

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)
)
Revision of Part 15 of the Commission's) ET Docket No. 13-49
Rules to Permit Unlicensed National)
Information Infrastructure (U-NII) Devices)
In the 5 GHz Band)

**REPLY COMMENTS OF INTELLIGENT TRANSPORTATION
SOCIETY OF AMERICA**

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SUMMARY

The Intelligent Transportation Society of America (“ITS America”) hereby respectfully submits its Reply Comments regarding the *Public Notice* issued by the Federal Communications Commission (“FCC” or “Commission”) in ET Docket No. 13-49, as captioned above.¹ ITS America’s Reply Comments address the more than sixty comments made in response to the proposals in the *Public Notice*, first raised in the underlying Notice of Proposed Rulemaking,² to permit the operations of Unlicensed National Information Infrastructure (“U-NII”) devices in the 5850-5925 MHz band (“5.9 GHz Band”) and the possible impact on Dedicated Short Range Communications (“DSRC”), which has a co-primary allocation in the 5.9 GHz Band.

A majority of commenters confirm that the DSRC spectrum has been deployed in many critical installations and has been a hotbed of research, development, and testing of applications and services, all in an effort to exploit the safety benefits of a network of connected devices on the roads. Stakeholders are poised for widespread deployment, and commenters assert that access to the full 75 MHz is necessary to ensure proper functioning of the technologies they have developed.

A majority of the comments detail that federal and state governments have invested significant time and money into developing DSRC systems, many applications of DSRC are

¹ *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, FCC 16-68, ET Docket No. 13-49 (2016) (“*Public Notice*”). ITS America is a party to the Joint Reply Comments submitted concurrently with the Association of Global Automakers, Inc., the Alliance of Automobile Manufacturers, and DENSO International America, Inc., and addresses with particularity there the questions posed by the FCC in its *Public Notice*. See, generally, *Public Notice*.

² *Revision of Part 15 of the Commission’s Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, Notice of Proposed Rulemaking, FCC 13-22, ET Docket No. 13-49, 28 FCC Rcd 1769 (2013).

poised for deployment, and the public and private sectors have spent significant resources to develop and test the use of V2X technology.

The cost of re-channelization would be disruption and delay in improving the safety of our surface transportation network at a cost measured in lives lost. In addition, more than a billion dollars in research, development, and testing based on the channel plan of 10 MHz-wide channels that accommodate the requirements for very low latency, stability, and reliability have been expended to meet the Commission's goals for safety-of-life technology. The re-channelization plan would likely nullify the investments already made under the current channelization and delay DSRC's benefits by years.

Commenters rightfully assert that V2X technology requires a high level of accuracy, reliability, and cooperation, and the detect and avoid sharing proposal — if proven to be technically feasible — is the only option that allows the use of the current DSRC system design and that will not require extensive and expensive redesign and retrofitting for equipment that industry is already prepared to bring to market. ITS America, along with many other commentators, urge the Commission to refrain from making any decision that might jeopardize the critical safety-of-life capabilities of DSRC applications and services.

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I. INTRODUCTION

The FCC received more than sixty comments responding to the *Public Notice*, with commenters ranging from State and Municipal Departments of Transportation (“DOTs”), technology companies, and original equipment manufacturers (“OEMs”), to cable companies, wireless service providers, research organizations, and vehicle, public safety, and other trade associations. The comments address the proposal in the *Public Notice* to permit the operation of U-NII devices in the 5850-5925 MHz band (“5.9 GHz Band”) (designated the “U-NII-4 Band” in the *NPRM*) and the possible impact on Dedicated Short Range Communications (“DSRC”),

³ *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, FCC 16-68, ET Docket No. 13-49 (2016) (“*Public Notice*”). ITS America is a party to the Joint Reply Comments submitted concurrently with the Association of Global Automakers, Inc., the Alliance of Automobile Manufacturers, and DENSO International America, Inc.

which has a co-primary allocation in the 5.9 GHz Band. The Comments collectively show that DSRC stakeholders have made significant strides in testing, development, and deployment to realize an ecosystem of intelligent cars, infrastructure, and devices that enhance roadway safety.⁴ The Comments show no significant disagreement that DSRC technology has the ability to, among other things, save lives, prevent serious injury, and enhance first responder capabilities. The Comments further establish that DSRC requires use of the entire 75 MHz allocated by the Commission, and that it cannot be chopped up and served a la carte based on arbitrary distinctions of safety vs. non-safety applications made by other parties with a goal of minimizing DSRC use of the band. The record shows that substantial public and private sector investment — including thousands of hours, significant expenditure of resources, and capital measured in more than a billion dollars — has been made in reliance upon the DSRC band allocation. Finally, the record shows that Cisco’s detect and avoid approach is the best option for sharing between DSRC and unlicensed U-NII devices, but only if it can be established through testing that it does not jeopardize the stable and secure RF environment required for the critical safety applications associated with DSRC.

There are Commenters that advocate for alternative approaches, including the re-channelization of the DSRC band to better accommodate use of the band by U-NII devices. They argue, among other things, that shared use of the 5.9 GHz Band can be achieved when applications critical for safety-of-life are distinguished from normal commercial applications. As ITS America discussed in its initial Comments, DSRC is intended to serve as the backbone of a national architecture that has been planned, designed, and implemented as an integrated

⁴ Comments of Intelligent Transportation Society of America, ET Docket No. 13-49, at 3 (filed July 7, 2016) (“ITS America Comments”).

ecosystem intended to enhance the safety of surface transportation, with the promise of delivering benefits measured not only in more than a billion dollars but in tens of thousands of lives saved. Disruption and delay of this effort at this critical moment when widespread deployment is upon us through a forced system redesign to accommodate re-channelization will not serve the broader public interest.

II. SUBSTANTIAL PROGRESS HAS BEEN MADE TOWARD REALIZING AN ECOSYSTEM OF CONNECTED CARS, INFRASTRUCTURE, AND PEOPLE.

A majority of commenters confirm that, rather than lying “fallow,” the DSRC spectrum has been deployed in many critical installations and has been a hotbed of research, development, and testing of applications and services, all in an effort to exploit the safety benefits of a network of connected devices on the roads. Now that stakeholders are poised for even more widespread deployment, commenters have established that access to the full 75 MHz as allocated by the Commission is necessary to ensure proper functioning of the technologies they have developed.

