Comments of the

Motor & Equipment Manufacturers Association (MEMA)

to

Federal Communications Commission

RE: Draft 5.9 GHz Band Order

ET Docket No. 19-138

November 10, 2020

The Motor & Equipment Manufacturers Association (MEMA) presents these targeted comments addressing certain aspects of the Draft Order[1] that MEMA respectfully submits are not the product of reasoned decision-making. Because the analytical shortcomings of the Draft Order identified below go to the heart of the Commission's proposed decision, MEMA implores the Commission not to rush through a fatally flawed order in a lame duck session when – without exaggeration – tens of thousands of lives lost annually from vehicle crashes are in the balance in this proceeding.

The Commission's Cost-Benefit Analysis Is Fatally Flawed

Simply put, the Commission has not shown that the purported benefits from reallocating 45 MHz of ITS spectrum to unlicensed Wi-Fi use are anything but illusory. As MEMA raised in its prior comments,[2] and left unaddressed in the FCC Draft Order,[3] the Commission's analysis appears to rest on an entirely false set of assumptions, specifically that *wireless* Internet is the bottleneck. However, ***current*** Wi-Fi 5 dual routers have a bandwidth ceiling of over 2 Gbps for multiple channels, while a single device can connect at speeds of approximately 700 Mbps on one band in real-life conditions.[4] In contrast, as the FCC's own data for fixed broadband service show, "the maximum advertised download speeds amongst the service tiers measured by the FCC were between 3-200 Mbps," and the "median speed experienced by subscribers of the participating ISPs was **72 Mbps**."[5]

Thus, ***existing*** Wi-Fi capabilities provide **10-30 times** the capacity of average fixed broadband speeds to the home. On top of this, the Commission itself recognizes that the new Wi-Fi 6 standard will increase Wi-Fi throughput rates by 2.5 times compared to current Wi-Fi 5 connection speeds, or easily above gigabit connectivity. Draft Order, ¶ 17. As a result, even if every home in America were to be connected to gigabit fixed broadband service (an entirely unrealistic proposition in the near term), Wi-Fi would *still* not be the bottleneck if the Commission did nothing.

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[1] *Available at* https://docs.fcc.gov/public/attachments/DOC-367827A1.pdf.

[2] *See* MEMA Reply Comments at 3, *available at* https://ecfsapi.fcc.gov/file/104271612122789/MEMA_Reply_Comments_re_FCC-5.9_Docket_19-138_DRAFT-April-27-2020_FinalFinal.pdf.

[3] Because the Commission is obliged to engage in reasoned decision making, it cannot have "fully considered and rejected" an argument if it fails to acknowledge the argument at all. Instead, the Commission must demonstrate that it has "examine[d] the relevant data and articulate[d] a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'" *Kristin Brooks Hope Center v. FCC.*, 626 F.3d 586, 588 (D.C. Cir. 2010) (citing *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962))); *see also Verizon Tel. Cos. v. FCC*, 374 F.3d 1229, 1235 (D.C. Cir. 2004) ("omissions render the Commission's decision arbitrary and capricious, not the product of reasoned decisionmaking.").

[4] *See* https://www.cnet.com/how-to/your-router-isnt-as-fast-as-you-think-it-is-heres-why/.

[5] *See* https://www.fcc.gov/reports-research/reports/measuring-broadband-america/measuring-fixed-broadband-eighth-report.

Of course, the Commission *did* do something – it opened up another 1,200 MHz of spectrum in the 6 GHz proceeding, more than tripling the spectrum available for Wi-Fi, from a total bandwidth of 560 MHz to 1,760 MHz. The Commission, however, has not even attempted to explain how this enormous increase would not satisfy any anticipated future capacity constraints for Wi-Fi connectivity by itself – let alone why reducing the minimal spectrum allocated to ITS operations by *60 percent* would have *any* marginal impact on broadband connectivity speeds.

