



February 6, 2019

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

Re: *5GAA Petition for Waiver to Allow Deployment of Cellular Vehicle-to-Everything (C-V2X) Technology in the 5.9 GHz Band; GN Docket 18-357*

Dear Ms. Dortch:

As a member of the 5G Automotive Association (“5GAA”), Samsung Electronics America, Inc.¹ (“Samsung”) and its wholly-owned subsidiary, HARMAN International² (“HARMAN”) write in support of the recent waiver request submitted by 5GAA to allow the deployment of Cellular Vehicle-to-Everything (“C-V2X”) technology in the upper 20 megahertz of the 5.9 GHz band. The requested waiver would be consistent with the current realities of the connected vehicle marketplace and would help ensure that America is not left behind as the technology continues to progress.

5G technologies will revolutionize wireless services and connected devices. With blazing speed, ultra-low latency, and massive connectivity, these technologies will enable a world of connected devices, working seamlessly together for consumers to make life more manageable, safer, and a whole lot more fun. Drawing on its long legacy of innovation, Samsung is leading the way to develop these transformative 5G solutions.

As part of these efforts, Samsung and HARMAN are strong supporters of C-V2X technology, a transportation technology with an evolutionary path to 5G. Together we are working to leverage our global efforts to bring the promise of 5G smart transportation to the United States. Some recent examples of our global efforts include:

- SK Telecom and Samsung are co-developing a smart traffic system which aims to cover 121 km along a number of Seoul’s expressways.³
- At CES 2019, HARMAN showcased a live, market-ready demonstration of a vehicle communicating with a motorcycle using its Telematics platform with C-V2X capabilities.⁴

Built on the foundation of earlier efforts to develop Vehicle-to-Everything (“V2X”) communications services, C-V2X is a modern, standards-based connected-vehicle communications technology. Leveraging 4G, and ultimately 5G, C-V2X allows for direct communications between vehicles in a peer-to-peer manner to help enable collision avoidance, especially when vehicles do not have a direct line of sight to each other; between vehicles and vulnerable persons such as pedestrians and cyclists; between vehicles and roadside infrastructure

such as sensors and traffic controls; and between vehicles and mobile networks to exchange information such as road condition updates. These communications hold the potential to facilitate important improvements in public safety, traffic efficiency, mobility, and energy efficiency on America's roads.

Unfortunately, the Commission's current regulations governing the 5.9 GHz band for Intelligent Transportation Systems ("ITS") Radio Service limit technology in the band to a single, two decades-old standard, ASTM E2213-03, or Dedicated Short-Range Communications ("DSRC"). This limitation stands in the way of testing and deploying more modern technologies. The Commission can begin to remediate this situation by granting 5GAA's waiver request.

As 5GAA recently explained to the Commission⁵, V2X has reached an inflection point. C-V2X's advantages include capabilities that can enable new and improved ITS services; a path to 5G that will greatly expand and enhance C-V2X services in the future; and an unmatched cost efficiency that will support accelerated deployment. These advantages have persuaded global stakeholders to commit to C-V2X, and the United States risks being left behind as this technology continues to progress.

The FCC can help facilitate the advancement of C-V2X in the United States by granting 5GAA's waiver request. The waiver request does not preclude the continued operations of DSRC technology. Rather, it will help to update the regulatory framework governing the 5.9 GHz band to better represent the realities of the V2X marketplace and afford interested stakeholders in the United States the flexibility to invest and innovate in a technology that is being adopted around the world. Ultimately, Americans stand to benefit through increased access to safety and other services powered by C-V2X technology.

Respectfully submitted,

/s/ John Godfrey
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Samsung Electronics America

/s/ Tom Mooney
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¹ Headquartered in Ridgefield Park, N.J., Samsung Electronics America, Inc. (www.samsung.com/us), is a recognized innovative leader in consumer electronics, mobile devices and enterprise solutions. A wholly owned subsidiary of Samsung Electronics Co., Ltd., SEA is pushing beyond the limits of today's technology and providing consumers and organizations with a portfolio of groundbreaking products in appliances, home entertainment, Internet of Things, mobile computing, smartphones, virtual reality, wireless infrastructure and wearables, in addition to offering leading content and services related to mobile payments, 360-degree VR video, customer support and more. Samsung is a pioneering leader in smartphones and HDTVs in the U.S. and one of America's fastest growing home appliance brands.

² HARMAN (www.harman.com) designs and engineers connected products and solutions for automakers, consumers, and enterprises worldwide, including connected car systems, audio and visual products, enterprise automation solutions; and services supporting the Internet of Things. With leading brands including AKG®, Harman Kardon®, Infinity®, JBL®, Lexicon®, Mark Levinson® and Revel®, HARMAN is admired by audiophiles, musicians and the entertainment venues where they perform around the world. More than 50 million automobiles on the road today are equipped with HARMAN audio and connected car systems. Our software services power billions of mobile devices and systems that are connected, integrated and secure across all platforms, from work and home to car and mobile. HARMAN has a workforce of approximately 30,000 people across the Americas, Europe, and Asia. In March 2017, HARMAN became a wholly-owned subsidiary of Samsung Electronics Co., Ltd.

³ Juan Pedro Tomas, *SK Telecom secures contract to deploy 5G-based smart traffic system*, RCR Wireless News (Jan. 21, 2019) <https://www.rcrwireless.com/20190121/5g/sk-telecom-secures-contract-deploy-5g-based-smart-traffic-system>.

⁴ *HARMAN Showcases Today's Ultimate In-Vehicle Experiences at CES 2019*, HARMAN (Jan. 7, 2019), <https://news.harman.com/releases/harman-showcases-todays-ultimate-in-vehicle-experiences-at-ces-2019>. Kfar Netter, *Autotalks' C-V2X Capabilities to be demonstrated by HARMAN at CES 2019*, Autotalks (Jan. 7, 2019), <https://www.auto-talks.com/autotalks-c-v2x-capabilities-to-be-demonstrated-by-harman-at-ces-2019>.

⁵ Reply Comments of 5GAA, ET Docket No. 13-49, (filed Dec. 14, 2018), <https://ecfsapi.fcc.gov/file/12132260216130/5GAA%20OET%20PN%20Reply%20Comments.pdf>.