A. DSRC Can Save Lives, Prevent Injuries, And Improve First Responder Capabilities.

In the 1999 Report and Order allocating the 75 MHz of spectrum to DSRC use, the Commission stated that “[t]he record in this proceeding overwhelmingly supports the allocation of spectrum for DSRC-based ITS applications to increase traveler safety, reduce fuel consumption and pollution, and continue to advance the nation’s economy.”⁵

⁵ *In the Matter of Amendment of Parts 2 and 90 of the Commission’s Rules to Allocate the 5.850-5.925 GHz Band to the Mobile Service for Dedicated Short Range Communications of Intelligence Transportation Services*, ET Docket No. 98-95, Report and Order, 14 FCC Rcd. 18221, 18223 (1999) (“1999 Report and Order”).

1. Commenters acknowledge the life-saving capabilities of DSRC.

ITS America agrees with commenters asserting that the “safety functions of the spectrum must be the foremost consideration.”⁶ Indeed, it is well-established that DSRC is a unique technology for Vehicle-to-Vehicle (“V2V”), Vehicle-to-Infrastructure (“V2I”), and Vehicle-to-Pedestrian (“V2P”) (collectively, “V2X”) communications, and is essential to stopping the upward trajectory of motor vehicle injuries and fatalities.⁷ As ITS America noted in its Comments in this proceeding,⁸ the statistics on motor vehicle fatalities are sobering, to say the least: over 35,000 deaths and millions of serious injuries occurred in 2015 alone, and traffic fatalities — long on the decline — are rising once again, with some estimates asserting that 2015 motor vehicle deaths exhibited the largest year-over-year percent increase in 50 years.⁹ In fact, according to the National Highway Traffic Safety Administration (“NHTSA”) and the Centers

⁶ Comments of Advocates for Highway & Auto Safety, ET Docket No. 13-49, at 1 (filed June 7, 2016) (“Advocates for Highway & Auto Safety Comments”).

⁷ DSRC also has an important role to play in the rollout of semiautonomous and autonomous vehicles. See The Editorial Board, *Lessons from the Tesla Crash*, New York Times (July 11, 2016) http://www.nytimes.com/2016/07/11/opinion/lessons-from-the-tesla-crash.html?_r=0.

⁸ ITS America Comments at 7.

⁹ *Id.* (citing *Motor Vehicle Deaths Increase by Largest Percent in 50 Years*, Press Release, National Safety Council (available at: <http://www.nsc.org/Connect/NSCNewsReleases/Lists/Posts/Post.aspx?ID=103>) (Feb. 17, 2016) (last visited July 6, 2016). See *U.S. Traffic Deaths, Injuries and Related Costs Up in 2015*, US Newsweek (available at: <http://www.newsweek.com/us-traffic-deaths-injuries-and-related-costs-2015-363602>) (Aug. 17, 2015) (last visited July 6, 2016); *U.S. DOT Announces Steep Increase In Roadway Deaths Based On 2015 Early Estimates And Convenes First Regional Summit To Drive Traffic Safety Behavior Changes*, Press Release, National Highway Traffic Safety Administration (Feb. 5, 2016) (available at: <http://www.nhtsa.gov/About+NHTSA/Press+Releases/nhtsa-sees-roadway-deaths-increasing-02052016>) (noting that “[t]he estimated increase in highway deaths follows years of steady, gradual declines. Traffic deaths declined 1.2 percent in 2014 and more than 22 percent from 2000 to 2014”).).

for Disease Control and Prevention (“CDC”), motor vehicle traffic crashes are the leading cause of death for people ages 8 to 34.¹⁰

As many commenters note, current projections are that DSRC technology could address 80% of crash scenarios involving non-impaired drivers.¹¹ Specifically, ITS America agrees with commenters filing in support of equipment manufacturers (like Panasonic and the Motor & Equipment Manufacturers Association) which assert that “DSRC technology provides secure, reliable, and immediate transmissions that are the basis for ‘safety of life’ communications, between vehicles, infrastructure and other road users to avoid or mitigate vehicle crashes,”¹² and that the FCC should “preserve the 5.9 GHz band and its channelization as designed for DSRC safety-of-life and mobility applications.”¹³

Some commenters, citing the “unprecedented and transformative safety benefits” of DSRC technology, oppose sharing efforts in the 5.9 GHz Band between DSRC and U-NII devices.¹⁴ For example, the Colorado Department of Transportation notes in its comments that it opposes any sharing in the 5.9 GHz Band between DSRC and U-NII devices, asserting that “saving lives is the ‘highest and best use’ of spectrum,” and urging that the Commission “not

¹⁰ *Id.* at 8 (citing *Motor Vehicle Traffic Crashes as a Leading Cause Of Death in the United States, 2008 and 2009*, Traffic Safety Facts Research Note (available at: <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811620>) (last visited July 6, 2016)).

¹¹ Comments of National Safety Council, ET Docket No. 13-49, at 1-2 (filed July 7, 2016) (“National Safety Council Comments”); Comments of the Colorado Department of Transportation, ET Docket No. 13-49, at 1 (filed July 1, 2016) (“Colorado Department of Transportation Comments”).

¹² Comments of Motor & Equipment Manufacturers Association, ET Docket No. 13-49, at 2 (filed July 7, 2016) (“Motor & Equipment Manufacturers Association Comments”).

¹³ Comments of Panasonic Corporation of North America, ET Docket No. 13-49, at 1 (filed July 7, 2016) (“Panasonic Comments”).

¹⁴ Colorado Department of Transportation Comments at 1.

lose sight of how we can save lives with this technology as well as potentially transform mobility on our roads.” The Mid-Region Metropolitan Planning Organization agrees, stating that the FCC should “preserve the 5.9 GHz Band and its channelization as designed for DSRC safety-of-life benefits and mobility applications.”¹⁵

2. DSRC has the potential to significantly improve first responder capabilities.

In addition to the more immediate life-saving properties of DSRC, comments filed by the Association of Public-Safety Communications Officials-International note that DSRC “could provide dynamic capabilities to responders on scene and in transmitting/receiving data to/from PSAPs [Public Safety Answering Points] and responders. . . . This would assist public safety telecommunicators with getting the needed resources to those in need more quickly and providing critical pre-arrival information to responders.”¹⁶ Indeed, an informal coalition of national emergency medical services (“EMS Coalition”) noted in the record that:

The Connected Vehicle Reference Implementation Architecture includes several specific public safety and first responder applications: Emergency Vehicle Preemption; Advanced Automatic Crash Notification Relay; Emergency Communications and Evacuation; Incident Scene Pre-Arrival Staging Guidance for Emergency Responders; Incident Scene Work Zone Alerts for Drivers and Workers; Warnings About Hazards in a Work Zone; Warnings About Upcoming Work Zone; Emergency Vehicle Alert; Slow Vehicle Warning; Stationary Vehicle Warning; and Vehicle Emergency Response.¹⁷

¹⁵ Comments of Mid-Region Metropolitan Planning Organization, ET Docket No. 13-49, at 1 (filed July 7, 2016) (“MRMPO Comments”).

