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**VIA ECFS**

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street SW  
Washington, D.C. 20554

Re: *Ex Parte Presentation*, ET Docket No. 13-49, GN Docket No. 18-357

Dear Ms. Dortch:

The Association of Global Automakers, Inc.<sup>1</sup> (“Global Automakers”), by its attorneys, hereby submits this *ex parte* letter offering a new approach for the Federal Communications Commission’s (“FCC” or “Commission”) rules governing operations in the 5.850-5.929 GHz (“5.9 GHz”) band. In particular, Global Automakers proposes that the Commission move to a modern, flexible-use licensing regime that will allow for regulatory certainty to facilitate the rapid deployment of road-ready technology and permission-less innovation in the 5.9 GHz band, including the introduction of new vehicle-to-everything (“V2X”) technologies. While conforming the 5.9 GHz service rules to spectrum management best practices already used by the Commission in a variety of bands, Global Automakers’ proposal will preserve and advance the life-saving safety benefits of V2X services by ensuring Basic Safety Message (“BSM”) interoperability and/or backwards compatibility with deployed services. Finally, to ensure scaled deployment of V2X services and achieve the network-effects necessary to maximize safety benefits, Global Automakers’ proposal includes aggressive buildout requirements.

**Background**

Auto fatalities on American roadways are persistently and unacceptably high. U.S. traffic fatalities last year were over **37,000** with vastly more serious

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<sup>1</sup> The Association of Global Automakers is a trade association based in Washington D.C. that represents the U.S. operations of international motor vehicle manufacturers, original equipment suppliers, and other automotive-related companies and trade associations. A list of Global Automakers members is appended hereto as Attachment 1.

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injuries. Addressing this senseless loss of life is an urgent national priority.<sup>2</sup> The U.S. is racing toward an autonomous vehicle (“AV”) future that promises previously unattainable safety benefits. But our present reality is human drivers of traditional vehicles, and our foreseeable future is a mixed fleet of both traditional vehicles and AVs. Policy makers must leverage all tools at their disposal to address the appalling loss of life that is our current reality.

The Department of Transportation (“DOT”) and the FCC, prescient in recognizing the need for innovative solutions, launched a long-term collaboration with the auto industry, research universities, and State Departments of Transportation on a project to leverage radio technology in collision-avoidance. The fruit of that successful collaboration was a transformative V2X technology – Dedicated Short Range Communications (“DSRC”). The compelling potential of DSRC motivated the Commission, at DoT’s request, to allocate the 5.9 GHz band for V2X auto safety services that are being deployed today.

The ground-breaking value proposition of V2X technology is that it does not just mitigate crash harms but can actually help prevent crashes from occurring. DoT estimates that, at scale deployment, V2X services could prevent 89% of light-vehicle to light-vehicle crashes and 85% of the property damaged associated with those crashes.<sup>3</sup> With this potential in mind, automakers and State DOTs already have begun deployment and are making large-scale commitments to undertake additional deployment,<sup>4</sup> even in the face of ongoing regulatory uncertainty about the

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<sup>2</sup> *Policy Priorities*, U.S. DEPT. OF TRANSPORTATION (Nov. 3, 2016), <https://www.transportation.gov/transition/policy-priorities> (explaining that “roadway fatalities” are a policy priority and that automated vehicles can help because of the technology’s “enormous potential for improving safety and mobility for Americans on the road”).

<sup>3</sup> Federal Motor Vehicle Safety Standards; V2V Communications, 82 Fed. Reg. 3854, 3863 (proposed Jan. 12, 2017).

<sup>4</sup> *See, e.g.*, Letter from Kirk. T. Steudle, Director, Michigan Department of Transportation, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 13-49, at 2 (May 24, 2018) (explaining that recent V2X infrastructure deployment includes deployment “in 26 states and cities in response to the American Association of State Highway Transportation Officials ‘[Signal Phase & Timing] Deployment Challenge’”); Letter from Paul Hemmersbaugh, Chief Counsel and Policy Director, Transportation as a Service, GM to FCC Secretary Marlene H. Dortch, ET Docket No. 13-49, at 1 (July 13, 2018) (announcing GM’s plans to offer vehicle-to-everything communications in a high-volume Cadillac crossover by 2023 and subsequently extend this technology to the entire Cadillac portfolio); Don Butler, Executive Director, Ford Connected Vehicle Platform and Product, Ford Motor Company, “How ‘Talking’ and ‘Listening’ Vehicles Could Make Roads Safer, Cities Better,” (Jan. 7, 2019), <https://medium.com/@ford/how-talking-and-listening-vehicles-could-make-roads-safer-cities-better-f215c68f376f>; Press Release, “Toyota and Lexus to Launch Technology to

