What They Are Saying About Preserving The 5.9GHz Safety Band

Saving lives by maintaining the Safety Band for Transportation

Qualcomm "…is concerned that the current draft does not immediately allow C-V2X operations in that portion of the band. The draft ruling proposes an indefinite and potentially lengthy "transition period" during which C-V2X still cannot use the spectrum... C-V2X needs the 5.9 GHz spectrum now so that this life-saving technology can be deployed...the draft ruling would permit Out-of-Band Emissions ("OOBE") levels from new U-NII-4 indoor operations that are 30 to 40 dB higher than current U-NII-3 devices are permitted to emit at the 5895 MHz upper edge of the new U-NII-4 band…"

5G Automotive Association "…Automakers like Ford Motor Company want to equip their vehicles with state-of-the-art C-V2X safety technology, and state and local transportation agencies are ready to deploy this technology along their roadways. The Commission can avoid any unnecessary delays by granting 5GAA's 2018 waiver request or implementing the interim transition steps developed by a coalition of automotive, telecommunications, and technology companies…Second, the final rules should provide C-V2X far greater protection from harmful interference caused by unlicensed technologies...The parties strongly encouraged the Commission to instead proceed with rules that more closely align with 5GAA's cross-industry, compromise proposal. Developed in 5GAA's collaborative forum with input from automotive and wireless experts, this balanced proposal represents a better, safer, and more equitable path forward..."

National School Transportation Association: "…part of the school transportation industry's success is due in part to the dedicated spectrum for high-speed safety communications – the 5.9 GHz safety band. Most newly manufactured school buses employ collision mitigation, emergency braking, and stability control technologies, and those systems depend on the 75 MHz available to receive uninterrupted crash avoidance signals."

Institute of Transportation Engineers (ITE): "A broad cross-section of transportation safety experts and stakeholders has clearly objected to anything less than the current 75 MHz of bandwidth. The only support for the proposed reallocation was from those seeking to profit from free access to the spectrum to provide Wi-Fi services... ITE believes that giving away spectrum that has been set aside for life-saving communications is unwise. Any changes to the allocation today would have the effect of hitting the "reset" button and erasing a decade or more of valuable lessons learned - and significantly setting-back nationwide deployment of life-saving technology..."

Alliance for Automotive Innovation: "…Every state DOT supports preservation of 5.9 GHz for auto safety...Interests of every stripe support preserving the entire 5.9 GHz band for auto safety: public safety groups, auto safety groups, wireless industry leaders (AT&T, T-Mobile and Qualcomm), standards setting bodies (IEEE and SAE International), consumer groups, and an array of cycling and walking stakeholders. The record is clear: addressing the nearly 40,000 traffic fatalities that occur each year is an urgent and widely shared national priority... The record reflects that 75 MHz is needed to support critical V2X applications, and a smaller allocation simply would not suffice."

Matthew Moore, Idaho DOT and Mike Tooley, Director, Montana DOT: "The record is clear that the commission's proposal would subject spectrum for transportation safety to harmful interference, reducing or eliminating safety progress and other transportation benefits… In short, the proposal would reduce spectrum available to enhance transportation safety by 45 mhz. Less spectrum means less safety... The

Transportation Departments of Idaho, Montana, North Dakota, South Dakota, and Wyoming continue to strongly recommend prompt withdrawal of the proposed rule in this docket."

Toyota Motor North America, Inc.: Reducing the amount of spectrum available for transportation means that important applications that have been developed or are under development will likely not be offered in the United States and that the full potential of the technology to advance transportation safety will not be realized. We hope that the FCC reconsiders the importance of life-saving V2X technology that will help address more than half of all crashes that on average kill more than 100 people and injure at least an additional 2,000 people every day.

Ford Motor Company: "Ford believes that the greater connectivity enabled by leading ITS technologies like C-V2X will help us to realize the promise of a truly interconnected and automated mobility eco-system… we and the majority of others in the transportation field believe that all 75 MHz of the 5.9 GHz band should be retained for ITS. This capacity will be needed as the technology transitions to 5G and is put to use in AVs. Not only is there widespread support for preservation of the band, but as noted, it is uniquely internationally harmonized allowing for more efficient deployment scenarios globally… These deployments must be protected from harmful interference in order to ensure consistent and reliable interpretation of safety messages."

American Honda Motor Co., Inc.: Honda is pleased to support the reply comments of the Alliance for Automotive Innovation (Auto Innovators), in addition to the recent announcement by the Auto Innovators to unite industry with a commitment to deploy at least 5 million V2X radios and devices by the end of 2025…This announcement marks a groundbreaking step towards widespread V2X deployment and demonstrates the automotive industry's commitment to realizing the full safety potential of V2X technologies. Honda respectfully urges the FCC to amend its proposal and preserve the entire 75 MHz of the 5.9 GHz band to allow the automotive industry to deliver this life saving technology to the American public.