¹⁶ Comments of the Association of Public-Safety Communications Officials-International, ET Docket No. 13-49, at 2 (filed July 7, 2016) (“Association of Public-Safety Communications Officials-International Comments”).

¹⁷ Joint Comments of The National Association of State EMS Officials, The International Association of Fire Chiefs, The National Sheriff’s Association; The National Association of EMS Physicians; International Association of EMS Chiefs, The National Association of EMS Educators, and The Paramedic Foundation, ET Docket No. 13-49, at 2-3 (filed July 7, 2016) (“EMS Coalition Comments”).

In addition, the EMS Coalition stated that “DSRC technology will improve mission critical mobility for all public safety organizations. Ambulance, police cars, fire trucks, and other emergency vehicles could alert others to their presence and assert priority while in transit to an incident.”¹⁸ ITS America agrees with commenters that these critical safety-of-life DSRC functions must not be compromised, and must be fully supported and protected from interference.¹⁹

B. DSRC Requires The Full 75 MHz Allocation For Deployment; It Cannot Be Picked Apart With Arbitrary Judgments About What Will Not Affect The Efficacy Of DSRC Systems.

1. DSRC applications require the full 75 MHz granted by the Commission.

The FCC recognized the essential nature of DSRC in allocating spectrum back in 1999.

In pertinent part, the 1999 Report and Order notes:

Based on the record, we conclude that an allocation of 75 megahertz of spectrum is warranted. First, we note that DSRC applications are a key element in meeting the nation’s transportation needs into the next century and in improving the safety of our nation’s highways. With this goal in mind, we agree with DOT that it is important to provide sufficient spectrum to facilitate the development and growth of DSRC applications. . . . Therefore, we find that 75 megahertz of DSRC spectrum within the United States is warranted due to the scope of the National ITS architecture, the incumbent operations in this band in the U.S. and consideration [of] DSRC developments domestically and internationally.²⁰

¹⁸ *Id.* at 3.

¹⁹ See Comments of Transit Department of the City of Albuquerque, ET Docket No. 13-49, at 4 (filed July 7, 2016) (“ABQ RIDE Comments”); Comments of Cohda Wireless, ET Docket No. 13-49, at 4 (filed July 7, 2016) (“Cohda Wireless Comments”).

²⁰ 1999 Report and Order, at 18223.

The rationale behind the grant of the 75 MHz has only become more compelling since the 1999 Report and Order. The National Safety Council in particular notes that extensive testing has showed that the best way for V2V to operate is with seven 10 MHz wide channels.²¹

2. Contrary to commenters' assertions, there is no validity to claims in the record that shared use can be achieved by making distinctions between safety-of-life applications and non-safety applications.

Some commenters assert that shared use of the 5.9 GHz Band can be based on a distinction between applications critical for safety-of-life and normal commercial applications.²² This is simply not the case. It is impossible to separate DSRC services into discrete safety/non-safety categories. Any such separation would be arbitrary and meaningless, as DSRC applications based on the national architecture have been planned, designed, and implemented as an integrated ecosystem to enhance the safety of surface transportation. Separation of the services on this basis would forestall an organic evolution of DSRC to its full state and would conflict with years of planning, investment, and deployment, and ultimately would harm the public.

The American Association of State Highway and Transportation Officials ("AASHTO") confirms this in its comments: "With few exceptions, there is no 'bright line' between safety and non-safety messages."²³ There are seven currently identified categories of message services; some categories that may not appear to be safety-related can become critically safety-related.²⁴

²¹ National Safety Council Comments at 2.

²² Comments of Open Technology Institute at New America, Public Knowledge, Engine, Common Cause, and Next Century Cities, ET Docket No. 13-49, at 30 (filed July 7, 2016) ("Public Interest Spectrum Coalition Comments").

²³ Comments of American Association of State Highway & Transportation Officials, ET Docket No. 13-49, at 6 (filed July 7, 2016) ("AASHTO Comments").

²⁴ *Id.* at 7.

In fact, AASHTO goes one step farther, noting that beyond being a bad idea, “[s]pectrum segmentation would have the effect of limiting ITS use of [DSRC] to the transmission and reception of only the defined Basic Safety Message (BSM), which is only one component of the planned and defined message sets available.”²⁵ According to AASHTO, re-channelization — one of the main proposals set forth for consideration in the *Public Notice* — mistakenly assumes that some channels are not critical to safety, when in fact, connected and autonomous vehicles may not be able to survive a spectrum squeeze.²⁶

ITS America agrees with the large majority of Commenters who note that sharing should only be a viable option if it is technically feasible and will not harm safety operations.²⁷ For example, Inmarsat notes that “[a]s the FCC moves forward with developing a feasible U-NII-4 sharing approach, it is critical to recognize, support and ensure the safety aspects of existing and new ITS services in the band.”²⁸

III. THE COMMENTS SHOW THAT DSRC IS DEPLOYED IN KEY OPERATIONS THROUGHOUT THE NATION AND IS POISED FOR WIDESPREAD DEPLOYMENT.

As a majority of the comments detail, federal and state governments have invested significant time and money into developing DSRC systems.²⁹ Many applications of DSRC are

²⁵ *Id.* at 6.

²⁶ *Id.* at 18-19.

²⁷ *See id.* at 19-20; Comments of Institute of Transportation Engineers, ET Docket No. 13-49, at 4 (filed July 7, 2016) (“Institute of Transportation Engineers Comments”).

²⁸ Comments of Inmarsat, ET Docket No. 13-49, at 1 (filed July 7, 2016) (“Inmarsat Comments”).

²⁹ Comments of Washington State Department of Transportation, ET Docket No. 13-49, at 2 (filed July 7, 2016) (“WDOT Comments”); Comments of Arizona Department of Transportation, ET Docket No. 13-49, at 1 (filed July 7, 2016) (“ADOT Comments”); Comments of Metropolitan Transportation Commission, ET Docket No. 13-49, at 2 (filed July 6, 2016) (“MTC

poised for deployment and the public and private sectors have spent significant resources to develop and test the use of V2X technology.³⁰

A. Commenters Recognize That DSRC Is Essential, And After Many Years Of Research, Development, And Testing, DSRC Applications And Services Are Poised For Deployment.

