



**Reply Comments of the
Motor & Equipment Manufacturers Association (MEMA)
to
Federal Communications Commission
RE: Proposed Rule; Use of the 5.850-5.925 GHz Band
ET Docket No. 19-138; FCC 20-164; FRS 17508
July 2, 2021**

The Motor & Equipment Manufacturers Association (MEMA) submits these reply comments in response to the *Further Notice of Proposed Rulemaking* (“FNPRM”) adopted by the Federal Communications Commission (FCC or Commission) to finalize the restructuring of the 5.9 GHz band.

I. The Commission Should Continue to Permit Commercial Operations in the Modified ITS Band

In our Initial Comments, MEMA demonstrated that any restriction on “commercial operations in ITS spectrum” would further disincentivize continued innovation in V2X applications, and serve no legitimate purpose, particularly if the current hierarchical priority system remains in place. MEMA Comments at 2-3. Indeed, the Commission’s passing reference to this potential action did not attempt to define what activity would be considered “commercial,” and MEMA noted that such an open-ended proposal would create more uncertainty in a band that desperately needs clear rules of the road. Accordingly, the Commission should retain its existing flexible use rights that prioritize safety-of-life applications, but also permit other applications – so long as they are transportation related. *See* 47 C.F.R. § 90.371(a).¹

For their part, New America and Public Knowledge pick up where they left off with their faulty 2016 petition requesting the same solution in search of a problem.² Specifically, they again advocate that the Commission “prohibit any commercial (i.e., for profit) use of the ITS band.”³ Taking this request at face value, it is difficult to imagine how this would not effectively ban all private-sector deployment of ITS technology to consumers, leaving only a small government/public safety market for ITS deployment.⁴

Notably, the Commission has already considered and rejected the folly of banning commercial use in the ITS band. In its 2004 DSRC Order, the Commission found that “a market limited to public safety users would be relatively small,” while allowing commercial use and deployment would

¹ To the extent a question ever arises concerning where a particular ITS use case falls within the 3-tiered hierarchy in the Commission’s rules, MEMA respectfully submits that the Department of Transportation or an industry standards-setting body would be the most appropriate forum to address the issue.

² *See* New America and Public Knowledge Comments at 25-28, available at <https://ecfsapi.fcc.gov/file/10603229843623/OTI%20and%20PK%205.9%20GHz%20FNPRM%20Comments%20Final.pdf>.

³ *Id.* at 28.

⁴ For-profit car and truck manufacturers, technology companies, and their suppliers (i.e., not non-profits) will be the entities developing and deploying next generation ITS technologies that will save lives and improve traffic – by creating and selling cars and trucks and other transportation infrastructure incorporating new ITS technology and applications. Put differently, they will be engaging in commerce.

provide “public safety entities and the public with the benefit of the economies of scale resulting from a larger market” and increased interoperability.⁵ The same reasoning applies with equal force today. Indeed, the success of C-V2X⁶ and ITS applications more generally is directly related to the number of vehicles and infrastructure in which the technology is deployed. Also, as the Commission previously recognized, this will only occur if transportation use cases – offered by both public and private sector entities – are allowed to operate in the band. Nothing has changed in this regard.

At bottom, the Public Knowledge proposal, if adopted, would be a tremendous step backwards and would obstruct deployment in the ITS band. Therefore, MEMA respectfully submits that the Commission’s rules should continue to permit flexible use rights in the ITS band without regard to arbitrary commercial versus non-commercial distinctions – so long as operations are transportation-related and adhere to the ITS service rules, as currently required.

II. The Commission Should Adopt Multiple Commenters’ Requests to Ameliorate Interference Issues

There is near unanimity among commenters that the Commission is moving ahead in this proceeding without developing an adequate evidentiary record regarding the ability of the ITS band to reliably operate without harmful interference from unlicensed use. Indeed, given the critical role ITS technology can play to drastically reduce the tens of thousands of traffic fatalities and millions of injuries annually, the Commission appears to be avoiding the need to examine the consequences of its proposals or supporting it with actual data. As the National Safety Council rightly noted, the Commission “must provide substantive evidence that the power limits that they are proposing on unlicensed devices will allow V2X communications to fully function within the remaining 30 MHz provided for V2X, as serious concerns about those limits have been raised by transportation stakeholders such as USDOT.”

