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Sophie Shulman
Deputy Administrator
National Highway Traffic Safety Administration (NHTSA)
DEPARTMENT OF TRANSPORTATION
1200 New Jersey Avenue SE.,
Washington, DC 20590

**Re: Petition for Reconsideration – Final Rule: Federal Motor Vehicle Safety Standards;
Automatic Emergency Braking Systems for Light Vehicles [NHTSA-2023-0021]**

Dear Ms. Shulman:

Autotalks is a leading international designer and manufacturer of connected car technologies. In 2018, Autotalks launched its LTE-V2X chipset¹, and in 2023, it announced the industry's first 5G-V2X (also known as NR-V2X) chipset².

Autotalks addresses one of the concerns raised by the Alliance for Automotive Innovation (AFAI) in their petition for reconsideration³.

V2X, or Vehicle to Everything communication, enables vehicles to communicate with each other and their environment. It allows vehicles to know what's ahead without relying on visibility. V2X communication enables the direct exchange of information between nearby vehicles, including data on speed, position, acceleration, and other relevant details.

¹ Autotalks Launches the World's First Global V2X Solution Unifying DSRC and C-V2X on its Deployment-Ready Chipset <https://auto-talks.com/autotalks-launches-the-worlds-first-global-v2x-solution-unifying-dsrc-and-c-v2x-on-its-deployment-ready-chipset/>

² Autotalks unveils the world's first V2X chipsets which support 5G-V2X for Day 2 scenarios <https://auto-talks.com/autotalks-unveils-the-worlds-first-v2x-chipsets-which-support-5g-v2x-for-day-2-scenarios/>

³ <https://www.autosinnovate.org/association-update/FMVSS%20127%20AEB%20PAEB%20Petition%20for%20Reconsideration.pdf>

V2X can ensure success in the lead vehicle deceleration test

According to Table 18 of the final rule, which details the Lead Vehicle Deceleration Test Results with a 12-meter gap to the lead vehicle, only one of the six tested vehicle models avoided contact at 80 km/h. When the test was conducted at 50 km/h, four models performed flawlessly, and the remaining two succeeded in 80% of the tests. Since deceleration is not affected by vehicle speed, the difference likely lies in lower sensing capabilities at 80 km/h.

V2X is designed to operate at speeds up to 250 km/h, while detecting a vehicle on the opposite side of the road traveling at 250 km/h, resulting in a relative speed of 500 km/h. V2X functions seamlessly at 80 km/h. The maximum speed required by the AEB rule, 145 km/h, which was raised as a concern by AFAI, is well within V2X's reliable operating range.

While V2X is particularly valuable in scenarios without visibility, such as avoiding a bicycle suddenly entering an intersection from around a corner, it is also effective in rear-end collisions. V2X can corroborate data from other sensors when detection is uncertain or guide sensors to specific risks at specific locations, thereby reducing detection time and increasing detection reliability.

V2X is an “available technology”

The USDOT has released an ambitious draft deployment plan⁴ aiming to install V2X at most US intersections and recently announced an additional \$60 million grant to serve as national models and help save lives⁵.

The only regulatory barrier is the lack of the FCC's final spectrum ruling. The FCC issued its first Report & Order⁶ in October 2020, and the industry expects the second Report & Order to be published toward the end of this year, eliminating the last deployment obstacle. Moreover, most OEMs already have production-ready platforms, with no technical barriers to deployment.

In China, V2X has been deployed in multiple vehicles following the inclusion of tests in the China NCAP that requires V2X from June 2024⁷. The Chinese V2X standard is nearly identical to the US standard.

In Europe, EuroNCAP has been awarding Vehicle-to-Infrastructure (V2I) 0.25 safety assist points since 2023. The recently finalized 2026 grading will increase the number of points, with further increases and required V2X applications expected for 2029 grading.

⁴ https://www.its.dot.gov/research_areas/emerging_tech/pdf/Accelerate_V2X_Deployment.pdf

⁵ <https://www.transportation.gov/briefing-room/usdot-awards-nearly-60-million-advanced-vehicle-technology-grants-arizona-texas-and>

⁶ <https://docs.fcc.gov/public/attachments/DOC-367827A1.pdf>

⁷ <https://www.safetywissen.com/object/A11/A11.bb7389553wmgi6v2yw72549w9q3j963845698149/safetywissen>

Proposal

Adding a V2X transmitter to the lead vehicle and activating it during the lead deceleration test with a 12-meter gap (Table 1 to S7.1). It will allow the tested vehicle to use V2X to complement its sensors.

The aim is not to undermine the necessary advancements in other sensors or the ability to protect vehicles without V2X. The proposal is to permit V2X usage only in the specific lead vehicle deceleration test with a 12-meter gap. The test with a 40-meter gap should be conducted without V2X.

Incorporating V2X into the AEB tests would significantly impact V2X deployment and enhance the safety of US roads.

If there are any questions regarding this response, please contact the undersigned.

Sincerely,

/s/ Onn Haran

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