

Necessity of Event Data Recorders (EDRs) and On-board Diagnostic (OBD) Systems for ACSF

1. Background

In ACSF, the system affects the lateral movement of the vehicle at a greater extent than existing advanced driver assistance systems. The system operates the vehicle in part, instead of the driver, under driver's monitoring, which means that higher weight of the vehicle control would be transferred from the driver to the system. (It does not immediately mean that the responsibility of the driving is transferred to the systems.) The electronically-controlled systems for ACSF are so sophisticated and so complicated than existing advanced driver assistance systems that car users cannot find the malfunctions of the system which may cause safety risk. This new relationships between the driver and the system may cause new types of risks, as follows.

- In the case of a significant malfunction, it may be more technologically difficult to control the vehicle's behavior during lateral control than during longitudinal control.
- Safety risk may be caused during the transition from the system to the driver.
- It would be difficult for car users to find and repair the malfunctions because the system is combined with several functions such as lateral control longitudinal control.

2. Proposal

EDR and OBD shall be necessary for ACSF in order to ensure the safety in use.

(1) EDR:

By recording the vehicle system's performance as well as the driver's operation before and after the relevant event, it will enable the verification, whether the system was functioning properly.

=> If it is found that the system caused the safety risk, the appropriate remedial measures should be taken without delay.

*Note: With regard to EDR, applicable rules on privacy information protection shall be respected.

2) OBD:

By monitoring the system, it will detect malfunctions and inform the driver of it. It will also retain the log of the malfunctions.

=> In case that a relevant malfunction occurs in ACSF, the driver shall disable the ACSF so that the system will not lead safety risk. It is also important to prepare the environments where the car users can get their ACSF repaired at any repair stations (not only at car dealers but also at the other repair shops).