DSRC technologies are being deployed because of the Commission’s critical decision to allocate the 75 MHz of spectrum to DSRC.³¹ As ITS America noted in its comments, the FCC allocation and rules consistent with the national architecture spurred enormous efforts by standards bodies to develop cooperative crash avoidance and active traffic management applications, and the Department of Transportation is developing guidelines addressing V2I communications.³²

Industry has paid attention and kept pace. In fact, many technology firms have made considerable investments in DSRC development. According to comments filed by Delphi, that company “is on target to launch V2V DSRC devices for GM’s Model 2017 Cadillac CTS vehicles, scheduled for August 1, 2016, and the MTC Ann Arbor Smart City Pillar 1 later this year.”³³ In its comments, GM explains that:

Comments”); Comments of Maricopa County Department of Transportation, ET Docket No. 13-49, at 1 (filed July 6, 2016) (“Maricopa DOT Comments”); ABQ RIDE Comments at 3; MRMPO Comments at 1; Comments of New Mexico Department of Transportation, ET Docket No. 13-49, at 3 (filed July 5, 2016) (“NMDOT Comments”).

³⁰ Comments of International Bridge, Tunnel and Turnpike Association, ET Docket No. 13-49, at 2 (filed July 7, 2016 (“IBTTA Comments”).

³¹ See NMDOT Comments at 2-3.

³² See 2015 FHWA Vehicle to Infrastructure Deployment Guidance and Products, available at: http://www.its.dot.gov/meetings/pdf/v2i_deploymentguidancedraftv9.pdf.

³³ Comments of Delphi, ET Docket No. 13-49, at 1 (filed July 6, 2016) (“Delphi Comments”). Moreover, Delphi notes that it is “currently deploying the full 75 MHz DSRC spectrum as defined by various governing transportation commissions. The DSRC system has been

DSRC technologies within the existing 5.9 GHz plan have been successfully tested, and are being deployed in the market. . . . Based on the Commission’s channelization plan, and relying on the assumption that the Commission would keep the 5.9 GHz band free from harmful interference, GM and other automakers invested considerable resources in developing safety of life solutions for V2X communication systems using DSRC.³⁴

Continued interference free access to the 5.9 GHz Band is necessary to achieve the public safety benefits of DSRC. In light of the substantial efforts undertaken by industry and governments alike, it is understandable that some commenters express concern over a deviation in the availability of DSRC at this late point. For example, the City of New York explains in its comments that “[r]ecent proposals have introduced tremendous uncertainty as to whether enough spectrum will continue to be available to automakers and public agencies to support the full range of traffic safety technologies.”³⁵ Moreover, the City’s “Vision Zero initiative [has already saved lives] through driver education, targeted enforcement, infrastructure redesign, . . . and new vehicle technology.”³⁶ As a result, New York City asserts that “[m]ore aggressive steps must be taken to continue our momentum,” and it disagrees with “any proposal that would weaken the City’s Vision Zero initiative or require jurisdictions like the City of New York to undertake a re-engineering and retesting effort before being able to deploy any connected vehicle safety applications, delaying implementation and reducing by millions the funding available for deployment.”³⁷

specifically designed to meet the high speed, high congestion and high positional accuracy for secure coverage for every type of commercial transport system.” Delphi Comments at 2-3.

³⁴ Comments of General Motors Company, ET Docket No. 13-49, at 1, 4 (filed July 7, 2016) (“GM Comments”).

³⁵ Comments of the City of New York, ET Docket No. 13-49, at 2 (filed July 7, 2016) (“NYC Comments”).

³⁶ *Id.* at 2.

³⁷ *Id.* at 2-3.

B. Suggestions That DSRC Is Outdated, Unnecessary, And Will Be Replaced By Other Technologies (such as LTE, 5G) Are Misplaced.

DSRC has been planned and designed as a backbone of a national ecosystem for safer surface transportation. As evinced by the record, DSRC has attained a critical and growing momentum. Importantly, other systems have not presented a solution to the basic needs identified by the national architecture. It may be that there will always be a better technology “around the corner.” That can be said of any service, but it should not serve as a reason to disrupt progress and delay the benefits of DSRC. In any event, there is no other technology designed at this point that would meet the needs of Intelligent Transportation Systems other than DSRC. And, no other technology has the built the consensus and community to overcome institutional, legal, and economic barriers as has DSRC to meet the needs of ITS.

IV. THE COMMENTS ESTABLISH THAT RE-CHANNELIZATION OF THE DSRC BAND WOULD STRAND THE MORE THAN ONE BILLION DOLLARS OF PUBLIC AND PRIVATE INVESTMENT, FORCE STAKEHOLDERS TO RE-DESIGN DSRC DEVICES, AND CAUSE A LENGTHY DELAY IN WIDESPREAD DEPLOYMENT.

Without question, the cost of re-channelization would be disruption and delay in improving the safety of our surface transportation network at a cost measured in lives lost. As the Motor Equipment & Manufacturers Association notes in its comments, “DSRC is result of demanding R&D and *validation to ensure safety*.”³⁸ As ITS America and other industry stakeholders note, more than a billion dollars in research, development, and testing based on the channel plan of 10 MHz wide channels that accommodate the requirements for very low latency, stability and reliability have been expended to meet the Commission’s goals for safety-of-life technology. To adopt the re-channelization plan at this late point “would nullify the investments

³⁸ Motor & Equipment Manufacturers Association Comments at 3 (emphasis added).

already made under the current channelization and delay DSRC's benefits by several years."³⁹

ITS America reiterates its comments on this point, noting that under the re-channelization approach, "the evolving V2X standards and application ecosystem would be disrupted, and enormous costs and delays would be placed on the companies that have invested in DSRC end-user equipment, services and standards."⁴⁰

A. Re-channelization will require significant updates—both to hardware and software applications—resulting in significant implementation delays.