American Public Transportation Association (APTA): "APTA stands with the Department of Transportation and other transportation stakeholders in urging the FCC to ensure that the 5.9 GHz band stays dedicated to transportation safety. To do otherwise would not only put our passengers at risk but would also stem any progress made to deploy lifesaving transportation safety technology in our public transportation vehicles..."

National Federation of the Blind: "...We believe that taking away the majority of the spectrum available for V2X technologies threatens to undermine the ability of these technologies to function, and should not be considered when we are closer than ever before to having fully autonomous vehicles on our roadways. This is especially true, given the recent announcement by the Alliance for Automotive Innovation that the industry will be committing to the deployment of five million radios for V2X communications over the next five years. Each of these devices will need to use the 5.9 GHz band without the possibility of interference in order to maintain safety on American roadways..."

American Trucking Associations (ATA): "ATA is concerned that the FCC does not have the appropriate expertise to properly evaluate the impact that potential rules changes in the 5.9 GHz band can have on the safety and efficiency of the nation's roadways, nor the significant work and investment by industry and all levels of government that is needed to develop and deploy safety-critical technology in the transportation system..."

James Bass, Executive Director, Texas DOT (TxDOT): TxDOT appreciates and acknowledges the economic opportunity associated with unlicensed use, however, as described in our initial comments, the dollar amounts remain largely in favor of preserving the Safety Band...(NHTSA and US DOT V2X)

https://www.fcc.gov/ecfs/search/filings?proceedings_name=19-138&sort=date_disseminated,DESC

numbers firmly justify preservation of the Safety Band from an economic perspective...the opportunity for harmful interference could even create a legal risk that could halt the deployment of V2X technologies...TxDOT remains concerned that the narrowing of the band could have unintended consequences from in-channel interference to the complete end of V2X communication development and use. Both are unacceptable."

DriveOhio: "...For DriveOhio and the Ohio Department of Transportation this is a safety issue, preserving the entire 75 MHz allocation for transportation safety is critical to saving lives...we're concerned that without reserving the entire 5.9 GHz safety spectrum, future development of V2X technologies will be hindered...DriveOhio recognizes the need for ever-evolving technological capabilities, but the success of V2X technology is heavily dependent on the sole use of the 5.9 GHz transportation safety band"

Contra Costa Transportation Authority: "...Taking away 60%, of the 5.9 GHz band and converting it for unlicensed Wi-Fi use will create major limitations for vehicle safety communications. These include interference problems for existing DSRC licensees, compatibility issues with current IEEE and SAE standards, and slow down CAV innovations development. The reduction of available spectrum will have major impacts for pilot projects that cities/towns, counties, transit agencies, and first responders are working on, as well as impacts to private sector companies such as DSRC manufacturers and autonomous vehicle manufacturers..."

General Aviation Manufacturers Association (GAMA): "… if the 5.9 GHz band is opened to new unlicensed uses, it will erode its usefulness for safe intelligent transportation on the ground and in the air...The 5.9 GHz Band is especially important for aerial V2V and V2I functions because traditional aviation spectrum solutions used for surveillance and communications are not suitable for all UAS operations because of the expected density of these operations at lower altitudes. As a result, existing aviation spectrum is not expected to accommodate the V2V or V2I needs of all UAM/AAM."

Commercial Vehicle Safety Alliance (CVSA): "CVSA remains opposed to any action that takes away spectrum from transportation safety technologies while U.S. DOT research continues to suggest that harmful interference will occur…we stand behind V2X technologies as a crucial tool in our national toolbox to reduce fatalities on our roads..."

NXP Semiconductors: "To underscore the potential value to society of preserving the full 75 MHz of spectrum for automotive safety communications, NHTSA estimates suggest that DSRC V2X technology like that which is now actively being deployed in Europe could eliminate or mitigate the severity of up to 80 percent of non-impaired crashes in the United States, where more than 37,000 lives were lost and 2.7 million were injured in the U.S. in 2017…An estimated billion dollars of public and corporate spending has been made to mature V2X technology and deploy infrastructure, which might be wasted if the infrastructure becomes obsolete."

Truck & Engine Manufacturers Association: We strongly support maintaining the current 75 MHz allocation of the 5.9 GHz spectrum for transportation communications in order to preserve the promise and functionality of V2X technologies…...The entire spectrum is needed to ensure the interoperability and protection from interference of V2X communications between automobiles, trucks, other roadway users and the infrastructure.

