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DIGITALEUROPE's comments on the draft Implementing Act on ADS

The overwhelming majority of road traffic accidents is attributable to human error.¹ Automated driving can make our roads significantly safer. Below we highlight our recommendations on important aspects in the European Commission's draft Implementing Act on type-approval of motor vehicles with regard to their automated driving system (ADS).²

O ▼ ▼ ✓ General Comments & Annex I

Definitions: The draft text of the Act refers to the definition of automated vehicles found in the General Safety Regulation (GSR).³ DIGITALEUROPE believes that it would be beneficial to clarify that the Act will apply to all vehicle types. The potential applications of automated driving extend beyond shuttles. In addition,

In addition, the draft framework lacks a section setting out basic definitions of key concepts, such as the dynamic driving task, driving, what constitutes an ADS, notions of risks and mitigation, supervision, intervention and monitoring. The EC should look to the SAE's definitions of many of these concepts as well as to the work done by the United Nations Economic Commission for Europe (UNECE) to define key concepts. This represents a more sensible approach than either starting from scratch or adopting potentially outdated definitions from previous Commission regulations.

○ ▼ ▼ ⊿ Annex II

Vehicle behaviour: Requirements on lane change, intersection crossing, and other vehicle behaviours propose the use of a fixed Time-to-Collision (TCC) as a metric. Fixed TTC definitions can be excessive in some scenarios and insufficient in others, and do not reflect the dynamic nature of safety involving variables

¹ European Commission, Saving Lives: Boosting Car Safety in the EU, 2016

² See here

³ Regulation (EU) 2019/2144 of the European Parliament and of the Council of 27 November 2019 on type-approval requirements for motor vehicles and their trailers, and systems, components and separate technical units intended for such vehicles, as regards their general safety and the protection of vehicle occupants and vulnerable road users

such as the speed, braking capabilities, and reaction time of all vehicles concerned. For example, the suggested requirement for TTC between vehicles can create an unsafe condition if there is no tangible closing speed. We propose adopting a dynamic definition of TTC that would reflect the impact of these variables. The TTC proposed under point 4 of Annex II is representative of this definition.

- Human supervision: It should be made clear that remote human supervision in an unclear situation should only be required of vehicles without a driver present in the vehicle.
- Fail safe strategy: Not all Operational Design Domain (ODD) exits should immediately cause a minimum risk manoeuvre, as this may lead to poor consumer experience. For instance:
 - For a planned ODD exit, e.g. highway exit, the system shall issue a transition demand. If the driver does not respond to a takeover request, the ADS shall be able to bring the vehicle to a safe stop before leaving the ODD.
 - For an unplanned and uncritical exit of the ODD, e.g. temporary loss of lane markings, the system may suppress the transition demand until the vehicle returns to the ODD. If the system is unable to return to the ODD within a short period of time, a transition demand should be issued.
 - For an unplanned and critical exit of the ODD, e.g. sensor failure, the system should immediately issue a transition demand. If the driver does not respond to the takeover request within an appropriate amount of time, the system shall issue a Minimal Risk Maneuver (MRM). In the case of a severe failure, the MRM may be issued immediately.
- Human Machine Interface (HMI) requirements: We suggest the addition of the following requirements for the provision of an emergency stop button:
 - "Care shall be taken to prevent inadvertent activation of the emergency button". This could be put in practice, for example, by making ensure the passenger needs to remove a cover or button mounted up high in an easily reachable but out-of-the-way location.
 - "The emergency button shall directly stop the vehicle without requiring any further decision logic." The emergency button should be direct-acting. The button should not send a message to the remote supervisor who would then have to respond.



Annex III

- We support the Commission's proposed approach to testing. We would like to underline that vehicle and other targets used for track testing should be an accurate reflection of real-life road users and features for all type of sensors and should not favour a specific technology.
- We would welcome an explicit requirement for limited real-world validation of the vehicle in its intended ODDs. Similarly to the verification conducted during emissions' testing, this would help prevent system optimisation for track testing.
- The proposed assessments carried out by the type-approval authority require further clarification. This should include, for instance, how the system would be designed (e.g. pass-fail or other metrics).

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