confusion, to take out ‘acoustic signal.’ UK suggested ‘either manually (according to …).’
- EC commented that the focus is only on system status information to the driver but need to consider system status information to the road users as well. Industry commented that opening this discussion will make it unable to finish the drafting work so the IWG should wait till the clear mandate. Chair (J) pointed out there was a discussion on this matter under WP29 as well but the conclusion is still unclear, and it does not seem reasonable to start new discussion now. EC agreed, and suggested to keep a place holder on the draft. AU also mentioned it may be necessary to consider passengers, not only driver. Chair(J) commented this issue should be first discussed at WP29 or GRVA level and suggested to take notes of this matter and bring up to GRVA/WP29. Korea/Industry introduced GRE activities trying to address this issue and mentioned this shall be in future addressed/decided by GRVA.

→ **The basis of this text is merged with the German proposal. OICA to redraft**

2.8.3.

- Remove the signal requirement as it is specified in the other section
- Acoustic warning at the end of automated mode (either manually pressed or after a TD)

- Industry: questioned the need for the acoustic warning, too many acoustic warnings could lead to confusion.
- UK: after manual deactivation of the ALKS system then support an acoustic warning that indicates the end of automated mode. However, can agree that at the end of a TD an additional acoustic warning is not needed.

➔ **Conclusion: the principle of the UK is agreed. The following text is added: An acoustic warning signal shall be provided unless the system is deactivated following a transition demand which contained an acoustic signal.**

Indicating the ALKS status to other road users

- EC raised the question about indicating the system status to other road users?
- OICA: this point is being raised very late and is a big topic. This is low speed ALKS and therefore is limited in its capability.
- Korea pointed out that WP29 is already thinking about these subjects.
- Chair (J) suggest raising this as a topic for GRVA (is a signal needed). Then GRE will need to implement an appropriate signal.

2.8.3.1. (DE proposal)

- DE explained the concept, that optical signal shall be escalated, and some examples are provided. Chair(J) questioned if optical signal is escalated there is no incentive to add other channel.
- Industry expressed concerns of examples of 'adequate means,' as they still may be considered as specification. DE explained there shall be still rework with other section necessary but need to ensure intuitive TD. Industry commented it seems more like a design guideline, and also is duplicate of the specification on TD.
- SW commented again that 2.8.2.2. should be separated into 'initiation' and 'escalation'. Industry suggested to delete the section and use the co-chair proposal.
- Chair(J) confirmed that DE intention of proposal as that during TD optical signal shall be escalated. UK asked if there are optical signals for system status and TD. DE replied that active status shall be indicated as general condition, and TD shall be additionally shown.
- Industry summarized the requirement:
  - There should be a 'tell-tale' and 'something more', and require change in characteristics in optical indication
  - TD escalation must be provided with haptic warning as well
  - TD shall escalate (after 4 s) until driver takes back the control
  - Reference in UN-R 121, standardized symbols as proposed until new standard prepared

➔ **Rework on the text based on the principles agreed**

2.8.4

- UK suggested to delete the reference to 'acoustic and optical'
- In addition add 'to the satisfaction of the technical service'.
- Chair suggested changing 'declared' to 'demonstrated'

➔ **agreed**

2.9

- SW questioned the [4] m/s2. Industry and others suggested not to start new discussion and reminded that it is a rare case. NL pointed out MRM is not EM and have concerns about high deceleration leading into a collision and said, I think 3m/s² is used in regulation 79
- EC introduced the EC proposal ('without prejudice to emergency manoeuvre'). Industry suggested using 6 m/s2 as to be in line with the emergency brake signal requirement. NL suggested using 3.7 in line with category C.
- SW: is 4.4m/s2 allowed?

- Industry reminded the MRM situation, where it comes after TD, it should not be decided based on the vehicle behind. The vehicle will be in mixed traffic with trucks etc, therefore it should be what deceleration is appropriate for the ALKS vehicle.
- The general concept was confirmed as
  - The concept is 'no harsh braking'
  - To activate the hazard warning at the start of the MRM
- UK suggested rewording to 'hazard warning signal shall be generated'
- SW suggested 4.0, instead of 4. Industry commented specification is included under ISO 15622 and no need to complicate. NL suggested 3.7 for compromise.
- EC suggested to add continue operation of the system during MRM. Industry commented the current text covers the concept.
- UK pointed out the MRM definition of DE document is changed. DE explained the proposal was not to change the principle. Chair(J)/EC expressed preference on the original wording. 2.9.2
- EC suggested adding 'deactivated by the driver' for clarity.
- UK: The original definition of an MRM was clearer.
- GER: not sure why this is removed, need to check. Fine to keep the definition as it was.
- EC agreed, and suggested to reinstate the definition.

➔ **Conclusion: reinstate the original definition to clarify the purpose of an MRM. What was the conclusion to 4m/s2? No conclusion reached during the meeting.**

Lateral support during an MRM

- EC: need to be careful that we do not forget that keeping the vehicle in the lane is required.
- Industry: Para 2.9.1. confirms that the vehicle lateral support must be continued during a MRM unless the lane markings have disappeared in which case the vehicle must remain on an appropriate trajectory.

