

**Draft report of the 13<sup>th</sup> Session  
GRSG informal group on  
awareness of Vulnerable Road Users proximity  
in low speed manoeuvres (VRU-Proxi)**

Dates: 4 - 6 February 2020  
Venue: Osaka International Convention Center, Room 702  
5-3-51, Nakanoshima Kita-ku  
Osaka, Japan 530-0005

Contact: Ms. Minoura (Japan Automobile Standards Internationalization Center)

Chairs: Mr. Matsui (J) and Mr. Broertjes (EC)  
Secretary: Mr. Broeders (OICA), email: [johan.broeders@daftrucks.com](mailto:johan.broeders@daftrucks.com)

## **1. Start of the meeting and introduction**

Mr. Tokai, Director for the Coordination of Motor Vehicle Safety Engineering Policy Division Meeting from the Road Transport Bureau (MLIT) started the meeting with a kind and nice welcome and thanked the participants for travelling to Japan. He also thanked for the opportunity to host the meeting and expressed his hope to move forward on the different topics scheduled for this meeting aiming for new or better safety regulations and enhanced vehicle safety.

The group was also welcomed by the Chairs with a special welcome to the Korea delegation. The Chair mentioned that important decisions and agreements have to be made in this meeting because of the 2026 date for Direct Vision for heavy vehicles. Furthermore the Chair informed the group on the activities that have been done after the previous meeting in November 2019 in Brussels:

- Reversing Motion: IWG submitted a Working Document to 118<sup>th</sup> GRSG with still some room for small adaptations;
- Moving-Off Information System: IWG submitted a Working Document to 118<sup>th</sup> GRSG, possibly more discussion and agreements are needed in this IWG meeting;
- Blind Spot Information System: EC submitted a Working Document to 118<sup>th</sup> GRSG as supplement 2 to ECE R151.

## **2. Adoption of the agenda**

Document: VRU-Proxi-13-01-Rev1 (Chair)

The proposed agenda and running order were presented by the Chairs and adopted by the group.

### 3. Adoption of the report of the 12<sup>th</sup> VRU-Proxi session (Brussels, Belgium)

Document: VRU-Proxi-12-18 (Chair)

The Secretary mentioned that there were no comments to the draft report of the 12<sup>th</sup> VRU-Proxi meeting, the report was adopted by the group.

### 4. State of play of close-proximity vision and detection rulemaking in the contracting parties

Not discussed as separate subject in this meeting.

### 5. Reversing motion

Documents: VRU-Proxi-13-02 (Japan)  
VRU-Proxi-13-03 (OICA)  
VRU-Proxi-13-10 (OICA)

J presented the content of the Working Document ECE/TRANS/WP.29/GRSG/2020/4 and the open topics.

#### Distance for direct view by looking back (paragraph 15.2.1.6):

- OICA proposed max. 2000 mm distance (between eye point to rear-end of vehicle) to allow direct view or direct view in combination with close-proximity rear-view mirror installed at the rear end of the vehicle.
- Opinion of Contracting Parties:
  - EC recalled the position of FR arguing that permitting direct view shall depend on the number of seating rows. With 1 seating row it seems OK, with more seating rows probably not acceptable (in current proposal: head restraints must be in highest position).
  - UK stated that a decision cannot be made on the presented overview from OICA as it seems not to be comprehensive (only few cars from EU manufacturers).
  - K raised also the concern that a passenger on the back seat could block the rear ward view. Head rest shall be placed in the highest position, however a head rest is not mandatory. UK remarked that if head rests are not mandatory then manufacturers might remove them.
  - NL understands position of J but supports the concerns from UK and K.
  - LDS prepared during the meeting a visibility simulation which showed that, in a typical passenger car, cones are not visible with passengers on the back seats or in case of head rests looking from the eye point of the driver to the rear of the vehicle (by turning the head).
- **Conclusion:** direct view allowed if the vehicle has one seating row (no back seats) and the distance between eye point and rear-end of vehicle does not exceed 2000 mm.

