



Regarding Secondary Activities during Automated Driving

Joint Meeting WP.29-GRRF and WP.1

GRRF-84 – WP1-75
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Introduction

- Secondary activities have also been referred to as **side activities/tasks, non-driving activities/tasks, secondary tasks**
- Secondary activities in the context of automated/autonomous driving (Level 3 -5) mean activities that go beyond the use of e.g. radio/navigation/Air Conditioning/Heating systems etc. that are established today for manual/assisted driving.
- Examples of secondary activities for automated driving: reading and writing e-mails, texting, etc. (see also ITS-AD-06-05)
- OICA proposes to use the term “**secondary activities**”



Manufacturers' Approach

For secondary activities in the context of Automated Driving Systems (i.e. Level 3 and some Level 4 systems):

- Manufacturers focus on **vehicle integrated communication displays** for the use of secondary activities (so called “infotainment systems”) that are operated from the driver’s seat
- On-board integrated solutions for secondary activities are developed under full control of the vehicle manufacturer.
- On-board integrated infotainment **can be controlled by the automation system**: in case of a take-over request, secondary activities are automatically terminated by the system (i.e. the projection on the screen instantly vanishes and the takeover request is instead displayed)
- Automation system ensures **sufficient lead time** for a safe take-over

Note: Levels 3 & 4: Automated Driving functions that still require a driver either during or at the end of the use-case.



Manufacturers' Approach

For secondary activities in the context of Autonomous Driving Systems (i.e. some Level 4 and Level 5 systems):

- The conventional driver becomes a “passenger”. Driver take-over not relevant anymore.
- “Passenger’s” distraction is not a safety issue anymore

Note: Autonomous Driving Functions (Level 4 & 5) are those functions which do not require a conventional driver



Secondary Activities in the traffic laws as of Today

- **Traffic laws** regulate the obligations of the driver while technical **vehicle regulations** define a minimum level of requirements to ensure road safety.
- **Traffic laws:** As of today, there are national differences regarding secondary activities that are permitted and drivers themselves have to decide if and when they use them (in compliance with national traffic law).
- **Vehicle technology:** For manually driven vehicles, the manufacturers have committed to HMI principles/guidelines (e.g. European Standard of Principles, ESoP) to minimize driver's distraction while driving.



Current Status

WP29/IWG ITS-AD and GRRF

- ITS-AD-12-05-3: The driver **may** perform secondary activities only with appropriate reaction times when using automated driving functions of Levels 3 and 4 (there is still a driver).

Recommendation that the vehicle built-in displays are used for secondary activities since they can be controlled by the automated driving function.

- ACSF-06-28 Para 5.6.1.4.6.: *In case the vehicle is fitted with a built-in infotainment system, content visible to the driver, which is not relevant for driving, shall be deactivated as long as a transition demand is issued.”*
- The system performs emergency manoeuvres, the driver is not expected to intervene immediately as at Level 1 and Level 2 (assisted driving).
- The system initiates the minimal risk manoeuvre if no manual takeover is detected following a takeover demand



Current Status WP1/IGEAD

- Two leading principles (Levels* 3 & 4):
 1. Secondary activities **shall not prevent the driver from responding** to demands from the vehicle systems for taking over the driving task
 2. Secondary activities **shall be consistent with the prescribed use** of the vehicle systems and their defined functions.

- Application of these principles is subject of the national traffic laws and may be further regulated nationally

- Ongoing debate at WP.1 on how to manage the agreed principles in the Vienna Convention

* Levels 3 & 4: Automated Driving functions that still require a driver either during or at the end of the use-case.



Next Steps

- Good collaboration between WP.29 and WP.1 will permit avoiding any legal gap(s) between the driver's requirements and the vehicle's construction requirements
- The intended use of automated driving functions of Levels* 3 and 4 can be further detailed by the industry
- Collaboration between the WP.1 and WP.29 relevant groups is key in the process of exchanging knowledge and approaches in regulating automated and autonomous driving functions.

* Autonomous Driving Functions (Level 4 & 5) are those functions which do not require a conventional driver