

Crashed vehicles at the holding yard (left) and a CASR researcher performing an EDR download via the OBDII port (right)



Event Data Recorders: black boxes for cars enable new research

The Centre for Automotive Safety Research (CASR) are experts in Event Data Recorder research.

The advent of Event data recorders (EDRs) in recent years has opened unprecedented opportunities to understand driver behaviour just prior to a crash. An EDR records various vehicle sensor data up to 5 seconds prior to a crash, and during the impact, similar to a black box in a plane.

CASR's expert team are specialised in the use of EDR and are leading the way in realising the opportunities EDR presents through the development of a large EDR data collection and data matching program. EDR data can provide new insights into:

- Travel speed and speeding
- Impact speed and injury severity
- Seatbelt wearing
- Operation of passive safety systems
- Operation of active safety systems
- Driver behaviour in critical situations
- Driver inputs prior to fatigue related crashes

The capability to properly determine the prevalence of speeding in crashes is key to driving speed enforcement policy and to greater public acceptance of policy.

New understanding of relationships between speed and crash outcomes can also drive speed limit and general speed management policy.

EDR data will also be critical to understanding how the autonomous functions of a vehicle operated in a critical situation and the implications of this for regulation and approval.

By mid 2019 CASR has already collected EDR data from more than 350 crashed vehicles and matched the EDR data to a police report and hospital injury data.


Additional funding could expand the amount and scope of this data collection and allow for further analysis of this rich data source.



Further enquiries

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