#### Information signal (paragraph 17.2.1):

- K raised the issue that only optical and haptic can be selected (so no audible). Chair asked the CPs if this would be acceptable:

- NL stated that an optical information signal shall be located in the expected viewing direction. The Chair mentioned that this should be within the freedom for the manufacturer as there is always a second warning. This was accepted by the group.
- K asked if it is possible to have always audible and additionally one other type of signal. OICA stated that for buses this might be annoying for the passengers and a bus driver could possibly not hear an audible signal in case of significant background noise from the passengers compartment. Current proposal is also in line with BSIS and AEB.
- K asked why 2 signals were required and not only 1 as this may require design changes of current cars. The Chair stated that this was discussed and decided in an earlier session. Moreover, this regulation is not considering a parking aid but a VRU safety system. Also a concern was raised that haptic could maybe not be noticed by the driver. The Chair responded that this shall be left to the manufacturers as this is in line with other regulations. UK noted that progress has to be made and proposed to start with current specification of 2 out of 3 signals. If it appears not to be sufficient then the requirement can be more stringent in future (by amendments). Also, people with hearing impairment can select a car that has a silent option.
- Opinions of other stakeholders:
  - J: audible shall not be mandatory;
  - ETSC: audible shall be mandatory;
  - DK: same as J and UK.
- **Conclusion:** as there is not enough evidence that audible is required, it was decided to leave it to choice of manufacturer. It can be adapted later if needed, based on new evidence.

#### Response time for VRU detection (paragraph 17.3.1)

- OICA proposed a response time of max 0.6 sec for detection systems. K asked how to measure this time. The Chair responded that this is open as only the requirement is specified (not the test itself).
- NL raised the concern that 0.6 sec is now linked to just one of information signals and this could be the information signal only. Especially for audible and haptic it is important that the response time not exceeds 0.6 sec.
- **Conclusion:** it was agreed to change it into: “At least one of the *audible or haptic* information signals meeting...”

#### Test procedure (Annex 9, paragraph 2.2 & Annex 10, paragraph 2.2)

- OICA proposed to change “selecting the reverse gear” into “reverse gear is engaged” at the definition of the backing event.
- **Conclusion:** it was agreed to change into “starting time of backing event shall be started at the choice of the manufacturer in accordance with the manufacturer’s specification and no later than when the reverse mode or reverse gear is engaged” .

#### ISO reference (Paragraph 17.2)

- The reference to be corrected ISO 15006:2011 (instead of 2010). The ISO standard needs to be available for GRSG through the Secretariat of UN. The IWG Secretary will send this request to the UN Secretariat.

#### Alternative (simplified) test method (Annex 10, paragraph 1.4)

- J presented a proposal to specify the number of poles depending on the vehicle width (below or above 2m) in case of a detection system. Initially the Chair proposed to reduce the width of vehicle that determines the pattern of poles and sensor set-up.
- **Conclusion:** after discussion it was agreed to specify only the 10 poles test and remove the 6 poles test to avoid the width discussion.

General comments and conclusions:

- H-Point shall be changed into R-Point (UN naming, H-point is from FMVSS).
- OICA issues as described in VRU-Proxi-13-10:
  - o Issue on moveable test object was understood and it was agreed that it shall be allowed to turn the pole with the patch of 0.15 x 0.15 m towards the camera.
  - o Issue on visibility of 2<sup>nd</sup> row of poles in case a camera is mounted at the rear of the cab on a tractor vehicle was discussed. The group is open to discuss but more evidence is needed and possible options (and configurations) to be worked out in more detail by OICA. It was agreed to continue with current requirements and change it at a later stage by amendments if appropriate.

## 6. Direct Vision

Documents: VRU-Proxi-13-04 (LDS-TFL)  
VRU-Proxi-13-05 (T&E)  
VRU-Proxi-13-07 (OICA-ACEA)  
VRU-Proxi-13-08 (OICA-ACEA)  
VRU-Proxi-13-11 (LDS)

The direct vision discussion was basically focused on the two main subjects:

- 1) Direct vision requirements for different vehicle categories
- 2) Evaluation and (physical) certification method.

Below the outcome of the discussion of the different views and positions of the stakeholders on the abovementioned subjects are given.

### **Loughborough Design School (LDS)**

LDS presented their common position with Transport for London (TfL) on potential application of the TfL Direct Vision Standard in UNECE regulation.