2.9.3

- EC commented the section seems unclear and may complicate the discussion. Industry suggested to keep using the hazard warning. Chair (J) reminded that it is necessary however to stay with the GRVA guidance.
- Industry commented that rear sensors are definitely required, as in Category C. Chair(J) pointed out that this involves detection of vehicles in front in the target lane so makes it much more complicated.
- SW commented this lane change should be recorded in DSSAD. Industry agreed but also commented that what to be recorded to be decided by DSSAD IWG.
- JPN recalled the GRVA discussion that it was agreed that lane change should be included, but discussions shall not delay the ACSF work, so detail shall be discussed later. EC suggested to keep the text in square brackets and report to GRVA.
- 'Declare' to be changed to 'demonstrated'

2.9.6.

- Industry suggested removing the entire paragraph 2.9.6. because the driver will lose trust in the system that it is unavailable. DE proposed to keep the paragraph. Industry expressed concern how to indicate the driver that even all the conditions are met still the system does not work, and how to make the driver understand the situation, and questioned if there is any benefit in this 'educational measure.'
- UK would support deletion of the paragraph.

➔ **Delete 2.9.6.**

2.10.2

- DE explained the DE proposal was prepared to be in consisted with 2.9.3. 2.10.2 is permitting a lane change in case of an EM

- Industry generally supported but proposed a few changes for clarification, adding the cases where failures are affecting the braking or steering system. (to carry out the manoeuvre with the remaining performance).
- NL questions why it is necessary to directly address braking failure since it is specified in separate Regulation. Industry explained that even though there is a requirement what shall be the remaining performance, what is available for ALKS may be different.
- Industry suggested keeping 'failure' in square brackets and consider later if we need to address 'severe' failure.
- CND suggested to reword 'with consideration for the remaining performance'
- UK suggest in 2.10.2: 'when appropriate' rather than 'whichever is most appropriate' in the first paragraph.

➔ **Add in 2.10.2 If failures are affecting the braking or steering performance of the system the manoeuvre shall be carried out with the remaining performance.**

- SW: question the new text above and if we need to be more specific about what failures we are talking about.
- CND: question that in the event of a failure it may be more appropriate for the system to choose the alternative manoeuvre, ie: failure in the steering it may be more effective to apply max braking performance. In addition in the 4th paragraph think we need to be more specific that if the vehicle returns to its original lane of travel then the appropriate checks should be made.

2.10.3

- Industry questioned if it is necessary to give TD after the risk disappears and suggested continuing the system operation.
- CND/EC commented there may be cases of EM ends with collisions, and what happens in those situations. CND suggested the situation should be explained as well. Industry explained that the necessary explanation is already provided, and the expected situation depends on the type of accident.
- EC asked if EM always leads to vehicle standstill. Industry replied when the risk disappears the system continues its operation. EC/UK suggested to change the wording to 'if' with some other modification.
- Chair(J) and JPN commented that since EM is quite rare situation it seems to make more sense to initiate TD.
- UK commented if the system can keep operating initiating TD is not appropriate.
- DE asked what is called emergency. UK agreed with the viewpoint and commented that EM situation shall be minimized. EC supported the UK position.
- Industry suggested adding general statement in line with the EC proposal in general provision. EC added in case collision caused by the other vehicle, the vehicle shall be brought to stop.
- EC suggested adding 'deactivation' of the system

➔ **Conclusion: The old text has been deleted. The text now says 'and continues to operate'. The understanding is that the vehicle may issue a TD (because this is still an operation of the system).**

2.10.3.2

- EC: what happens when the Ego vehicle is crashed into?
- OICA what happens depends on the impact. This is open at the moment. Ie: a bump might just issue a TD, damage to the system may result in a EM.
- EC: in the event the ego vehicle is crashed into the ego vehicle is supposed to stop – this is the national law.
- OICA: the collision needs to be detected by the vehicle. If you just say any collision it will not be possible to respond.
- UK suggested modifying the wording

➔ **Redrafted in the meeting. Either the vehicle stops and puts the hazards on or it continues to operate**

[Conclusion]
Chair(J) summarized the current situation. The draft to be revised based on the outcome of the discussion. DE agreed to prepare a revised draft; JPN/DE/UK to refine the document and distribute to the IWG.
Industry suggested organizing a web meeting before the Christmas break as there are still several items the IWG did not have time to review.

5. Discussion on testing requirements for ALKS

Documents: ACSF-24-12 (FR) ALKS Testing requirements
ACSF-24-13 (Germany) - ALKS Testing

FR prepared the preliminary input, DE input on principles of the test requirement. FR is willing to prepare draft test requirements with the coordination with interested members, possibly with some meetings (web or face-to-face) in Dec.

6. Other business

-.-

7. Schedule for further meeting

25th meeting of the IWG on ACSF will take place:

CP Meeting; Tuesday 21st January 2020 09:30, ending 12:30
Meeting: Tuesday 21st January 2020 13:30 – Friday 17:00