In final analysis, the purported benefits of the proposed reallocation are based on the myopic view that increasing Wi-Fi spectrum is an end in itself. But it is not. Wi-Fi is a *means* to connect to an overwhelmingly wired Internet – a wired Internet that is substantially slower than existing Wi-Fi capabilities.[6] At bottom, the Commission did not, and could not, explain how the purported benefits of reallocation would materialize in the real world given prevailing differences between fixed and wireless Internet speeds, let alone the added efficiency gains from Wi-Fi 6 and the added spectrum from the 6 GHz band. This is not reasoned decision-making. This is the broadband equivalent of "hurry up and wait" – finding efficiency gains where none actually exist.

Ironically, when it comes to evaluating the costs of the proposed reallocation, the Commission rejects as "hypothetical" the significant societal costs that could be prevented by the deployment of nascent ITS technologies. Draft Order, ¶ 135. Indeed, the Commission even refuses to recognize the very real and indisputable costs of a forced transition from DSRC to C-V2X, asserting that "the latter cost is necessitated by market factors." *Id.* ¶ 139. This purported justification turns reality on its head: a government mandate to stop using a proven ITS technology – DSRC – is not the invisible hand of the market at work. It should go without saying that if this was the outcome preferred by the market, one federal agency would not need to pick a winner over the overwhelming objections of nearly all current licenses and affected stakeholders. This dictate will come with very real costs for both the vehicle industry and society at large and ignoring these costs will not make them go away. Doing so is arbitrary and capricious.

Additionally, the vehicle industry, various governmental bodies and other stakeholders have invested hundreds of millions of dollars developing these technologies and the infrastructure to support these communication systems. This development was not only based on the reliance on the Commission's channel plan requiring very low latency, stability, and reliability, but also on anticipated regulations and policies that would have provided much needed certainty for industry to ramp up deployment.[7]

The failure to recognize these costs, while imagining benefits from Wi-Fi that will never materialize in the real world given fixed broadband bottlenecks, is not reasoned decision-making. Instead, to quote Chairman Pai in an analogous context, "[t]his is not data-driven decision-making, but corporate favoritism."[8] MEMA therefore encourages the Commission to reevaluate its cost-benefit analysis consistent with the foregoing, as any honest appraisal will demonstrate that the costs far exceed any putative benefits that would be derived from oversaturating Wi-Fi capacity

[6] By analogy, the Commission's actions here would be akin to widening I-66 to ten lanes in Front Royal to alleviate congestion on the Roosevelt bridge. Such a project could only result in costs that outweigh the benefits, because there can be no benefits if the actual bottleneck is not addressed.

[7] Where, like here, the agency's "prior policy has engendered serious reliance interests that must be taken into account," an agency must "provide a more detailed justification" for changing its prior policy. *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009).

[8] Dissenting Statement of (then) Commissioner Ajit Pai, *Protecting the Privacy of Customers of Broadband and Other Telecommunications Services*, WC Docket No. 16-106.

beyond any ability of fixed broadband to keep pace. The reallocation of critical ITS spectrum in this proceeding will be a bridge to nowhere.

The Draft Order Fundamentally Alters ITS Licenses

As MEMA previously established, given the vested reliance interests licensees possess in the 5.9 GHz band, under Supreme Court precedent, it would be unlawful to fundamentally alter or reduce the spectrum allocated to ITS applications. *See, e.g., MCI Telecommunications Corp. v. AT & T*, 512 U.S. 218 (1994) (holding that statutory "authority to 'modify' **does not contemplate fundamental changes**") (emphasis added). Indeed, as the Utah Department of Transportation noted, if the Supreme Court ruled that a change affecting 40 percent of a service exceeded the Commission's modification authority, it would certainly be beyond the Commission's authority to carry out the changes proposed here – reducing the spectrum allocated to ITS applications by 60 percent generally, and completely eliminating DSRC applications over the next two years.[9]

Remarkably, the Commission posits that "our decisions today do not represent a termination of DSRC licenses." Draft Order, ¶ 118. Of course, they do – just not immediately. This is like arguing that a death sentence is not a death sentence because the execution occurs at a later date. Here, DSRC licensees will ultimately lose their ability to operate their systems as deployed – let alone the applications that have been developed and are ready for deployment. Thus, without costly alterations,[10] DSRC licensees will be unable to operate existing ITS functions in the limited room left for them using C-V2X. On top of this, the Commission has left the mandatory DSRC-to-C-V2X transition period entirely unsettled, such that neither of these two incompatible technologies can be properly utilized for the foreseeable future. This alone represents a fundamental change for current licensees.

