Automotive Safety Council

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October 15, 2019

Docket Management Facility
U.S. Department of Transportation
1200 New Jersey Avenue SE
West Building Ground Floor
Room W12-140
Washington, DC 20590-0001

National Highway Traffic Safety Administration

[Docket No. NHTSA-2019-0082]

Agency Information Collection Activities; Notice and Request for Comment; Drivers' Use of Camera-Based Rear Visibility Systems Versus Traditional Mirrors

Subject: **Request for Comments:**

The Automotive Safety Council (ASC) is an industry trade association of 48 of the world's leading suppliers of Autonomous, Crash Avoidance and Occupant Protection automotive safety systems to the automobile industry. The mission of the Automotive Safety Council is to improve the safety of people through-out the world through the development, production and implementation of the latest automotive safety equipment by preventing accidents, protecting occupants and pedestrians when in a collision and to notify emergency responders after the collision when necessary.

The ASC is providing comments to the recently published RFC document requesting comments pertaining to Drivers' Use of Camera-Based Rear Visibility Systems Versus Traditional Mirrors. The ASC appreciates the opportunity to comment on this topic.

Overall Comments:

- The study should consider commercially available systems in other markets in order to support global harmonization.

- Public acceptance and safety Benefit will depend significantly on HMI and capability of such system. HMI and Performance has a cost impact as well. Different level of capability/performance and different levels of sophistication of the HMI should be considered.

- Replacing outside mirrors with a camera-display-system is expected to bring different advantages for the end users, such as lower fuel consumption and improved viewing areas (e.g. enhanced field of view) to the side and rear of the vehicle

- The study should try to understand some of the following user experiences
    - User preferences such as monitor size, position / orientation
        - Importance of aligning camera and display in the vertical axis – e.g. to avoid disorienting drivers with an unexpected view perspective
    - Impact of system framerate or latency / "lag" on driver perception and acceptance of the displays
    - Impact of different ambient light levels – e.g. day and night conditions
    - Reaction times of various monitor layouts and use of various cues such as a red or yellow triangle to see what the most effective way is to get the drivers attention.
        - Just as an example, a test could be setup where an image of multiple color triangles is displayed, and the driver would need to push one button on the steering wheel for a yellow triangle and another button for a red triangle
    - Glance behavior, mental effort such as confusion between visions / scenarios should be considered, along with evaluating the time and effort needed for the driver to refocus from distant exterior objects to an interior display
    - As FMVSS 111 already requires a rear-view camera and display for backing, the synergies between side and rear camera systems should be considered, e.g. integrated display view.

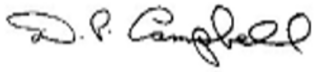
- The study participants should include
    - Vision impaired subjects requiring prescription glasses, far-sighted drivers who do not wear glasses for driving, partially blind in one eye
    - Elderly and limited mobility drivers

- The study should also identify benefits of a bigger field of view with mirrorless systems such as blind spot detection improvements especially for many drivers with limited neck mobility to turn heads while driving

- The study should ensure sufficient time for the drivers to get acquainted with the system.

In conclusion, the ASC welcomes this opportunity to comment on Drivers' Use of Camera-Based Rear Visibility Systems Versus Traditional Mirrors. We welcome any invitation to visit the NHTSA office for a detailed discussion of these comments should the need arise.

Sincerely,



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