SES Americom, Inc. (SES) and Intelsat License LLC (Intelsat): "The Commission's tentative view that no action is needed to prevent fixed-satellite service (FSS) operations from receiving harmful interference due to new types of vehicle safety services and Unlicensed National Information

Infrastructure (U-NII) devices reflects outdated and incorrect information...Because the record establishes a significant risk that incumbent FSS uplinks in the 5.9 GHz band and the adjacent 5.925-6.425 GHz conventional C band frequencies will be disrupted…"

DENSO Corporation: "We strongly support the continued allocation of the 5.850-5.925 GHz band to ITS in the United States and urge the FCC to abandon its proposal to reallocate the ITS safety band... the Commission should take action to protect V2X, a safety of life service."

Motor & Equipment Manufacturers Association (MEMA): "Federal and state transportation agencies, along with existing private licensees, have made significant investments developing and deploying ITS technologies, and therefore have significant reliance interests in the current 5.9 GHz band framework. Particularly in light of the Commission's decision to open 1,200 MHz of the 6 GHz band, there is no legitimate legal or factual basis to implement such a drastic policy change in the 5.9 GHz band...the automotive industry has committed to deploy 5 million ITS radios and devices in new vehicles over the next five years on the condition that the 75 MHz within the 5.9 GHz band is retained as is."

Intelligent Transportation Society of America: "... ITS America and many other Commenters established beyond doubt in the record that the 5.9 GHz Band has spurred the investment of billions in public and private sector funds and that many public and private sector experts in transportation safety have dedicated their careers to developing and deploying new life saving technologies in the Band, leading to operational systems throughout the country...", and "the record reflects significant opposition to the Commission's reliance on a flawed economic analysis to justify splitting the band and the failure to consider the vast positive economic impacts of V2X technologies."

Juniper Networks: "The stake is billions of dollars in economic impact by lifesaving V2X technologies... any economic or social benefits from increased unlicensed use pale in comparison to the enormous impact of V2X to our daily lives, smart cities, and to make our roadways safer and economically efficient."

International Association of Fire Chiefs (IAFC): "...In January 2020, Secretary Elaine Chao announced the First Responder Safety Technology Pilot Program that would invest up to $38 million to equip first responder vehicles and key infrastructure with V2X communication technology. These communications systems will use the 5.9 GHz band and improve the safety of first responders and the public traveling on U.S. roadways..."

SAE International: V2X Core Technical Committee & Infrastructure Applications Technical Committee: "...Repurposing safety spectrum to provide cable companies with gigabit broadband to households is inappropriate. The SAE Committees agree with Panasonic Corporation that "in its efforts to find more unlicensed spectrum, the FCC effectively would subsidize cable and over the-top video providers while harming vehicle safety…The FCC should not reverse course on its forward-looking V2X policy and allow other countries to overtake the United States in the innovative use of this technology..."

Center for Auto Safety (the Center): "...the Center continues to support an exclusive non-commercialized, dedicated safety bandwidth that will allow vehicles to communicate with other vehicles, pedestrians, and infrastructure in a manner that has the potential to drastically reduce fatalities, injuries, and costs on American roads as it continues to be deployed. The Center remains opposed to reallocation of the 5.9 GHz band (5.850-5.925 GHz) ...This proposal would also likely force migration of V2X technologies to unproven alternative commercial services in other spectrum bands, unnecessarily delaying

V2X deployment, discouraging its use, limiting its lifesaving potential, compromising user privacy and imposing user costs for alternative communication services..."

Center for Auto Safety (the Center):" …to ensure the proper functioning of ITS applications, particularly those related to safety of-life, it is essential that the 5.9 GHz band be protected from out-of-band emissions... Argo believes that for the potential of ITS applications relative to safety, efficiency, and general mobility to be realized, the entire 5.9 GHz band must be preserved for their use and additionally protected from harmful interference."

Georgia DOT (GDOT): "GDOT also recognizes and agrees with T-Mobile, AT&T, and others that the Commission does not need to reserve any portion of the 5.9 GHz band for unlicensed use and that unlicensed provisions or plans for provisions in (other) bands are more than adequate to meet the needs of next-generation Wi-Fi applications and their spectrum needs... With more than 600 signalized intersections equipped with roadside units broadcasting infrastructure messages to support safety and mobility applications, GDOT will be required to make significant investment of over $6M to modify this infrastructure to comply with our understanding of the Commission's current proposed rulemaking...GDOT will be required to significantly adjust additional fully funded deployment plans that were equipping an additional 1,000 intersections with V2X infrastructure. GDOT has made intentional investments over the last several years with support for V2X as a clear outcome."

American Association of State Highway and Transportation Officials (AASHTO): "...AASHTO continues to believe that reallocation of this spectrum will result in unnecessary deaths that otherwise would have been prevented through connected and automated vehicles."