Moreover, as DoT and others have shown with extensive data and testing, it is unlikely that "***any* level of consistent and reliable BSM transmission will occur due to adjacent channel interference**" now that ITS will be surrounded by unlicensed spectrum – with error rates of up to 80 percent.[11] Simply put, the inability to reliably use basic safety messages – which were designed to tolerate only a 10 percent packet error rate – fundamentally alters DSRC licenses because a safety message that cannot be reliably transmitted is not a safety message at all.

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[9] *See* Utah Department of Transportation Comments at 9-10. *see also* Comments of the Intelligent Transportation Society of America at 13-15 ("Reducing the bandwidth for DSRC to 10 MHz would prevent licensees from providing many, if not most," of their services, which would thus constitute an unlawful "fundamental change.").

[10] Consistent with this straightforward application of Section 316, past Commission decisions reallocating spectrum either provided incumbent licensees with replacement spectrum or compensated them for relinquishing their rights. The Commission has not, as a rule, decreased the amount of usable spectrum available to a licensee in good standing without some reasonable compensation, let alone to this substantial degree. Where replacement spectrum has been unavailable, the Commission has either arranged direct financial payments to incumbents for relinquishing their spectrum or provided them with the valuable new rights created by the repurposing. *Broadcast Incentive Auction Order*, 29 FCC Rcd. 6567 (2014) (paying broadcasters to relinquish unneeded spectrum to make room for mobile wireless operators); *39 GHz Order*, 33 FCC Rcd. 12168, ¶¶ 29, 34-35 (2018) (providing incumbent 39 GHz licensees either vouchers "sufficient to win blocks in the auction equivalent to their existing" spectrum holdings or direct payments to compensate them if they wished simply to "relinquish" their spectrum use rights).

[11] *See Impairing Traffic Safety from Changes in the Safety Band, Introduction of Interference from Unlicensed Users*, U.S. Department of Transportation at 38, available at https://www.transportation.gov/sites/dot.gov/files/2020-03/Rechannelization%20Inteference-01AUGUST2019_FINAL_0.pdf.

Conclusion

MEMA, along with the overwhelming majority of commenters in this proceeding, supports preserving the full 75 MHz of spectrum currently available for vehicle-to-everything (V2X) communications because these technologies can save lives. Over 36,000 people die and over 2.7 million people are injured in motor vehicle crashes annually, resulting in hundreds of billions of dollars in economic loss.

Further, as MEMA and many others have noted, there is a consistent trend among other countries and regions around the world to coalesce around 75 MHz of spectrum in the 5.9 GHz band with a desire to harmonize its use globally. From complicating the ability of U.S., Canadian and Mexican vehicles to cross our shared borders and seamlessly use the same V2X technology, to making it much more difficult, if not impossible, for U.S. manufacturers to export our technologies, adopting the Draft Order will create a major and needless rift with our major trading partners.

In sum, the Draft Order is a fatally flawed policy proposal that offers no real benefits to consumers on closer examination, and it will prevent significant deployment of ITS technology promised by the automotive industry if the spectrum is preserved for ITS. The Draft Order is overwhelmingly opposed by multiple federal agencies, every state department of transportation, broad cross sections of industry and consumer protection groups, and raises serious international harmonization and trade concerns. In short, this is not remotely the type of uncontroversial order that is usually disposed of during a lame duck session of an outgoing administration. MEMA respectfully submits that given the tremendous stakes and competing and multi-faceted interests involved in this proceeding, the only prudential course would be to allow the incoming Administration to provide its input before taking any further action in this proceeding.

For questions or more information, please contact MEMA's Chief Technology Officer Brian Daugherty at bdaugherty@mema.org or (248) 430-5966, and Vice President of Regulatory Affairs Leigh Merino at lmerino@mema.org or (202) 312-9249.

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