



Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

Peter A. DeFazio
Chairman

Sam Graves
Ranking Member

Katherine W. Dedrick, Staff Director

Paul J. Sass, Republican Staff Director

November 22, 2019

The Honorable Ajit Pai
Chairman
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Dear Chairman Pai:

I write to register my growing concern about the Federal Communications Commission's (FCC) pattern of subordinating transportation safety to corporate broadband interests. First, unless the FCC imposes mitigations that will conclusively prevent adverse effects on aviation safety, I strongly object to the FCC's proposal to repurpose portions of the 3.7-4.2 GHz spectrum band, or C-band, for 5G wireless purposes.¹ Second, I also strongly object to the FCC's November 20 proposal to give away more than half the reserved 5.9 GHz connected vehicle spectrum to unlicensed Wi-Fi, which could jeopardize the opportunity to eliminate many of the 36,560 traffic fatalities every year. Spectrum reallocations must not risk the lives of traveling Americans and decades of investment in aviation equipment and vehicle safety technology.

3.7-4.2 GHz

Last summer, the FCC voted unanimously to open some or all of the C-band for wireless use. Numerous aviation stakeholders have expressed concerns to you about expanding the availability of the C-band to wireless mobile and hand-held devices, and the almost-certain risks to aviation safety that would result. I share their primary concern that reallocating the C-band, or parts therein, to additional (and particularly high-density) mobile services could potentially overlap into and interfere with the upper adjacent band, 4.2-4.4 GHz, which is allocated exclusively for aeronautical radio navigation equipment, such as radio altimeters and wireless avionics intra-communication (WAIC) systems (hereinafter, the "aviation band").

Radio altimeters are absolutely essential for the safe operation of every airliner and many general aviation airplanes and helicopters, measuring the altitude between an aircraft and terrain below. They are necessary for safe approaches and landings and the operation of terrain awareness

¹ See FCC Order and Notice of Proposed Rulemaking, *Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, GN Docket No. 18-122, 84 Fed. Reg. 22733 (May 20, 2019). See also Ajit Pai (@AjitPaiFCC), Twitter (Nov. 18, 2019, 9:23 AM), <https://twitter.com/AjitPaiFCC/status/1196479165467373576>.

and warning systems, among other things. WAIC supports safety communications within commercial aircraft.

I recognize this week's FCC announcement indicates a future public auction will effectively include a guard band between the reallocated C-band portion and the aviation band.² However, even such a guard band is insufficient to protect all aviation safety equipment. Ongoing research into potential interference with aviation equipment has already produced troubling findings. In its October preliminary report, the Aerospace Vehicle Systems Institute (AVSI) concluded that interference with radio altimeters in the aviation band actually begins at 3.75 GHz for helicopters and 3.95 GHz for commercial aircraft—both well within even the smaller C-band portion now under consideration.³

In light of the serious nature of the risks posed by possible spectrum interference, I am concerned that the FCC is moving forward prematurely with reallocating part of the C-band for 5G without sufficiently analyzing and understanding the effects on aviation safety. With the recent AVSI findings in mind, I urge you to delay making a final decision in this proceeding until you have completed consultation with the Federal Aviation Administration and aviation industry experts to fully understand how C-band reallocation could affect the safety of flight, and you have developed sufficient mitigations that will, without any doubt, prevent harmful interference with critical aviation equipment.

5.9 GHz

I likewise object to the FCC's November 20 proposal to give away more than half the bandwidth currently reserved for transportation safety. Vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2X) communication in the 5.9 GHz spectrum will save lives by creating a seamless, cooperative environment. In 2018, an estimated 36,560 people were killed in motor vehicle accidents. Of these crashes, approximately 30,000 fatalities, or 82 percent, can be prevented by connected vehicle technology.⁴

Automakers and State and city departments of transportation have invested hundreds of millions of dollars, both public and private, in technologies using this spectrum to date.⁵ You should understand that the FCC's efforts to support unlicensed Wi-Fi in the 5.9 GHz will undercut this investment. Automakers and State and city departments of transportation need certainty to invest in connected vehicle infrastructure, and that begins with the assurance that the Federal government will provide the necessary spectrum to safely connect vehicles. I urge you to reconsider your proposal, which would undermine our Nation's commitment to improving transportation safety.

² POLITICO Pro Technology, *Pai Sides Against Satellite Operators in Key 5G Auction Call* (Nov. 18, 2019).

³ AVSI, *Preliminary Report: Behavior of Radio Altimeters Subject to Out-of-Band Interference* (Oct. 22, 2019) (on file with Committee).

⁴ *Frequency of Target Crashes for IntelliDrive Safety Systems*. John A. Volpe National Transportation Systems Center.

⁵ AASHTO *Letter to FCC* (Aug. 19, 2019), <https://www.transportation.org/wp-content/uploads/2019/08/2019-08-19-AASHTO-52-CEO-Letter-to-FCC-on-5.9GHz-Safety-Band.pdf>.

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Many interested parties view the debate over the 3.7-4.2 GHz spectrum and 5.9 GHz spectrum as a battle between commercial interests. But aviation safety and motor vehicle safety are not commercial interests. I urge the FCC to not place any commercial interests above the safety of the traveling public.

Thank you for your prompt attention to this important matter.

Sincerely,



PETER A. DeFAZIO
Chairman

cc: The Honorable Elaine L. Chao
Secretary, U.S. Department of Transportation

The Honorable Stephen M. Dickson
Administrator, Federal Aviation Administration