

Japan's View on External Signaling

MLIT, Japan

1. Background

- There have been discussions in Japan on external signaling that indicates whether a vehicle is under the automated operation or not.
- The government of Japan now requires manufacturers to attach a sticker on a vehicle, which enables other vehicles and road users to recognize ADS, despite WP29 having not yet reached a conclusion on the necessity of external signaling.



Image of the sticker

2. Purposes of external HMI

There are some purposes of external signaling, but Japan supposes that there are the following two main purposes:

- External signaling enables other vehicles and road users to respond appropriately to the unique characteristics and behavior of automated vehicles (e.g., lack of eye contact, more or less too conservative driving, etc.).
- External signaling helps police officers to enforce traffic rules if needed (e.g., when the driver is using smart phone). This will prevent drivers of conventional vehicles from pretending that they are driving under automated operation to use smart phone, etc., which leads to careless driving.

3. Future Work

Taking into account the purposes of external signaling, we need further discussion on the necessity of such devices, considering the following points:

- Sufficient visibility should be ensured even under the situation of poor visibility (e.g., at night time, in bad weather, etc.).
- It should display vehicle's operational status on a real-time basis because vehicles which have L3 or higher automated mode may be used in L2 or lower operational mode.
- We should also consider avoiding the negative effects of external signaling, such as misunderstanding by ORU.