The overwhelming majority of commenters agree that re-channelization will require hardware and software redesigns and would cause significant delays to implementation.⁴¹ State and municipal transportation agencies — operating on appropriated budgets — are understandably highly committed to the investments made to date. For example, the New Mexico Department of Transportation notes that:

Re-channelization will delay and limit the safety benefits of V2V, V2i, and V2P. Each of the seven channels carries safety-of-life applications. Compressing what was intended for all seven channels into the upper 30 MHz would dramatically restrict the functionality of DSRC applications. Also, placing the BSMs in Channel 172 near higher-power public safety applications in Channel 184 would degrade and endanger the BSMs.⁴²

The Metropolitan Planning Organization similarly states that:

³⁹ *Id.* at 4.

⁴⁰ ITS America Comments at 10.

⁴¹ Comments of Hyundai Motor Group, ET Docket No. 13-49, at 2 (filed July 7, 2016) ("Hyundai Comments") ("A redesign of the V2X systems would likely cause significant delays in implementing the technology in production vehicles."); Panasonic Comments at 5; Cohda Wireless Comments at 3; Motor & Equipment Manufacturers Association Comments at 4; Comments of Toyota Motor Corporation, ET Docket No. 13-49, at 11 (filed July 7, 2016) ("Toyota Comments").

⁴² NMDOT Comments at 3.

Re-channelization would delay and limit the safety benefits of V2V, V2I and V2P applications by imposing high and unexpected costs on MTC and its partners to reinstall or update equipment and revise system documentation. This would make near-term deployment of safety-critical devices very difficult.⁴³

The Utah Department of Transportation explains:

Any modification to the channel plan of DSRC spectrum will delay the deployment of DSRC technologies. Utah is involved in DSRC planning efforts among multiple states, and any modification to the channel plan of DSRC spectrum will negatively impact all these deployments and delay the deployment of life-saving technologies.⁴⁴

The Mid-Region Metropolitan Planning Organization agrees, noting that:

A selection of any proposal that calls for re-channelization of the 5.9 GHz band will damage and delay the technology for safety of life V2V, V2I, and V2P communications. Specifically, a re-channelization proposal would require substantial DSRC system re-design and testing to ensure that the new channelization plan could successfully support any DSRC applications. Additionally, the selection of a re-channelization approach would cost hundreds of millions of dollars in wasted research, development, and investment.⁴⁵

Maricopa County Department of Transportation asserts that “[a]ny proposal that calls for the re-channelization of 5.9 GHz will set back the future of traffic safety several years and cost hundreds of millions of dollars in wasted research, development and investment” and that re-channelization will “nullify the \$3 million DSRC investment already made in Maricopa County, and delay DSRC’s benefits by several years (as time and resources will be spent on re-tooling and testing current DSRC systems),”⁴⁶ while Washington Department of Transportation explains

⁴³ MTC Comments at 2.

⁴⁴ Comments of the Utah Department of Transportation, ET Docket No. 13-49, at 3 (filed July 7, 2016) (“UDOT Comments”).

⁴⁵ MRMPO Comments at 1-2.

⁴⁶ Maricopa DOT Comments at 1-2. The list of Departments of Transportation asserting that re-channelization would be detrimental to DSRC efforts go on and on. *See e.g.*, ADOT Comments at 1 (“The FCC should preserve the 5.9 GHz band and its channelization for DSRC. Re-channelization of the 5.9 GHz band will set back traffic safety for years and cost hundreds of millions of dollars by nullifying research, development and testing.”); UDOT Comments at 3 (“A re-channelization approach could waste resources. Based on Utah state DSRC deployments,

that low power and high power functions are currently separated; placing them in close proximity could be harmful.⁴⁷

State and municipal transportation agencies are not alone in rejecting re-channelization. Equipment manufacturers also note in their comments that “[r]e-channelization would impair the safety benefits of V2X applications and nullify investments already made under the existing channel plan and set back DSRC deployment several years.”⁴⁸ Vehicle manufacturers assert that “[c]hannel reallocation without evaluating the effectiveness and reliability of any interference mitigation techniques could compromise the performance of these concurrent V2X services.”⁴⁹

Specifically, in its comments, Volvo notes that:

The proposed re-channelization concept would require the entire DSRC system to be redesigned. Lumping DSRC channels without any guard band poses significant risks in terms of in-band, adjacent, and spurious channel interferences, thereby restricting the number of “reliable” channels available for safety applications. [The Commission should conduct] substantial testing to ensure that anticipated use cases for DSRC technology are not compromised as a result of the spectrum reallocation.⁵⁰

a re-channelization of DSRC communications would cause Utah to lose several years of time and resources spent on modifying hardware, redefining standards, modifying software.”); ABQ RIDE Comments at 2-3 (“The Commission should not select a re-channelization proposal. Any proposal that calls for re-channelization of the 5.9 GHz band will set back the future of traffic safety by several years (by delaying and limiting the safety benefits of V2V, V2I, and V2P), and cost hundreds of millions of dollars in wasted research, development, and investment. Additionally, a re-channelization proposal would cause a delay in rolling out DSRC technology, as such a proposal would require a substantial amount of DSRC system re-design and retesting to ensure that the new channelization plan successfully supports any DSRC applications.”).

⁴⁷ WDOT Comments at 2-3.

⁴⁸ Panasonic Comments at 4.

⁴⁹ Comments of Volvo Group North America, ET Docket No. 13-49, at 3 (filed July 7, 2016) (“Volvo Comments”).

⁵⁰*Id.*

Ford Motor Company agrees, explaining that “the re-channelization concept would require a DSRC system redesign, thereby most likely delaying V2V safety communications deployment and potential safety benefits of V2V DSRC applications in the 5.9 GHz band.”⁵¹ Ford, like many commenters, also noted several issues that must be resolved before even considering re-channelization as a viable option, including “[i]nterference to upper channels when Wi-Fi is introduced in the lower part of the band; [a]djacent channel interference when the three upper channels are used simultaneously; and [t]he protocol for sharing between Wi-Fi and DSRC in the lower part of the band.”⁵²

Cohda Wireless, which “has extensive experience in the design and execution of Cooperative Intelligent Transport Systems (C-ITS) programs, and is internationally recognized for the quality of outcomes from its . . . V2X hardware and software deployments” agrees that “[r]e-channelization will delay and limit the safety benefits of V2V, V2I, and V2P,” will “essentially damage or severely delay the future of much safe traffic,” and “would require a substantial amount of DSRC system re-design and testing to ensure that the new channelization plan could support DSRC applications.”⁵³ Moreover, the joint comments filed by the EMS Coalition note that “[t]he re-channelization proposal, which will leave only one channel (Channel 184) for public safety use, may be insufficient to support the large number of applications described in the Connected Vehicle Architecture,” and that the “current channelization separates the lower power V2V BSM-based applications in Channel 172 from the

⁵¹ Comments of Ford Motor Company, ET Docket No. 13-49, at 2 (filed July 7, 2016) (“Ford Comments”).

