



January 18, 2019

Ex Parte

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

Re: *GN Docket No. 18-357; 5GAA Petition for Waiver to Allow Deployment of Cellular Vehicle-to-Everything (C-V2X) Technology in the 5.9 GHz Band*

Dear Ms. Dortch:

Ericsson supports the waiver request filed by the 5G Automotive Association (“5GAA”) of footnote NG160 to Section 2.106 of the Commission’s rules to allow for the deployment of Cellular Vehicle-to-Everything technology (“C-V2X”) in a 20 MHz channel located in the upper edge of the 5.850-5.925 GHz (“5.9 GHz”) band (5905-5925 MHz).

Ericsson is one of the largest telecom suppliers in the world with a portfolio that spans Network Infrastructure, Digital Services, Managed Services, and Emerging Business. Ericsson’s investments in innovation have delivered the benefits of telephony and mobile broadband to billions of people around the world.

The Commission allocated the 5.9 GHz spectrum band for Intelligent Transportation Systems (“ITS”) in 1999. Since that time, the mobile industry has continued to advance the capabilities of cellular technologies. For example, industry has evolved 2G GSM/EDGE, and developed two generations of mobile broadband systems, namely 3G based on Universal Mobile Telecommunications Service, and 4G based on Long Term Evolution (“LTE”). All of these systems are still in service, and LTE is expected to continue to evolve as a strong complement to 5G. Today, LTE can support high speed mobile broadband use and meets many of the needs of increasing traffic demand with improved systems and technology.

ITS is expected to be one of the key services supported by 4G and more importantly 5G technology. Indeed, 5G C-V2X can meet certain ITS service requirements that likely cannot be fulfilled by either DSRC or the current 4G LTE-based version of C-V2X. The ongoing development of 5G offers further opportunities for radio technologies to evolve, which will enable core network improvements allowing for greater programmability for networks to the requirements of ITS. Therefore, with C-V2X’s evolution path to 5G, future ITS applications can be designed for a richer array of services, utilizing both peer-to-peer and network-based communications, that take advantage of the ability to provision computational and storage resources closer to road traffic, thus reducing latency to the order of a millisecond. The potential of technologies such as



C-V2X to serve the ITS sector's needs is recognized by USDOT, most recently in its "Automated Vehicle 3.0, Preparing for the Future of Transportation" report, where it encouraged all ITS stakeholders to continue developing technologies that leverage the 5.9 GHz spectrum band for transportation safety benefits.¹

Ericsson is committed to doing its part to advance 5G's role in connected vehicles, thus facilitating C-V2X's continued evolution to 5G. To that end, Ericsson is boosting its U.S. investments in R&D and manufacturing to support accelerated 5G deployments. While Ericsson and its partners have spent years testing 5G technology in labs and in field trials, Ericsson is speeding the timeline to make 5G products available in the United States through its Austin ASIC Design Center in Austin, TX, that focuses on 5G base stations and a new software development center that will focus on the baseband needed for 5G. Ericsson has begun manufacturing the first 5G radios in United States. This series of strategic initiatives will allow Ericsson to meet the growing demand for autonomous and connected vehicles and other ITS use cases that will rely in part on 5G in the United States and globally.

The cellular mobile industry has the wherewithal to address the current and future needs of ITS. By granting 5GAA's waiver request, the FCC can help facilitate the continued advancement of C-V2X. Allowing for C-V2X operations in a portion of the 5.9 GHz band will afford industry stakeholders the certainty necessary to increase investment and innovation in C-V2X.

Respectfully submitted,

/s/ Mark Racek

Mark Racek

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Government Affairs and Public Policy

Ericsson

¹ U.S. Department of Transportation, *Automated Vehicles 3.0, Preparing For the Future of Transportation*, at 16 (Oct. 4, 2018), <https://www.transportation.gov/sites/dot.gov/files/docs/policy-initiatives/automatedvehicles/320711/preparing-future-transportation-automated-vehicle-30.pdf>.