#### 1) Direct vision requirements (VRU-Proxi-13-11)

- The following information was provided to the IWG. In a pre-meeting at ACEA in Brussels on 16/1/2020 with OICA, LDS and EC the required height and visibility of the VRU was discussed. LDS proposed to consider the visible area of the VRU head only instead of head and shoulders. OICA argued that drivers will not only identify VRUs by seeing the head but also if other parts of the VRU body are clearly visible. Furthermore, in real traffic situations the VRU's and the driver's head are continuously moving which make it more obvious that the driver will notice the VRU. LDS responded that there could still be cases where, depending on the background situation, a VRU is not clearly visible. OICA did not agree as these are very rare situations. However, due to lack of studies on the required visibility of other body parts for identification of a VRU, the visibility of the full head was chosen by LDS as way forward.

- The effect of seeing the head only instead of the head and shoulders was calculated by LDS based on a significant number of vehicles. The volumetric score for the new vehicle defined by head only visibility of the VRU is appr. 8 m<sup>3</sup> which is appr. 2 m<sup>3</sup> below the original 1star TfL DVS boundary (10 m<sup>3</sup>).
- EC expressed sympathy that for the EU CO<sub>2</sub> regulation, in order to meet the limits, still a big cooling system (radiator) appears to be needed that has to be located in front of the cab to achieve the required energy efficiency. OICA confirmed this and added that for alternative fuels and electrification in future still a large cooling system would be needed as well. The group shall be aware of this and it shall be avoided that the direct vision requirements are getting overdone given this context.

## 2) Certification method (VRU-Proxi-13-11)

- LDS presented an update of the physical VRU test where lines segments need to be drawn on the ground where the yellow part of the stick can be seen. A very good correlation (0.992) was achieved with increments of 10 cm between the lines. With an increment of 20 cm this correlation was maintained, the effect of an increment of 30 cm was not yet investigated. LDS will perform the physical test and check its applicability at the Millbrook proving ground in March 2020.
- OICA expressed the concern that even with a good correlation there are still outliers that could pass the volumetric assessment but fail for the physical test. LDS confirmed that this is a potential risk and a certain tolerance range shall be allowed in the final version.
- OICA asked whether the test can be simplified for the cases where it is obvious that the vehicle will pass (low positioned cabs). LDS responded that this could be possible by defining a reduced number of locations or lines where the yellow part of the stick has to be seen.

## **OICA/ACEA**

### 1) Direct vision requirements (VRU-Proxi-13-07)

- OICA/ACEA showed that the 1 star limit is based on an existing vehicle that has a better direct vision performance than just seeing the head and shoulders of the VRU on the defined 0.6 m (off-side), 2.0 m (front) and 4.5 m (near-side). A 1 star vehicle basically over-performs the requirement of closing the gap between direct and indirect vision. This was confirmed by LDS but responded that this reasoning would over-simplify the issue and would ignore that vehicles fail in certain viewing direction. This is the case because the assessment works with averaging of distances, meaning that one of the three sides can be exceptionally good and another side very poor at the same time. OICA stated that in theory a cab design that meets the direct vision requirement to all directions would not achieve 1 star.
- The question was raised if it would make sense to split the volume and to define the minimum requirements for the off-side, front and near-side of the vehicle separately. LDS stated to be not in favour of this due to added complexity and probably more details are needed to assess such an alternative approach. Various stakeholders and CPs indicated that this approach could however be appropriate.
- OICA/ACEA argued that lowering of cabs is physically limited (space needed for engine and cooling system, fit for purpose, etc.) and will affect safety in high way applications (less situational awareness, less driver fitness/alertness, less safe driver position). Low cabs with less living comfort/space will not be accepted by the drivers/customers and flat

floor cabs are demanded by the customers not by the manufacturers. OICA is considering to ask truck driver associations and transport operations interest groups to get involved into this discussion.

- The Chair asked the positions of the Contracting Parties:
  - EC suggested that direct vision to the front shall start at 2m as this is the area that can be seen in the front mirror (according R46). The main question however is what should be visibly on that distance.
  - UK responded that mirrors are not always adjusted correctly, in particular the Class V mirrors, although there seems to be lack of evidence on this. UK stated that is too early to take a position and that more information is needed.
  - DK is in favour of split up in 3 directions but needs to discuss internally.
  - OICA is not in favour of splitting up as this is another method than the TFL DVS and will not encourage the manufacturers to optimize the overall direct vision performance.
  - K preferred separate requirements for front and sides but K has no plans to adopt the direct vision regulation.
  - J mentioned that the star rating and the volumetric method is new for them and that more time is needed.
  - NL proposed to define incentives that would improve direct vision in all directions (front and sides).

