**DCAS - Questions and Answers**

This document aims to provide written feedback on commonly asked questions and open issues on DCAS

* **From a User perspective, what kind of system is DCAS?**

DCAS is a system that may assist the driver continuously in driving the vehicle on any journey within the system boundaries (potentially on any type of road or in any driving environment), by means of lateral and longitudinal guidance. Under DCAS operation, the driver maintains primary control and supervision of the vehicle’s behaviour and its interaction with the environment, and must always intervene, without delay, whenever the driver believes it necessary.

* **What is the aim of this new Regulation/TF ADAS activity?**

In order to provide the aforementioned assistance (e.g. address more complex scenarios, expand use cases, address Level 2 systems), certain limitations established in UN-R79 for ACSF B1 and C need to be reviewed, provided DCAS will secure the appropriate minimum driver engagement monitoring to ensure the expected safety level.

Additionally, the aim is to develop a technologically neutral regulation allowing inclusion of a variety of driving control features under one Regulation by a generic approach while ensuring a clear distinction from Automated Driving >=SAE Level 3 (see item 3.d. of the terms of reference).

* **What is the difference between DCAS and ALKS/ADS with regard to the required driver engagement?**

DCAS will always require the driver to remain engaged with the driving task by monitoring the driver engagement (ensuring hands-on wheel or eyes-on road or even both) and giving distinct warnings to the driver as needed.

While an ALKS/ADS is active, the driver may completely disengage from the driving task and perform other tasks (unrelated to driving, e.g. watch a video) and does not have to monitor driving in any way. The driver is only expected to react to a prompt by the system to resume manual control.

* **How do we ensure the driver remains aware of the system’s limitations and sufficiently engaged with the driving task?**

From experience with existing ADAS it is observed that when sufficiently engaged with the driving task, the driver can easily adapt their driving behaviour to the limitations of the system.

In order to ensure appropriate driver engagement this will be monitored and warnings given when needed.

Additionally, manufacturers will provide clear and detailed information about the system’s capabilities and limitations & the driver’s responsibilities to the users.

* **What is the role of the driver in using DCAS?**

The driver is still the ‘driver of the vehicle’, and hence by default assumes overall responsibility and control of the operation of the vehicle.

* **Is the system required to detect and respond to all critical situations? How will the driver recognize that the system will/ will not be able to handle certain critical situations (HMI)?**

The system should be able to detect and respond to all common scenarios within the use case (“if the system suggests it can do it, it should be able to do it safely”), but the system should not be required to handle each and every critical situation as the driver is still in control of the vehicle.

For example, making a comparison with an emergency system, drivers don’t wait for AEBS to decelerate the vehicle just because they know their vehicle is fitted with it.

Therefore we should not rely on the HMI to tell the driver if the system will or will not handle an upcoming critical situation. Instead, the extent to which the driver is required to remain (physically) engaged should match the expected need for driver intervention.

* **Does DCAS need to be aware and comply with traffic rules in its country of operation?**

When manoeuvres are initiated by the system, the system should be able to assess whether these manoeuvres are currently permitted (e.g. not initiating a LC across a solid lane marking). However, when manoeuvres are initiated by the driver, overall compliance with traffic rules is not deemed needed, as the system only assists the driver in operating the vehicle, so the control remains with the driver.