**Questionnaire - DCAS Phase 3 – Response by the TF on ADAS Chair**

Please fill in the table indicating need for new requirements, modifications of existing ones, or current DCAS requirements already addressing the specific topic.

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| --- | --- | --- |
| **Topic/Category** | **SIM on Highway with withholding HOR** | **SIM in non-highway with Hands-On** |
| **Monitoring of DCAS by the driver:** The driver is able to detect/anticipate wrong actions of DCASAt first, the term ‘wrong actions’ needs to be defined. In this document, it is assumed that ‘wrong actions’ means ‘the system control inputs and maneuvers not desired and not expected by the driver. | * By which means can the driver detect or anticipate a wrong behavior of DCAS?

The driver can see an intention of the vehicle to start a maneuver like turning on the direction indicators, increase or decrease of vehicle speed, an obstacle or a slow-moving vehicle ahead. The driver should be given a sufficient notice to react for a SIM (5.3.7.2.1.1.(c))* How does Hands-Off driving additionally influence the Monitoring?

‘Hands-off’ means lack of haptic feedback from the system, which could be felt by the driver * Is this already addressed by current DCAS requirements?

Yes, in 5.3.7.2.4. | * By which means can the driver detect or anticipate a wrong behavior of DCAS?

The driver can see an intention of the vehicle to start a maneuver like turning on the direction indicators, increase or decrease of vehicle speed, an obstacle or a slow-moving vehicle ahead. The driver should be given a sufficient notice to react for a SIM (5.3.7.2.1.1.(c))* Haptic feedback is present and can be used to detect the beginning of a maneuver
* Is this already addressed by current DCAS requirements?

Yes, in 5.3.7.2.4. |
| **Attentiveness:** The driver is attentive, aware of the situation and focused on the driving task Note: This is a requirement to the driver, not to the system, which can only implement measures to keep on with the attentiveness and awareness of the driver. It should be decided, whether the implemented regulatory measures are sufficient or not. | * How does the driver remain attentive and focused on the driving task?

It is assumed that the driver remains attentive and focused on the driver task (the concept of a competent and careful driver applies). This driver’s behavior is ensured by the driver disengagement monitoring by the system (5.5.4.2.1) * How does the driver remain engaged and situationally aware during SIM?

The driver can see how the system performs a maneuver.* Is this already addressed by current DCAS requirements?

Yes, in 5.5.4.2. | * How does the driver remain attentive and focused on the driving task? Also, when involved in HMI interactions?

It is assumed that the driver remains attentive and focused on the driver task (the concept of a competent and careful driver applies). This driver’s behavior is ensured by the driver disengagement monitoring by the system (5.5.4.2.1) * Is this already addressed by current DCAS requirements?

Yes, in 5.5.4.2. |
| **Controllability:** The driver can control the vehicle (safely override) as needed | * How can the driver control the vehicle (safely override) if needed?

The driver controls a vehicle by default. In addition, measures ensuring proper driver override are provided in 5.5.3.4.* How to ensure appropriate driver’s response after continued/prolonged use?

The proper driver’s response depends on his/her engagement in driving process. It can be assumed that the driver is properly engaged because the system monitors the driver disengagement (5.5.4.2.1) * Is this already addressed by current DCAS requirements?

Yes, in 5.5.3.4., 5.5.4.2.1. | * How can the driver control the vehicle (safely override) if needed?

The driver controls a vehicle by default. In addition, measures ensuring proper driver override are provided in 5.5.3.4.* Is this already addressed by current DCAS requirements?

Yes, in 5.5.3.4. |
| **Reactiveness:** The driver remains aware and ready to intervene even when not contributing to the operational controlNote: This is a requirement to the driver, not to the system, which can only implement measures to keep on with the reactiveness and readiness of the driver. It should be decided, whether the implemented regulatory measures are sufficient or not. | * How can the driver remain aware and ready to intervene even when not contributing to the operational control? And with use of hands-free systems?

It is assumed that the driver remains aware and ready to intervene (the concept of a competent and careful driver applies). This driver’s behavior is ensured by the driver disengagement monitoring by the system (5.5.4.2.1) * Is this already addressed by current DCAS requirements?

Yes, in 5.5.4. | * How can the driver remain aware and ready to intervene even when not contributing to the operational control?

It is assumed that the driver remains aware and ready to intervene (the concept of a competent and careful driver applies). This driver’s behavior is ensured by the driver disengagement monitoring by the system (5.5.4.2.1) * Is this already addressed by current DCAS requirements?

Yes, in 5.5.4. |

Conclusions:

1.First of all, we should formulate our expectations (two right columns of the table) regarding the topics set in the most left column of the table. As all topics are already regulated in UN R 171, we should estimate, whether the existing provisions are sufficient or not, and what aspects are missed. Then, we should draft the missed provisions.

2. Two topics amongst four relate to the driver, whose behavior we cannot regulate. By default, the concept of a competent and careful driver applies. If the driver is less competent and less careful, then the system implements driver state monitoring and warning strategies (5.5.4.2.) We should decide whether we are confident in such strategies or whether we should improve them.