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continued availability of the 5.9 GHz band. The existing and anticipated levels of V2X deployment underscore the importance of retaining the 5.9 GHz band for V2X services – a principle about which the entire auto industry, as well as the DOT and the National Highway Transportation Safety Administration, are in complete agreement.<sup>5</sup>

DSRC is the result of more than 10 years of innovation, field testing, product development, and deployment on America’s roads in cars and infrastructure. While DSRC is the only V2X technology ready to deploy today, a potential new innovation has arisen that has the potential to be deployed, once it has fully matured and undergone field testing.<sup>6</sup> Cellular-V2X (“C-V2X”) is emerging as a competing—and potentially complementary—option. As Global Automakers

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Connect Vehicles and Infrastructure in U.S. in 2021” (Apr. 16, 2018), <http://corporatenews.pressroom.toyota.com/releases/toyota+and+lexus+to+launch+technology+connect+vehicles+infrastructure+in+u+s+2021.htm> (While Toyota’s original timing has changed due to continuing uncertainty, Toyota remains committed to DSRC and V2X deployment. *See* Letter from Hilary M. McCain, Toyota Director of Technology and Innovation Policy, to Marlene H. Dortch, Secretary, FCC, Re: Comment, ET Docket No. 13-49, GN Docket No. 18-357, at 1–2 (filed Apr. 26, 2019)).

<sup>5</sup> See Press Release, Alliance of Automobile Manufacturers, Association of Global Automakers, The Intelligent Transportation Society of America, The 5G Automotive Association, The American Association of State Highway and Transportation Officials, American Trucking Associations and The Motor & Equipment Manufacturers Association, “Multi-stakeholder Statement on Preserving the 5.9 GHz Band” (Oct. 24, 2018), <https://autoalliance.org/2018/10/24/multi-stakeholder-statement-preserving-5-9ghz-band/> (explaining that the auto industry is “on the cusp of a major breakthrough in vehicle connectivity and safety innovations” and that “[t]he entire 5.9 GHz band is needed to achieve the full benefit of these communication technologies in the years to come”); Press Release, National Highway Traffic Safety Administration, “Statement on Safety Value of 5.9 GHz Spectrum” (Oct. 24, 2018) (explaining that “[t]he automotive industry and municipalities are already deploying V2X technology and actively utilizing all seven channels of the 5.9 GHz band and, accordingly, “[p]reserving the 5.9 GHz band for transportation communications is essential to public safety today and in the future”).

<sup>6</sup> For this reason, Europe is pursuing an approach of moving forward with DSRC implementation while leaving open possible future authorization of C-V2X. European Union Transport Chief Violeta Bulc explained her longstanding support for WiFi-based standards in a recent interview: “It’s quite simple really. First, WiFi is a proven technology and has almost no patents on it anymore. It’s available now, is easy to implement and it’s cheap. It’s affordable for everyone. . . . I suffer personally when I see that 25,000 people lose their lives every year and 137,000 are seriously injured. . . . We have technology that can be deployed now and can save lives. I don’t want to be part of those statistics.” Sam Morgan, *Bulc urges 5G advocates to focus on autonomous driving, leave connected cars to WiFi*, EURACTIV (Apr. 17, 2019), <https://www.euractiv.com/section/road-safety/interview/bulc-urges-5g-advocates-to-focus-on-autonomous-driving-leave-connected-cars-to-wifi/>.

