Driver Assistance Projections
Informal Document to support ECE/TRANS/WP.29/GRE/2020/4

Review: Feedback from 82nd GRE
• Standardization of symbols
• To conduct further investigations on distraction

Further studies on flashing Driver Assistance Projections and distraction potential
Leibniz Universität Hannover
Standardization of Symbols

Driver Assistance Projections - Extension of the dashboard

• Optional additional means to provide safety-related assistance to the driver
• Define Pattern and Symbols - Standardize Symbols
• Therefore proposed to have the similar approach as in UN R121: *If own conception of a symbol, the design principles laid down in paragraph 4. of ISO 2575 „Road vehicles — Symbols for controls, indicators and tell-tales” shall be followed.*

Approach in ECE/TRANS/WP.29/GRE/2020/4:

Define „Driver Assistance Projections“, consist of:

„Driver Assistance Pattern“

„Driver Assistance Symbols“

Simple geometric shape, e.g. vehicle total-width marking

Standardized symbols, e.g. rear-end collision warning symbol
Study setup:
Distraction potential of road projection symbols

- The test person is overtaken by the projecting vehicle while driving on the highway
- Test person wears eye-mark glasses to measure glance direction and duration
- Speed difference: 15 km/h, overtaking maneuver of ~6s
- Symbol: excavator
- Static projection: Permanently on
- Dynamic projection: Continuous flashing 1 Hz with 0.5 s off

- First results from 26 test persons (15 male, 11 female); outlook for End of Oct 2020: 39 (24 male, 15 female)
- Age in years: $30.2 \pm 11.3$ (mean $\pm$ standard deviation); Min. 19; Max. 69
Study scenario and conclusions

Part 1
- Test persons are not informed about study objective
- Projected symbol is visible in peripheral field of vision of test person

→ Visual attraction of the investigated projections in real traffic situations is low
→ The study shows no indication of a decrease of road safety by static or blinking projections for other road users

Part 2
- Test Persons are informed about study objective and every overtaking maneuver
- Projected symbol is visible in direct field of vision of test person

→ The study indicates that when a test person is informed in advance, then a projection that is blinking becomes slightly more noticeable than one which projects statically.
→ Other road participants are able to see the projected light but are not able to recognize the projection as the right symbol
Thank you