⁵² *Id.* at 3-4.

⁵³ Cohda Wireless Comments at 1, 3.

higher power public safety applications in Channel 184.”⁵⁴ The EMS Coalition expresses concern that putting these functions in close proximity would likely “degrade and endanger the BSM-based applications.”⁵⁵

B. Others Argue — Without Support — That Re-Channelization Will Not Cause Delays To DSRC Deployment Because It Will Require A Simple Software Upgrade, Rather Than Updated Hardware.

Notwithstanding irrefutable evidence to the contrary, expert technical opinions, and the record established from the 2013 NPRM, some argue that re-channelization will not cause delays to DSRC deployment, as new software can be integrated into existing systems to move channels.⁵⁶ In support of its proposal, Qualcomm asserts that “[r]e-channelization does not require any hardware changes, a major reworking of DSRC standards, or significant retesting.”⁵⁷ Specifically, Qualcomm asserts that movement of the safety-of-life operations to the upper portion of the band “can be achieved through software changes and can be carried out quickly.”⁵⁸ As cited above, many other parties that have dedicated their businesses and careers to DSRC and to traffic safety do not agree. In this regard, and based on the overwhelming majority view expressed in the record, Qualcomm is an outlier in its stated view.⁵⁹

⁵⁴ EMS Coalition Comments at 3.

⁵⁵ *Id.*

⁵⁶ Comments of Qualcomm, Inc., ET Docket No. 13-49, at 13 (filed July 7, 2016) (“Qualcomm Comments”).

⁵⁷ *Id.* at 9.

⁵⁸ Qualcomm Comments at 9.

⁵⁹ *See* Joint Reply Comments Of The Alliance Of Automobile Manufacturers, Association Of Global Automakers, Intelligent Transportation Society Of America, And Denso International America, Inc. at 5-6, *Revision of Part 15 of the Commission’s Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, ET Docket No. 13-49 (filed on July 22, 2016)(“Joint Reply Comments”).

C. Re-Channelization Would Destroy International Harmonization And Economies Of Scale In Production.

1. Re-channelization in the U.S. may have a cascading impact globally such that regulators in other countries may be less willing to rely upon U.S. leadership in technological development.

The U.S. and FCC have been world leaders in establishing a platform for a robust DSRC deployment by allocating the 5.9 GHz Band to DSRC operations. Indeed, other regions relied on robust U.S. DSRC deployment in their development efforts. ITS America agrees with comments that “[t]he re-channelization approach does not support harmonization with emerging global markets.”⁶⁰ In fact, according to Comments filed by the Car 2 Car Communications Consortium, the “European Conference of Postal and Telecommunications Administration (CEPT) regulators have clearly stated that reallocation of ITS channels is not an option and the existing channelization arrangements will not be changed.”⁶¹ Thus, introducing unlicensed devices in the 5.9 GHz Band could “negate the many efforts towards international harmonization,” setting the U.S. up as “the only country with an unregulated and unlicensed component allowed in this spectrum reserved for [safety-of-life] applications.”⁶²

In addition, according to comments filed by AASHTO, “[c]hanges to the data rate without full international agreement would further isolate the US from participating in the

⁶⁰ Comments of Car 2 Car Communications Consortium, ET Docket No. 13-49, at 2 (filed July 7, 2016) (“Car 2 Car Comments”).

⁶¹*Id.* Car 2 Car also notes that “Channel reallocation to avoid interference between DSRC and Wi-Fi is not feasible. In Europe, spectrum above 5925 MHz is heavily used for high-capacity fixed services point-to-point links. In Europe, re-channelization would potentially cause interference in the upper 20 MHz of the DSRC band.” *Id.*

⁶² AASHTO Comments at 7.

international arena as vehicles used here would become unable to utilize this life saving technology when crossing [national] borders.”⁶³

V. THE RECORD ESTABLISHES THAT DETECT AND AVOID SHARING BETWEEN DSRC AND UNLICENSED DEVICES WOULD BE APPROPRIATE ONLY IF TESTING ESTABLISHES THAT IT WILL NOT CAUSE INTERFERENCE TO DSRC SYSTEMS.

Commenters assert — and ITS America agrees — that “V2X safety-of-life technology requires a high level of accuracy, reliability, and cooperation,” and that the industry is currently prepared to bring these systems to market.⁶⁴ ITS America agrees with the majority of commenters that the detect and avoid sharing proposal — if proven to be technically feasible — is the only option that allows the use of the current DSRC system design and that will not require extensive and expensive redesign and retrofitting for equipment that industry is already prepared to bring to market.⁶⁵

A. Detect And Avoid Is The Only Feasible Method For Sharing That Would Not Require A DSRC Redesign And Destroy Years Of Investment.

The auto manufacturer commenters support the testing of sharing utilizing the detect and avoid approach. GM states in its comments that “[t]he detect and avoid approach potentially presents a promising pathway to protect safety while also permitting alternative use of the spectrum.”⁶⁶ Specifically, GM explains that “[b]y retaining the existing band plan, the detect and avoid approach would minimize the risk of interference to safety of life DSRC while making

⁶³ *Id.*

⁶⁴ Hyundai Comments at 2.

⁶⁵ Ford Comments at 2.

⁶⁶ GM Comments at 7.

significant 5.9 GHz spectrum available for unlicensed use.”⁶⁷ In addition, according to comments by Toyota:

The detect and avoid approach more effectively minimizes the interference risks to DSRC and does not require significant changes to DSRC. This approach would avoid co-channel interference from U-NII devices, and avoid cross-channel interference from U-NII devices. This approach also does not delay or disrupt the deployment of current DSRC applications. This approach has support from a broad cross section of stakeholders.⁶⁸

Hyundai agrees. In its comments, the auto manufacturer notes that “DSRC is an important step for enhancing future crash avoidance systems, including autonomous vehicles. If ‘detect and avoid’ is confirmed to work as designed, Hyundai supports this approach because it does not require a V2X system redesign.”⁶⁹

B. Consistent With FCC Precedent And The Status Of Unlicensed Devices Under Part 15, The Burden Of Establishing Non-Interference Is On The Unlicensed Device.

