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**Position statement on optical and/or audible signals in the
context of driver assistance systems, advanced driver
assistance systems and autonomous vehicles**

Submitted by Germany

Following the preliminary discussion on the topic at the last session, supported by Informal document No. 3, Germany, with the present document, would like to contribute to continue discussing the topic during the present session.

Germany discussed the topic of signaling requirements for Automated and Autonomous Vehicles (AVs).

Following this discussion, Germany supports the following points of view:

- First and foremost, AVs should use the existing external signalization devices which are available in and used by current existing vehicles (direction indicators, brake lights, horn, etc.) without driver assistance systems. New and different solutions could cause confusion when road users have to interact with multiple vehicles, both conventional and automated.
- AVs should signal their status and communicate their next intended actions using visual or audible signals or a combination of both only in special cases.
- In such special cases, in general, they should make use of an optical signal (under normal traffic conditions and active autonomous driving).
- For an optical signal it must be defined, when and under which conditions this signal should be activated.
- In this context, e. g. interaction with police and other road users (pedestrians) shall be taken into account, depending on the extent of automation.
- An optical signal to indicate that a vehicle is being driven by an automated driving system can be useful as a temporary solution to address specific needs in specific situations, e.g. autonomous parking of the vehicle.
- We conclude that the traffic rules for automated vehicles must not be different from existing traffic rules.
- We would like to clarify that the aforementioned points shall not prevent us from discussing the topic further, particularly taking into account audible signals, which could support e.g. disabled persons in communicative scenarios.