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explained in its comments on the Waiver Petition of the 5G Automotive Association, both DSRC and C-V2X are standards-based technologies that can support the entire suite of communications capabilities necessary for V2X services, and may be leveraged to support expanded auto safety and other public interest applications, including full vehicle autonomy.<sup>7</sup>

Global Automakers recognizes that the current regulatory framework for the 5.9 GHz band is unworkable for the V2X future. By limiting use of the 5.9 GHz band to DSRC-based services, the Commission's existing service rules for the band do not allow for deployment of other existing and future technologies that may be developed to provide V2X services. However, simply opening the band to new technologies without restrictions would undermine the very functionality of V2X services. For instance, V2X technology is built around the ability to transmit and receive the Basic Safety Message ("BSM"), which provides key information about moving vehicles including size, position, speed, and heading.<sup>8</sup> Technologies that are unable to share this message with other connected vehicles deploying different technologies will not be able to achieve the primary safety benefits of V2X services.

Global Automakers urges the Commission to rethink its regulatory framework for the 5.9 GHz band, bearing in mind the following principles:

1. The entire 5.9 GHz band must be retained for auto-safety services.
2. The FCC and relevant federal agencies must ensure a data driven, fact-based approach for evaluating interoperability; evolution and backwards compatibility; and the potential coexistence of multiple V2X technologies in a technology-neutral manner.
3. Any band plan that accommodates multiple technologies must avoid harmful interference among existing services.
4. All V2X-equipped vehicles and infrastructure must be able to provide for communication of the Basic Safety Message.
5. The regulatory framework must promote investment in deployment of lifesaving V2X services for the benefit of the driving public now.

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<sup>7</sup> See Comments of Global Automakers, GN Docket No. 18-357, at 3-4 (Feb. 7, 2019).

<sup>8</sup> See *id.* at 5.

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Adherence to these principles—which Global Automakers has repeatedly advanced in the above-referenced proceedings<sup>9</sup>—will ensure that the 5.9 GHz band can be used to its fullest potential, and will maximize the opportunity for development and deployment of transformative V2X technology.

### **Global Automakers’ Proposal: A New Framework for the 5.9 GHz Band**

In light of the foregoing, Global Automakers proposes that the Commission modernize its rules for the 5.9 GHz band by transitioning from a command-and-control approach that specifies a single technology to a flexible-use licensing scheme that is agnostic to the technology used. Global Automakers further proposes adopting policies to facilitate research and development with respect to future uses of the 5.9 GHz band, including new V2X technologies and unlicensed use. Finally, Global Automakers proposes industry-wide buildout requirements to ensure rapid deployment.

#### *Flexible Use Licensing Framework*

Global Automakers proposes that the Commission revise Part 90 of its rules to allow any V2X auto safety technology to use the 5.9 GHz band, as long as the technology:

- (1) Complies with the band’s existing technical rules and does not interfere with an incumbent, deployed technology; and
- (2) Supports: (a) BSM interoperability<sup>10</sup>; and/or (b) backwards compatibility<sup>11</sup> to an incumbent, deployed technology.

The benefits to this approach are threefold. *First*, the proposal will provide broad latitude for innovation—not only for existing technologies, but for future V2X technologies. *Second*, unleashing this innovation will not compromise the safety

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<sup>9</sup> See, e.g., Letter from Scott Delacourt, Counsel to Global Automakers, to Marlene H. Dortch, Secretary, FCC, Re: Notice of *Ex Parte* Presentation, ET Docket No. 13-49, GN Docket No. 18-357, at 2 (filed Apr. 12, 2019).

<sup>10</sup> Global proposes to use the IEEE’s definition of interoperability: “V2X devices to be able to decode IEEE 802.11p BSM transmissions.”

<sup>11</sup> Global proposes to use the IEEE’s definition of backward compatibility: “Ability of V2X devices to operate in a mode in which they can interoperate with IEEE 802.11p devices.”

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benefits of V2X technologies because of the interoperability and backwards compatibility conditions which will preserve transmission of the BSM regardless of technology. *Third*, this approach will remove uncertainty about the future of the 5.9 GHz band and speed deployment of V2X technologies, making transformative safety benefits available to the public now, expediting the valuable network-effects upon which these technologies rely, and solidifying industry incentives to continue investing in V2X technology.

#### *Policies to Facilitate Future 5.9 GHz Operations*

Global Automakers also proposes two policies to facilitate continued research and development on future potential uses of the 5.9 GHz band that could eventually allow new services to access the band without sacrificing the Commission's policy objectives with respect to V2X services. *First*, the Commission should allow for experimental licensing for V2X technologies that do not meet the requirements set forth above. C-V2X providers have had success using experimental licensing to test C-V2X technology in the 5.9 GHz band in the absence of enabling service rules.<sup>12</sup> Allowance for experimental licensing will allow for valuable research of this kind to continue while retaining certainty about the 5.9 GHz band plan.