## 2) Certification method (VRU-Proxi-13-08)

- OICA/ACEA presented an alternative certification method as subject for discussion which is based on measuring the vertical visibility at the outer lines of the ECE R46 mirror fields of view (aiming for closing the gap between direct and indirect vision).
- LDS confirmed that the approach is more or less identical to the LDS physical VRU test. In the OICA/ACEA method the visible vertical area of the assessment volume is measured and with the LDS method the visible horizontal area is mapped. Both methods cover basically the same visibility. However, LDS expressed the following concerns:
  - At the A-pillar areas the VRU is not visible, LDS stated that the visibility shall be measured from the top (e.g. 1.6m) downwards, so at the A-pillar the visibility will basically be zero.
  - When the vision lines hit the ground the method will not match with the volumetric method as in there will be no additional credits in this case (max. visibility at the vertical area has already been reached).
- LDS mentioned that instead of the laser also a camera can be used, LDS will check the camera feasibility while performing the test at Millbrook proving ground.

## **Transport & Environment (T&E)**

(Presented by the EC upon request by T&E due to absence at the meeting)

### 1) Direct vision requirements (VRU-Proxi-13-05)

- T&E proposed to differentiate between N3 and N3G (construction vehicles). According to the EC the vehicles can normally not be divided within a vehicle category as every truck can drive into a city or on the highway. However, the N3G is basically a classification within the N3 category of vehicles and this classification may be a feasible way to differentiate.
- T&E suggests to add the rating of vehicles according the DVS standard in the UN regulation. As the UN 1958 agreement is based on Type Approval of vehicles, a rating or

classification in performance levels is probably not possible. Within the EU framework this could be done. DK is in favour of a rating in the UN regulation. EC expressed that rating is not desired as this would over-expand the regulation and argued that differentiation will occur anyway as truck manufacturers are using same cabs for different applications but on different heights. Setting the limit based on the worst case vehicle will automatically improve the city vehicles with lower cab mountings.

- The Chair stated that transitional provisions (with increasing level of performance requirements) cannot be implemented in a new UN regulation. This is only possible in new series of amendments to a regulation.
- OICA comments:
  - Pictures in presentation do not all match with the descriptions.
  - It is not possible to differentiate between rigid and articulated vehicles as rigid will also be used for long haulage (large rigid vehicles towing a trailer) and both type of vehicles are fundamentally based on the same configurations (same cab, suspension, engine, chassis, etc.).
  - Flat floor cabs are demanded by the customers not by the manufacturers, OICA is considering to ask truck driver associations and transport operation interest groups to get involved into this discussion.
  - T&E proposals are much more demanding than London DVS where also active safety systems are permitted as an alternative in the time frame of 2024.
  - There are no justifications and cost-benefit analyses presented that would underpin the propositions of T&E.
  - No evidence given of the need for step-wise increasing direct vision levels. Truck cabs have much longer life cycles (10-15 years or more) and not all manufacturers are in the same phase of the cab life cycle. Furthermore the truck industry faces extremely high investments for the development of new cab designs and adaptation to the production lines. Therefore fast consecutive mandatory changes to the cab design cannot be justified by the relatively low annual production volumes in relation to the passenger car industry.

## 2) Certification method (VRU-Proxi-13-05)

- T&E advocated to use the Direct Vision Standard methodology and argued that CAD software is applicable for implementation in UN regulations.

## **Final discussions**

### Direct vision requirements:

- LDS approach is at outer line of DVS volume (outer lines of the mirror zones), EC agreed as this is in line with the GSR text eliminating the blind spot by improving direct vision. K indicated that internal consultation is needed. DK could not yet give a position.
- UK proposed the following VRU positions: 0.6 m (initially 0.5 m) at driver side (off-side), 1.7 m (initially 1.5m) in front of vehicle and 2.5 m at co-driver side (near side). The full head of the 5<sup>th</sup> %ile Italian female shall be visible on average at these distances.
- LDS calculated different options: VRUs positioned at 0.6 m at off-side and at a distance of 15%, 30% and 45% of the width of the mirror zones towards the vehicle at the front and near side.
- The UK option would be equivalent to 11.5 m<sup>3</sup> visible DVS volume. OICA raised the issue that this level is technically not feasible for all N3 vehicle applications and showed

that this level corresponds to a small city truck. This level will ban 34 out of 51 existing truck models (lowest and highest variants) and cannot be applied as legal limit for all N3 vehicles. OICA will provide more evidence for this in next meeting.

