



Informal document **GRVA-13-44**

13th GRVA, 23 – 27 May 2022

Provisional agenda item 4(d)

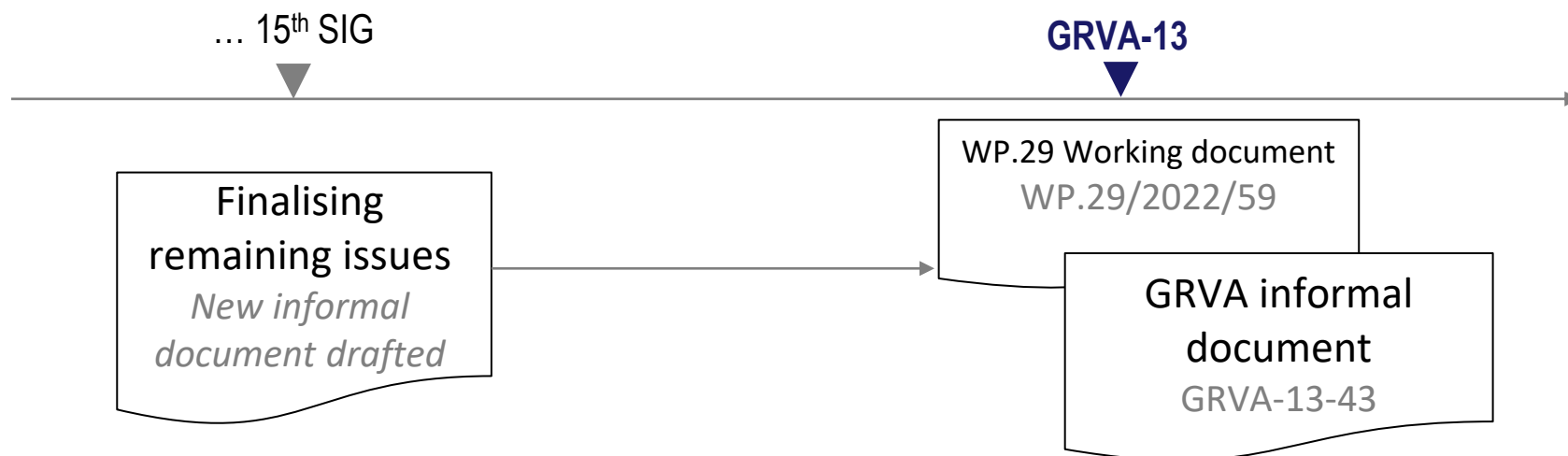
Submitted by the SIG on R.157

# *Progress report from the Special Interest Group on UN Regulation 157*



# Meetings of the group

- Fifteen meetings held



Goal: Adopt informal document in 13<sup>th</sup> GRVA to amend working document at 187<sup>th</sup> WP.29

All meeting documents of the group can be found [here](#)



# Remaining items addressed by UN R157 SIG

- Scope and requirement for lane change capability for systems operating above 60km/h
- Provisions for intentional lane crossing and evasive lane crossing
- Additional DSSAD element for lane change
- Transitional provisions
- Final review of testing annex
- Further clarification of text



# Scope & requirements for ALKS operating >60 km/h

- Systems operating above 60 km/h must have the capability to perform an minimum risk manoeuvre lane change
  - This does not mean that it has to always perform an MRM LC just that should have the ability
- A regular lane change to be limited to  $M_1$  &  $N_1$ 
  - Desire to gain experience with light-duty and review requirements with respect to heavy-duty



# Provisions for lane crossing

- **System can cross lane markings for:**
  - Lane change procedure
  - Emergency manoeuvre
  - Forming emergency corridor
  - Driving around obstruction in the lane
- **Provisions for evasive lane crossing as drafted**
- **Avoiding obstructions:**
  - No more than 1m
  - $<1.0 \text{ m/s}^2$  lateral acceleration
  - Sufficient distance between other road users and road boundaries



# DSSAD occurrences added for lane change & crossing

- Lane change procedure only stored when associated with EDR trigger, emergency manoeuvre, and aborted lane change
- Aborted lane change occurrence flag included along with those for lane crossing



# Transitional provisions

- From 1 September 2023 approvals shall be to the 01 Series
- Original Series to be accepted until 1 September 2024



# Testing annexes

- Changes to the boundaries for the traffic conditions (e.g. free flow, light, heavy)
- Reduction in the repetition of the scenario:
  - Lane changing performed by the system -> Merging at lane end -> Heavily congested traffic
- Appendix on “guidance to determine the difficulty of the test” moved to the correct annex.





# Other modifications

- Clarification of the expected response for a collision
- Approval marking requirement for systems capable of lane change
- Manual activation of direction indicator to initial transition demand
  - It is allowed to make sure that the driver is in a suitable position to respond to the transition demand
  - Expectation is to improve this provision
- 'Vehicle' definition to cover address vehicle combinations
  - This should be taken as appropriate when approving systems



# Potential future activities

- Production of interpretation document
- Improvements to the information document
- Clarifications of provisions (e.g. changing control strategy)
- Alignment with developments across GRVA



Thank you for your attention.