MEMA fully agrees with these concerns. As unrebutted USDOT testing data establishes, “[i]nterference from Wi-Fi in an adjacent channel typically resulted in significant packet errors 200-350 m away for traffic loads of 15% and higher.”⁷ Moreover, the packet error rate climbed to “as high as 80 percent within a 200-meter range,”⁸ even though ITS safety applications are designed to only tolerate a 10 percent packet error rate to function safely. Further, based on 5GAA’s technical analysis simulating real-world conditions for C-V2X communications, the proximity of unlicensed Wi-Fi spectrum as allocated in the Commission’s proposed rules would permit interference that would only provide drivers with a 1-second warning, which is effectively no warning at all given typical driver reaction times. Simply put, the Commission’s proposed rules would, if adopted, clearly endanger the reliability of ITS safety-of-life applications.

For these reasons alone, the Commission’s proposed power and OOB rules for unlicensed operation will make it inevitable that harmful interference to ITS operations will occur.⁹ Thus,

⁵ 2004 DSRC Order, ¶ 16.

⁶ Public Knowledge’s proposal would eliminate the “V” from C-V2X by effectively prohibiting for-profit vehicle manufacturers and their suppliers from using the band, and the remaining public safety use cases would hardly represent the “X” this technology promises.

⁷ See *Impairing Traffic Safety from Changes in the Safety Band, Introduction of Interference from Unlicensed Users*, U.S. Department of Transportation (“DOT Interference Study”), available at https://www.transportation.gov/sites/dot.gov/files/2020-03/Rechannelization%20Inteference-01AUGUST2019_FINAL_0.pdf.

⁸ *Id.*

⁹ “[H]armful interference” is defined in the Commission’s rules as any “emission, radiation or induction that *endangers* the functioning of a radio navigation service or of **other safety services** or seriously degrades, obstructs or repeatedly interrupts a radio communications service operating in accordance with this chapter.” 47 C.F.R. §15.3(m) (emphasis added).

MEMA strongly urges the Commission to adopt rules based on technical analysis to prevent the ITS band from becoming so unreliable as to be useless.

III. The Commission Should Allow Standards Development Organizations to Resolve the Remaining Technical Issues for the ITS Band

MEMA agrees with the many commenters advocating that the Commission should leave the issue of how best to resolve remaining technical issues regarding the use of the remaining 30 MHz in the ITS band to the standards-setting process. Given all the variables and unknowns that will inevitably arise from the mandated transition to C-V2X, a different radio protocol than DSRC, it would be prudent to permit the automotive industry to continue developing usage standards established within standards development organizations, such as SAE International. The ITS industry is best situated to resolve channelization issues for using the spectrum most efficiently through consensus building within standards development organizations.

IV. ITS Operations Need More Dedicated Spectrum

Once again, the overwhelming majority of commenters agreed that additional spectrum is needed for ITS operations to fully reach their potential. To be clear, MEMA reiterates here that the most ideal additional spectrum for ITS operations would be the lower 45 MHz recently taken away for unlicensed use. Having a contiguous 75 MHz band with such ideal spectrum characteristics for the safety-of-life ITS applications already deployed and in development cannot be understated. Moreover, the United States would not be diverging from the international harmonization efforts coalescing around the 5.9 GHz band for ITS operations.

That said, if reconstituting the 5.9 GHz band for ITS operations is impossible, no one seriously contests that 30 MHz is insufficient spectrum to provide anything but basic safety related services during peak-demand conditions, such as during rush hour or at busy intersections. Put differently, advanced ITS applications, including those that rely on collective perception messages (CPM), maneuver coordination messages (MCM), and personal safety messages (PSM) – critical for automated vehicles and vulnerable road users – will not have sufficient spectrum to operate unless at least an additional 40 MHz of interference-free spectrum is made available.

MEMA therefore fully supports any Commission efforts to examine and allocate additional spectrum dedicated to ITS applications.

Respectfully submitted,

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