

Proposal for amendments to FRAV interim submission

Submitted by the expert from the United Kingdom

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Proposal

- 3.X** ***“User-Initiated Takeover”* means a user-initiated procedure by which the ADS hands over dynamic control of the vehicle to a user such that the user assumes the role of driver upon completion.**
- 5.11.8 An ADS which ~~permits~~ **may request** a transition of control shall be designed to ensure safe transitions of control **to a fallback user.**
- 5.11.8.1 The Transition of control process shall follow a common sequence of actions and states
- 5.11.8.2 Transition of control shall return to a common default user role
- a) The role of the user after a transition of control from the ADS to the user or after the deactivation of the ADS. This role shall normally be a fully engaged driver without any control assistance (temporarily intervening safety systems such as ESC will remain activated)
- 5.11.8.3 The ADS shall continuously verify whether the **fallback** user is available for the Transition of Control and
- a) adapt the Transition of Control process, including the time budget where feasible, to the state of the **fallback** user and/or to the ADS.
- b) warn the **fallback** user if not available when required
- c) register **fallback** user response indicating readiness for transfer of control
- 5.11.8.4 The ADS shall verify that the **fallback** user is in stable control of the vehicle to complete the Transition of Control process
- 5.11.9. An ADS which permits user-initiated takeovers of control shall be designed to ensure a user-initiated takeover process.
- 5.11.9.1 Such ADS shall allow the user to initiate a take-over process.
- 5.11.9.2 The deactivation shall follow a common sequence of actions and states in the ~~transition~~ **user-initiated takeover** of control (change of user roles)

- 5.11.9.3 The ADS shall verify whether the user is ready for the takeover of control**
- 5.11.9.4 The ADS shall momentarily delay deactivation of driving control when immediate human resumption of control could compromise safety.
- 5.11.9.5 The ADS shall verify that the user is in stable control of the vehicle to complete the user-initiated takeover of control process**
- 5.11.9.6 The ADS shall provide clear, specific feedback of the completion of a user initiated take over.
- 5.11.9.7 The user initiated take over shall return to a common default user role being the driver.
- a) The role of the user after a ~~transition~~ **user-initiated takeover** of control from the ADS to the user or after the deactivation of the ADS. This role shall normally be a fully engaged driver without any control assistance (temporarily intervening safety systems such as ESC will remain activated)

Justification

The term “Transition of control” specifically refers to a transition of control to a fallback user. However, it is used in 5.11.9 which is a requirement focused on user initiated takeover of control. Currently there are no definitions to refer to a user voluntarily taking control of the system.

This proposal adds a new definition of user-initiated takeover to cover this situation.

5.11.8 refers to transitions of control. This has been clarified that it refer to fallback users not all users so there is no requirement to monitor a user who is not a fallback user.

5.11.9 refers to user-initiated takeovers and so should not have any reference to transition of control. Uses of transition of control have been changed to the new term

Two new points are added to 5.11.9 to ensure the user is in stable control of the vehicle before the ADS deactivates.