*Second*, the Commission should expedite FCC-DOT joint testing of the feasibility of unlicensed sharing of the 5.9 GHz band under the agreed test plan, including Phase II already underway and Phase III. As Global Automakers has previously explained, this additional testing "should be expeditiously conducted," with technical changes that reflect the results of Phase I testing, "to inform data-driven decision-making about the future of the 5.9 GHz band."<sup>13</sup> The testing should also be expanded to study compatibility of unlicensed use with C-V2X services in addition to DSRC.

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<sup>12</sup> See, e.g., Experimental License, Ford Motor Company, File No. 1020-EX-CN-2018, Call Sign WJ2XYG (granted Feb. 15, 2019).

<sup>13</sup> See Comments of Global Automakers, ET Docket No. 13-49, at 9 (filed Nov. 28, 2018); see *id.* at 4 (explaining that, in light of the results of Phase I testing, subsequent phases should (i) conduct testing using DSRC power levels and propagation characteristics that better approximate real-world conditions; (ii) if re-channelization continues to be pursued, conduct field testing to ensure that the Commission's proposed re-channelization will effectively accommodate V2X safety communications in the upper 30 MHz of the 5.9 GHz band; and (iii) conduct on-board blocking tests and evaluate sharing between DSRC and higher power U-NII-4 devices).



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### *Build-out Requirements and Incentives*

Consistent with updating the regulatory framework for the 5.9 GHz band to reflect modern spectrum management best practices, Global Automakers also recommends that the FCC adopt deployment benchmarks for the band. In order to ensure the 5.9 GHz band is put to use for the benefit of the driving public quickly and efficiently, Global Automakers proposes that holders of non-exclusive V2X licenses would be subject to the following performance requirements on a collective basis:

- Interim Build-Out Requirement: Deployment of two million V2X radios within five years. Such radios could be deployed in vehicles—during manufacturing or in the aftermarket—or on roadway infrastructure. Failure to meet the interim deadline would accelerate the final build-out requirement by two years.
- Final Build-Out Requirement: Within ten years, deployment of V2X radios in an amount equivalent to 75% of new light vehicles sold in the U.S. in the calendar year of the final build-out deadline. If this final build-out deadline is not satisfied, the Commission would revisit alternative uses of the 5.9 GHz band.

The 5.9 GHz band has never been subject to build-out requirements. Global Automakers' proposal addresses this shortcoming and conforms the band to modern spectrum management best practices. Imposing such benchmarks on a collective, industry-wide basis will incentivize and expedite deployment and hasten the achievement of network effects, maximizing safety benefits for the driving public.

### **Conclusion**

The driving public can no longer accept **37,000** roadway fatalities a year where solutions are readily at hand. The DoT-FCC collaboration in development of V2X services has been a resounding success and the public deserves the benefits of its investment. By modifying the service rules for the 5.9 GHz band as described herein, the FCC can transform roadway safety and save lives. Global Automakers urges the Commission to act expeditiously to make the connected vehicle future now.

Please direct any questions to the undersigned.



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Respectfully Submitted,

*/s/ Scott Delacourt*

Scott Delacourt  
*Counsel to Global Automakers*

Attachment



## Attachment 1

### Association of Global Automakers Members

- American Honda Motor Co.
- Aptiv
- Aston Martin Lagonda of North America, Inc.
- Robert Bosch, GmbH
- Byton
- Denso North America, Inc.
- Ferrari North America, Inc.
- Hyundai Motor America, Inc.
- Isuzu Motors America, Inc.
- Kia Motors America, Inc.
- Local Motors
- Maserati North America, Inc.
- McLaren Automotive, Ltd.
- Nissan North America, Inc.
- NXP Semiconductors
- Panasonic Corporation of North America, Inc.
- PSA North America, Inc.
- Sirius XM Radio, Inc.
- Subaru of America, Inc.
- Suzuki Motor of America, Inc.
- Texas Instruments, Inc.
- Toyota Motor North America, Inc.