As most commenters recognize, however, there are a number of issues with the “detect and avoid” approach that ITS America and other commenters recognize must be addressed before it — or any spectrum sharing scheme — can be adopted.

For example, AASHTO asserts that: “[s]pectrum sharing would be problematic. A spectrum sharing approach that dedicates only a small portion of spectrum to ITS or that requires the creation of a database of fixed locations would be unable to account for the mobile nature of units and compromise most DSRC units. *Spectrum sharing should only be allowed where it’s technically feasible and would not compromise DSRC, as confirmed by field testing.*”⁷⁰ Thus,

⁶⁷ *Id.*

⁶⁸ Toyota Comments at 2-3.

⁶⁹ Hyundai Comments at 1. *See supra* note 7.

⁷⁰ AASHTO Comments at 6-8.

first and most importantly, “[a]ny spectrum sharing must be proven to be completely and reliably safe without interference to the safety of life functions of DSRC,” and “[t]he sharing of the 5.9 GHz spectrum band is supported on a not-to-interfere basis and with priority to DSRC, as long as it can be positively proven that any unlicensed sharing of the band will not impede the safety of life functions of DSRC.”⁷¹

1. Incumbent DSRC users must be given priority usage.

In accordance with the FCC’s Part 15 rules for unlicensed operations, the incumbent, licensed DSRC users must always be given priority usage.⁷² The Commission explained this regulatory construct in the 2013 Progeny Order, where it “affirmed that unlicensed devices would continue to operate under Part 15 of the Commission’s rules in this band, and that persons operating unlicensed devices must accept interference from all other operations in the band, including M-LMS, and have no vested or cognizable right to continued use of any given frequency.”⁷³

C. Advocates For Unlicensed Use Erroneously Contrive An Argument For “Regulatory Parity” Between Services.

The New Mexico Department of Transportation notes that the *Public Notice* appears to put safety-of-life operations on an equal footing with Wi-Fi operations.⁷⁴ Moreover, it is clear from the record that certain proponents of DSRC and U-NII sharing in the 5.9 GHz Band believe

⁷¹ ABQ RIDE Comments at 3-4; *see* ADOT Comments at 1.

⁷² WDOT Comments at 2; ADOT Comments at 1; MTC Comments at 2; Comments of Michigan Department of Transportation, ET Docket No. 13-49, at 1 (filed July 7, 2016) (“MIDOT Comments”); Maricopa DOT Comments at 2; ABQ RIDE Comments at 4; NMDOT Comments at 4.

⁷³ *Request by Progeny LMS, LLC for Waiver of Certain Multilateral Location and Monitoring Service Rules*, Order at para. 10, WT Docket No. 11-49, FCC 13-78 (2013).

⁷⁴ NMDOT Comments at 4.

that unlicensed operations deserve a higher priority than what they are granted under the FCC's rules. NCTA's comments seem to completely overlook the licensed status of all DSRC operations, asserting that "Cisco's 'Sense-and-Avoid' proposal is sharing in name only and would drastically and unnecessarily limit unlicensed access even for non-safety DSRC operations."⁷⁵ This statement shows a misunderstanding of the basic priority status afforded Commission licensees, as opposed to entities operating without a license.

D. Potential Harm To DSRC Systems Must Be Tested.

ITS America reiterates record comments that "[a]ny interruption in the process of developing DSRC would be detrimental," and that "[a]ny impairment to the operation of DSRC will undermine investments made" by a number of public and private actors.⁷⁶ As a result, ITS America agrees with comments filed by the Advocates for Highway and Auto Safety, which state that the sharing method selected by the FCC "should be well-researched and proven the unimpeded transmission of motor vehicles safety communications as the primary function of the spectrum."⁷⁷

⁷⁵ Comments of the National Cable & Telecommunications Association, ET Docket No. 13-49, at 24 (filed July 7, 2016) ("NCTA Comments").

⁷⁶ NYC Comments at 2; *see also* Motor & Equipment Manufacturers Association Comments at 3-4.

⁷⁷ Advocates for Highway and Auto Safety Comments at 1. *See* Maricopa DOT Comments at 1 ("The use of DSRC in the 5.9 GHz band according to the current channel plan should be preserved. Any sharing protocol must work around current and planned deployments of DSRC applications, and testing must be conducted to determine that the protocol is safe before any sharing implementation."); *see also* WDOT Comments at 1-2 ("Sharing should be allowed only if it is demonstrated there will not be interference or other negative effects. The burden of proof is on those who advocate sharing, not incumbents."); MRMPO Comments at 2 ("Any spectrum sharing must be proven to be completely and reliably safe without interference to the safety of life functions of DSRC.").

Safety must be the foremost consideration. Some commenters express concern that the testing schedule set forth in the *Public Notice* is unrealistic. For example, in its comments, Ford Motor Company asserts that “[t]he FCC’s test plan has an aggressive timeline. The FCC should not allow unlicensed U-NII use of the 5.9 GHz band unless a set of rules and test procedures can be developed to show DSRC systems are protected from harmful interference.”⁷⁸ Further, the EMS Coalition urges “[t]he FCC [to] adopt a reasonable schedule of testing that is based on what is required to show empirically that sharing can be done safely.”⁷⁹

Other commenters express concern about the nature of the tests. For example, the Utah Department of Transportation notes that “[t]here are serious concerns about any detect and avoid sharing techniques. [A]ny field-testing which does not involve multiple fixed and hundreds of moving DSRC units will lead to erroneous and incomplete testing results.”⁸⁰ Similarly, SES S.A. and Intelsat S.A. note that “[t]he questions posed and the test plan presented in the Public Notice fail to take FSS operations into account, particularly with respect to the potential aggregate interference the incumbent FSS satellites may experience from the ubiquitous nature of unlicensed U-NII devices.”⁸¹

⁷⁸ Ford Comments at 4.

⁷⁹ EMS Coalition Comments at 4.

⁸⁰ UDOT Comments at 2. *See* Comments of the National Public Safety Telecommunications Council, ET Docket No. 13-49, at 7 (filed July 7, 2016) (“NPSTC Comments”) (“[Interference] testing should also incorporate to the maximum extent possible real world conditions expected to be experienced as DSRC technology and deployment advances to enable greater traffic safety. . . . For example, Phase III testing could include testing a use case comparable to having DSRC operation in multiple vehicles and roadside units at an urban intersection with multiple U-NII devices within and outside nearby buildings.”).

⁸¹ Comments of SES S.A. and Intelsat S.A., ET Docket No.13-49, at 2 (filed July 7, 2016) (“SES S.A. & Intelsat S.A. Comments”).

