

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Expanding Flexible Use in Mid-Band)	GN Docket No. 17-183
Spectrum Between 3.7 and 24 GHz)	
)	

COMMENTS OF ASSOCIATION OF GLOBAL AUTOMAKERS, INC.

The Association of Global Automakers, Inc. (“Global Automakers”) submits these comments in response to the above-referenced Notice of Inquiry (“NOI”) seeking comment on the potential for flexible wireless broadband use in the 5.925–6.425 GHz band, among others.¹ As the National Highway Traffic Safety Administration recognizes, Dedicated Short Range Communications (“DSRC”) systems have “the potential to revolutionize motor vehicle safety,” allowing for vehicular communications to help eliminate 89% of light vehicle-to-light vehicle crashes and 85% of their associated economic cost.² These systems enjoy primary status in the 5.850-5.925 GHz band (the “5.9 GHz band”) as a non-Federal Mobile Service.³

Should the Commission move forward to allow additional flexible wireless broadband use in the 5.925–6.425 GHz band, it must protect from harmful interference DSRC systems and their transformative safety-of-life operations – including future innovative uses yet to be deployed. DSRC provides a standardized platform for safety applications, such as Forward

¹ See *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Notice of Inquiry, 32 FCC Rcd. 6373, ¶¶ 26-31 (2017) (“NOI”).

² U.S. Department of Transportation, National Highway Traffic Safety Administration, *Federal Motor Vehicle Safety Standards: V2V Communications*, Notice of Proposed Rulemaking, 82 Fed. Reg. 3854, 3855 (Jan. 12, 2017).

³ The 5.850-5.925 GHz band is also allocated on a primary basis to Fixed Satellite Services for non-Federal operations and the Radiolocation Service for Federal operations. See 47 CFR § 2.106 Table of Frequency Allocations.

Collision Warning, Emergency Electronic Brake Light, Intersection Movement Assist, Left Turn Assist, Do No Pass Warning, and Blind Spot/Lane Change Warning. These and future safety applications promise to help protect drivers, pedestrians, and road workers, allow for more efficient truck platooning, facilitate autonomous vehicles, and improve traffic flow. DSRC will produce clear public interest benefits, and any uses and deployments in spectrum adjacent to the 5.9 GHz band contemplated by the NOI must protect this incumbent, licensed service from harmful interference.

While all 5.9 GHz channels host DSRC safety services, the FCC specially has designated DSRC Channel 184 (5915-5925 MHz), the channel on the 5.9 GHz band edge, “for public safety applications involving safety of life and property.”⁴ It is not the case that the higher-power DSRC transmissions allowed on Channel 184 mean it is more immune to interference than other channels. The Channel 184 higher-power transmissions allow critical safety functions that require longer range, such as clearing intersections for high-speed emergency vehicles. These functions require signal preemption negotiation packets be receivable at the same low sensitivity levels as other DSRC packets, on the order of -92 to -95 dBm. As a result, the characteristics of transmissions on this channel leave them very susceptible to interference from nearby interferers, such as outdoors near a signal controller or in vehicles themselves.

In the event the Commission elects to permit U-NII operation in the 5.925–6.425 GHz band, it should consider reserving a small guard band between DSRC Channel 184 and the lowest permitted U-NII operation above 5.925 GHz. Such a guard band would recognize the near impossibility of sufficiently limiting out-of-band emissions from transmissions immediately

⁴ 47 CFR § 95.1511.

adjacent to the 5.9 GHz band.⁵ Notably, in responses to a formal request by the ETSI ITS technical committee to address potential WiFi-to-ITS interference resulting from WiFi allocations above 5.9 GHz, Europe has stated that the 6 GHz operating frequencies should “be moved to 5945 MHz.”⁶ Introducing 20 MHz of spectral separation would have minimal or no impact on the number of 40, 80 or 160 MHz unlicensed channels (twelve, six, and three, respectively) available in the 5925-6425 MHz band.

In addition, the NOI demonstrates the myriad bands available for unlicensed WiFi deployment.⁷ Meanwhile, despite years of study, sharing proposals between DSRC and WiFi for the 5.9 GHz band are complex and their viability uncertain, and the regulatory cloud produced by re-channelization proposals has stunted DSRC’s growth.⁸ With large amounts of other spectrum identified in the NOI potentially available for future WiFi deployment, Global Automakers encourages the Commission to protect the DSRC spectrum, reject proposals to re-channelize the 5.9 GHz band and promote DSRC deployment.

⁵ If the Commission were to permit commercial wireless broadband operations with power limits exceeding U-NII, a larger guard band likely would be necessary.

⁶ *ETSI ERM System Reference document (SRdoc), WAS/RLANs in the band 5925 to [6725] MHz, v0.0.3*, Section 7.2.2.3, Figure 1 (July 2017); *Proposal from TC ITS for the SRdoc on 6 GHz RLAN systems, ITS(17)000026r1*, (June 28, 2017)

⁷ The NOI contemplates unlicensed use for the 5.925-6.425 GHz band, for the 6.425-7.125 GHz band, and for “non-federal and shared bands between 3.7 and 24 GHz.” NOI, ¶¶ 26-31, 36-37. This in addition to the 7 GHz of unlicensed spectrum the Commission made available in the *Spectrum Frontiers Order*, which “doubles the amount of high-band unlicensed spectrum to 14 GHz of contiguous unlicensed spectrum (57-71 GHz)” and represents “15 times as much as all unlicensed Wi-Fi spectrum in lower bands.” *Fact Sheet: Spectrum Frontiers Proposal to Identify, Open Up Vast Amount of New High-Band Spectrum for Next Generation (5G) Wireless Broadband* (July 14, 2016), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-339990A1.pdf.

⁸ See *The Commission Seeks to Update and Refresh the Record in the “Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band” Proceeding*, Public Notice, ET Docket 13-49, FCC 16-68 (June 1, 2016).

Respectfully submitted,

/s/

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