- The Chair questioned if CPs would want to perhaps consider the UK option only for new types and a lower ambition level for existing types. UK responded that this is not preferred as the effective date for new types in EU would be 2026 and the industry will wait with bringing new types into the market
- The Chair concluded the discussion by putting the following options on the table:
  1. Direct vision at a DVS level (volumetric) that corresponds with visibility of the head of a 5<sup>th</sup> %ile VRU on an average distance of 0.6 m at the off-side, 1.7 m to the front and 2.5 m to the near side (UK option).
  2. Same as option 1 with an increased distance to the near side (> 2.5 m) on the condition that the VRU is clearly visible in the Class V mirror with different adjustments. **OICA** to provide evidence up to what distance the VRU is clearly visible.
  3. Visibility requirements for each direction separately with an average VRU distance of 0.6 m at the off-side, 2 m in the front and 4.5 m at the near side. **LDS** to determine the required specific volumes that correspond to these average VRU distances.
- The Chair asked the Contracting Parties to prepare a position on the 15% distance inside the mirror FoV in the front and at the near side.

#### Certification method:

- It was decided to further elaborate the 2 options for physical certification tests (LDS and OICA/ACEA) for discussion in the next meeting.

## **7. Forward motion Vehicle driving straight or taking off from standstill**

Documents: VRU-Proxi-13-06 (OICA-CLEPA)  
VRU-Proxi-13-09 (MLIT)  
VRU-Proxi-13-12 (TRL)

J presented VRU-Proxi-13-09 with proposal to enhance vehicle safety for VRUs:

- Targets of Japanese government in 2020 are annual number of fatalities below 2500 and annual number of injuries below 0.5 million.
- Debate ongoing in J on VRU safety due to aging of people as there will be more elderly drivers.
- Fatalities and injuries mainly caused by vehicle categories M1 and N1.
- The documented speed in the accident statistics was based on driver declarations.
- Accidents were distributed over 5 impact zones for turning left accident scenarios, in this presentation only focus on the front impact side. LH turns have the largest number of fatalities in Japan, but the collision impact positions are at the front. Please note that the pictures in this presentation are mirrored to show the situation with LHD vehicles in RH traffic.
- Proposal (priority) to put M1 and N1 in scope of forward motion regulation for improving driver's vision and maybe to include turning to the driver side as well but depending on the availability of technology (this would require changes to the Terms of Reference of this IWG). According to J the max. speed to be covered by a detection system shall be 20 km/h. Further research needed on drafting, J will present more details in next meeting.
- TRL agrees with the findings as the situation in UK is quite similar.
- NL agreed to add the N1 to the scope of BSIS.

- K state that the situation in K concerning the LH turning accidents is same as in Japan.
- Chair asked CPs to look for accident data before next meeting.
- UK questioned where this regulation would fit, the Chair responded that this will probably be the MOIS and explained that the VRU-Proxi group may continue this work after April 2021 if needed. An amendment to the ToR can be proposed for the 119<sup>th</sup> GRSG session in September 2020 (also work to be done for separate technical units for BSIS)

TRL presented the status and consensus document regarding the Moving-off Information System (VRU-Proxi-13-12), below the comments and conclusions are given:

#### General comment:

A Working Document on MOIS has been submitted to GRSG at the beginning of January. The goal is to prepare an Informal Document for the 118<sup>th</sup> GRSG that needs to be ready for submission at end of February 2020. OICA and CLEPA have jointly prepared a document with comments to this Working Document.

#### Q1 Child Cyclist Testing

- MOIS shall detect child cyclists;
- Child cyclist test targets may be tested by the MOIS Regulation – based on Test Service selection of test cases;
- TRL shall check with BSI regarding publication date of the ISO 19206-4 standard – if it is before Nov 2020 then include, otherwise adopt BSIS approach (referencing 1/3rd adult dimensions from earlier revision) and add an annex with a “copy” of the ISO description of the child cyclist target.

#### Q2 Max forward Detection Boundary

- Chair proposes to stay consistent and prefers no difference between the different vehicle categories.
- Maximum forward detection distance shall be based on the direct vision of the vehicle;
- Maximum forward detection distance shall be based on proposed “maximum forward blind spot plane” approach;
- The maximum forward detection distance shall be no greater than 3.7m separation for both adults and children;
- The max. forward detection distance shall be no less than 1.25m for adults and 1.15m for children (1.0 m separation to both).