1. A minority of commenters assert that the detect and avoid approach is unappealing, claiming that the plan is not as “efficient” as re-channelization.

A small group of commenters assert that the detect and avoid approach is inefficient. In particular, the Wireless Internet Service Providers Association (“WISPA”) avers that the detect and avoid approach “is the very definition of inefficiency,” claiming that a “complete rendering of all DSRC band channels unavailable for unlicensed use is plainly overkill, and would inevitably result in a continued waste of the 5.9 GHz band’s available spectrum, to the detriment of consumers that could otherwise use the spectrum for fixed wireless broadband access.”⁸² Moreover, WISPA complains about the possibility that it would have to incorporate sensor technology akin to Dynamic Frequency Selection in the U-NII-2 bands, which it claims might lead to greater manufacturing costs and which might require that additional equipment authorization procedures be followed.⁸³

WISPA’s claims, however, rely on a number of erroneous observations. First, WISPA’s assertion ignores that fact that safety-of-life operations may be indistinguishable from commercial applications because of the interwoven nature of the intelligent transportation ecosystem. Second, “continued waste” would presuppose that there is waste to begin with, and as a substantial number of record accounts show, the 5.9 GHz Band has been used to perform vigorous research, development, and testing, by any number of stakeholders, who are now ready to deploy DSRC apps and services on a large scale. Third, while access to spectrum for fixed wireless broadband access is important, ITS America—and majority of the commenters—believe that consumer access to safer roadways is even more critical because it has the potential to save

⁸² Comments of the Wireless Internet Service Providers Association, ET Docket No. 13-49, at 5-6 (filed July 7, 2016) (“WISPA Comments”).

⁸³ *Id.*

lives, and as the Colorado Department of Transportation notes, it is the “highest and best” use for the spectrum.⁸⁴ Finally, additional costs for sensor technology and additional procedures for equipment registration seem a small price to pay to help ensure that vital DSRC operations continue to function without impairment from interference, especially as unlicensed operations will not otherwise bear the costs of the spectrum they use.

2. Other commenters assert that re-channelization protects DSRC systems by placing them in spectrum that is off-limits to unlicensed Wi-Fi.

While it is clear that the “re-channelization proposal provides substantial benefits for unlicensed Wi-Fi operations. . . enabl[ing] unlicensed Wi-Fi [to] use two additional 40 MHz channels, an additional 80 MHz channel, and an additional 160 MHz-wide channel,”⁸⁵ what is less clear to a majority of commenters — including ITS America — is how this helps the nation achieve more safe roadways.

Other commenters claim that re-channelization affords more protection to DSRC because it “places [DSRC safety-of-life] communications in spectrum that remains exclusively allocated to DSRC that also is as far away as possible, and thus avoids [OOB] emissions.”⁸⁶ In the 1999 Report and Order, the Commission noted that “the 5.9 GHz range [is] appropriate for DSRC applications due to its potential compatibility with European and Asian DSRC

⁸⁴ See Letter from Peter DiFazio, Ranking Member of the Committee on Transportation and Infrastructure, US House of Representatives, to Anthony Foxx, Secretary of the Department of Transportation, and Thomas Wheeler, Chairman of the Federal Communications Commission (July 20, 2016)(“While I understand the desire for more unlicensed WiFi spectrum, the desire for better Pokemon Go play cannot be compared to the 35,000 motor vehicle deaths every year. . . . There is no other public interest need for this spectrum that rises to this level of importance.”).

⁸⁵ Qualcomm Comments at 5.

⁸⁶ *Id.* at 3-4.

developments, the availability of radio technology, signal propagation characteristics, and the available spectral capacity in this spectrum range. . . . After carefully reviewing the record, we conclude that an allocation of spectrum in the 5.9 GHz region is the best available choice for DSRC applications.”⁸⁷

3. Detect and Avoid will require extensive testing prior to deployment to ensure that the U-NII systems “see” the DSRC signal and move channels.

“[T]esting is necessary... in actual urban business centers,” not just atypical test beds.⁸⁸ The FCC’s Phase III test plan is insufficient,⁸⁹ as noted by AASHTO. Volvo notes that “[a]nalyzing and quantifying the interference potential introduced to DSRC receivers from unlicensed transmitters operating simultaneously in the 5.850-5.925 GHz band is essential.”⁹⁰ A majority of the commenters believe that regardless of what sharing plan is adopted, substantial planning and testing must come first to ensure that DSRC is not compromised and that vital safety-of-life operations continue to support the ultimate goal — significantly safer roadways for American consumers.

⁸⁷ 1999 Report and Order at 18224. *See also* Joint Reply Comments at 4-5.

⁸⁸ AASHTO Comments at 16.

⁸⁹ AASHTO Comments at 17. *See* ADOT Comments at 1 (“Thorough testing must be completed to determine whether any change in the protocol is safe before sharing implementation.”). *See also* Association of Public Safety Communications Officials-International Comments at 2 (“APCO recommends that any sharing arrangement ensure that no harmful interference to public safety applications in the 5.9 GHz band. Any sharing techniques under consideration should undergo substantial testing and be proven effective in advance before being used in ways that could impact public safety communications.”); Comments of Continental, ET Docket No. 13-49, at 1 (filed July 7, 2016) (“Continental Comments”) (similar); MRMPO Comments at 1 (“Thorough testing must be done to determine that the protocol is safe before any sharing implementation.”); MIDOT Comments at 1-2 (similar); NPSTC Comments at 1, 4 (“The FCC should only pursue spectrum sharing in the 5.9 GHz DSRC band if it does not harm the integrity and reliability of current or prospective DSRC intelligent vehicle-to-roadside or vehicle-to-vehicle operations.”).

⁹⁰ Volvo Comments at 3.

VI. CONCLUSION

The Comments clearly establish that DSRC will provide significant public safety benefits and is poised for near-term, widespread deployment. ITS America, along with many other Commentators, urge the Commission to refrain from making any decision that might jeopardize the critical safety-of-life capabilities of DSRC applications and services.

Moreover, ITS America is prepared to support any tests the FCC determines are necessary, and to participate in accompanying stakeholder discussions. Finally, to the extent the Commission finds that spectrum sharing with U-NII devices is preferred in the 5.9 GHz Band, ITS America implores the Commission to take all the necessary steps to ensure that the band sharing plan sufficiently protects DSRC operations from interference.

Respectfully submitted,

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