



February 25, 2019

The Honorable Elaine L. Chao  
Secretary of Transportation  
U.S. Department of Transportation  
1200 New Jersey Ave., S.E.  
Washington, DC 20590

**RE: Department of Transportation Request for Comments on the Development of Communication Technologies associated with the development and integration of Vehicle-to-Everything (V2X) Technologies [Docket No. DOT-OST-2018-0210; 83 FR. 66338]**

Dear Secretary Chao,

Continental welcomes the opportunity to comment on the Department of Transportation's (DOT) request for comments regarding developments in vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I), and vehicle-to-pedestrian (V2P) communications, collectively referred to as vehicle-to-everything (V2X) published in the Federal Register on December 26, 2018 (83 FR 66338).

Continental is an established Tier 1 supplier that provides each Original Equipment Manufacturer (OEM) with sustainable, safe, and affordable solutions to enhance automotive safety. In 2017, we generated more than \$50 billion in sales within our five divisions, Chassis & Safety, Interior, Powertrain, Tires, and ContiTech. In the U.S., our company employs more than 23,000 employees at more than 100 facilities across 37 states. Globally, we employ more than 230,000 employees across 56 countries.

For more than a decade, Continental has been directly involved in the design and development of advanced vehicle technologies, with production awards worldwide in both Dedicated-Short-Range-Communications (DSRC) and Cellular-V2X (CV2X), including the U.S. market. Our company has actively developed these technologies for OEMs to use as the foundation of V2V/V2X communications facilitating the exchange of critical information about the vehicle's speed, heading, brake status, and other crash avoidance parameters.

We believe the optimal framework of the surrounding environment requires sufficient market penetration of on-board equipped devices to establish a network of vehicles able to effectively communicate with one another and with infrastructure. Such fleet penetration and system interoperability are necessary to generate the safety benefits being sought to enhance automotive safety overall.

The information exchanged through these technologies enable vehicles to directly communicate with each other and their surrounding environment to make driving safer and more efficient. To further build upon the extensive work over the last decade, Continental is developing a flexible hybrid solution that allows for both mobile network communication and vehicle-to-vehicle direct communication for the rapid and reliable exchange of data. Our hybrid platform is currently in series development for an awarded SOP in 2022 and provides a solution that integrates technologies for 4G and 5G network access, as well as DSRC and Cellular V2X, for the most efficient V2X communication. In our experience, the technical path to establish V2X communications presents a challenge to manufacturers in that it varies globally in technology preference and standards. We believe the flexibility in our hybrid solution can reduce costs and complexity in supporting either communication standard which can assist in the deployment of V2X on a national, and global, scale.

One primary advantage to a flexible hybrid solution that combines V2X with licensed mobile communication is a platform that can be operable to both types of networking. By integrating the V2X requirements with 4G/5G counterparts, the ad-hoc networking through V2X applications could drastically increase driving safety. Additionally, combining long-range and short-range communications capabilities can provide earlier



information to increase driver awareness of impending situations, provide extra time to improve the decision making of the drivers, and to increase comfort for automated driving functions by reducing the frequency of abrupt maneuvers.

While Continental lauds the efforts to develop a complete set of national standards and guidelines applying to Smart Cities, roadside infrastructure, and vehicles as part of an overall national Intelligent Transportation System, we believe that proper data collection, analysis, and foresight are necessary as any national standard or rule in this area will have longstanding effects for decades on the national transportation infrastructure. We therefore encourage both Government and industry to continue to perform the necessary due diligence – including ensuring sufficient and protected 5.9GHz spectrum; addressing RF interference from adjacent U-NII usage due to spectrum mask specifications; designing a strong and manageable transportation cybersecurity infrastructure; and ensuring communications compatibility between vehicles and infrastructure, including infrastructure performance and compatibility guidelines.

Continental believes that it will be important for Government to work with industry to define standards for the data and interfaces to be shared and implemented across multiple back end transportation server systems, regardless of whether those servers are managed by local transportation authorities, private industry, or federal agencies. It is such a focus on end-to-end interface standards and guidelines, in addition to vehicle-to-vehicle standards, that will maximize the flow of critical safety data across the multiple vehicle manufacturers and the various back end service providers for future safety applications, enabling the necessary system-wide compatibility for a future, national Cooperative ITS infrastructure.

Continental agrees with NHTSA's previous conclusion that a mandate is required to ensure all new vehicles are equipped with the necessary devices to allow for an information exchange to successfully occur. A successful exchange of critical information requires a network capable of fully supporting the high volume of transmissions without harmful interference or latency. The most recent proposed mandate, or even a clear technology direction, would help accelerate fleet wide deployment of V2V/V2X technology which will result in the reduction of fatalities and injuries more quickly than would otherwise occur. To help further realize these safety benefits, we believe the development of our hybrid V2X platform will offer manufacturers flexible solutions for differing communication and technical standards on a national, and global, scale.

We would like to thank the Department of Transportation and the Secretary for the opportunity to provide input on the agency's request for comment and welcome the opportunity to provide direct feedback during the review process. Should you have questions or wish to discuss this further, I can be reached by telephone at (202) 657-2931 or by email at [Ian.musselman@continental-corporation.com](mailto:Ian.musselman@continental-corporation.com).

Sincerely,

A handwritten signature in blue ink, appearing to read "Ian P. Musselman".

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Director, Government Affairs  
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