#### Q3 Min forward Detection Boundary

- The minimum forward detection boundary shall be based on a single value of 0.6m for the adult test target and 0.5m for the child test target (0.35m separation to both).
- If the Industry (CLEPA) can provide good clarification that the separation of 0.35 m needs to be increased this can be done by amending this regulation with justification in a later phase.

#### Q4 Offside LPI Boundary

- OICA questioned whether these offside crossing collisions hitting the vehicle to the front. If evidence is available (in-depth analysis) this situation can be re-considered
- TRL stated that accidentology shows that offside crossing collision should be considered.
- OICA proposed that the LPI at offside shall be based on the direct vision of the vehicle, only up to the side of the vehicle. The Chair disagreed as it will be too complicated to specify this within 3 weeks. TRL the measurement is also needed for the front area. OICA

expressed the concern that the information signal might be always on.

- **Conclusion:** the offside LPI shall be based on both the speed of the VRU and the direct vision of the vehicle:
  - LPI to be the nearer of the distances calculated from either the “max. offside plane” or VRU speed;
  - LPI to be no greater than that calculated from the max. speed of the VRU (5kph)/vehicle width (~1.4-1.5 m);
  - [LPI to be no nearer than that calculated based on the min. speed of the VRU (3kph)/vehicle width (~0.6-0.7 m)]

#### Q5 Nearside LPI Boundary

- **Conclusion:** the nearside LPI shall be based on both the speed of the VRU and the direct vision of the vehicle:
  - LPI to be the nearer of the distances calculated from either the “max. nearside plane” or VRU speed
  - LPI to be no greater than that calculated from the max. speed of the VRU (5kph)/vehicle width (~1.4-1.5 m)
  - [LPI to be no nearer than that calculated based on the min. speed of the VRU (3kph)/vehicle width (~0.6-0.7 m)]

#### Q6 Ocular reference point

- **Conclusion:** the ocular reference point shall be defined as the ORP from ECE R46.

#### Q7 Parking Brake Engagement

- **Conclusion:** the MOIS Regulation shall require proximity information signals when the vehicle is stationary and the vehicle master control switch is on.

#### Q8 HMI Harmonization/proximity information signal position

- **Conclusion:**
  - Some HMI requirements shall be removed to promote HMI harmonisation
  - No positioning requirements for the proximity information signal

#### Q9 System initialisation time

- As system shall be active at all times when stationary (Q7), only initialisation time needed, no response time.
- **Conclusion:** regulation shall require a maximum time for MOIS system initialisation/signal (similar to Reversing Motion)

#### Q10 False positive tests

- OICA proposed to remove requirement to perform false positive tests
- “VRUs not at risk” not clearly defined in the text.
- **Conclusion:**
  - False positive tests shall not be included in the requirements of the MOIS Regulation, manufacturers shall develop MOIS systems with due diligence to avoid false positives.
  - [Minimising false positive requirements shall also include “not at risk” VRUs – with “not at risk” VRUs to be defined]

#### Q11 Reduction of Testing Burden

- The total number of test cases required shall be no less than a specified minimum number

of test cases selected from the specified boundary conditions associated with each test configuration

- This minimum number of test cases shall be two selected cases for each configuration from the defined boundary condition test cases and 1 extra case for each configuration with any combination of the test parameters within the scope of the requirements.
- If justifiable to do so (to appropriately assess performance), the Test Service shall be permitted to test any other boundary condition test case specified by the Regulation or at any other combination of test parameters within the scope of the requirements.”

**Conclusion:** TRL will update the document and share it within 1,5 week, then a line-by-line discussion (Skype meeting) shall be planned.

## **8. Forward motion Vehicle turning - Blind Spot Information System**

EC has submitted a Working Document to 118<sup>th</sup> GRSG containing amendments to BSIS ECE R151 (including vehicle categories M2 and N2 into the scope). The Industry reviewed the proposal and had no issues except for some alignment issues with the BSIS requirements for N3/M3.

## **9. Next meeting**

14<sup>th</sup> meeting: 21-23 of April 2020, location Södertälje (Sweden)

15<sup>th</sup> meeting: [8-10 September 2020, location Munich Germany TBD]

## **10. Any Other Item**

No other items discussed.