February 2, 2022

The Honorable Peter DeFazio
Chair, House Transportation and Infrastructure Committee
U.S. House of Representatives
2134 Rayburn Office Building
Washington, DC 20515

The Honorable Sam Graves
Ranking Member, House Transportation and Infrastructure Committee
U.S. House of Representatives
1135 Longworth House Office Building
Washington, DC 20515

The Honorable Rick Larsen
Chair, Subcommittee on Aviation
U.S. House of Representatives
2163 Rayburn House Office Building
Washington, DC 20515

The Honorable Garrett Graves
Ranking Member, Subcommittee on Aviation
U.S. House of Representatives
2402 Rayburn House Office Building
Washington, DC 20515

Re: 5G and Aviation Co-Existence in the C-band

Dear Congressmen:

Thank you for your important attention to the conflict between the Federal Aviation Administration (FAA) and the Federal Communications Commission (FCC) on the rollout of 5G in the C-band (3.7-3.98 GHz). As leaders of U.S. policy for some of America's most important and innovative industries, your efforts to maximize aviation safety and to speed the rollout of 5G are greatly appreciated. Ensuring the continued evolution and update of wireless networks is essential to broadband competition, economic development, and jobs. Simultaneously, Americans expect that not only is it safe to fly, but that aviation actors invest in the technology and processes to improve safety. As such, Americans rely on the relevant regulators, the FCC and the FAA, to achieve these policy goals.

We are a group of international spectrum experts with decades of experience in developing policy to deploy wireless networks and services. The contest for scarce spectrum resources is not new. The U.S. has established tools, processes, and regimes to steward the rollout of new wireless technologies while ensuring the continued safety and operations of existing uses.

The recent experience of the FAA issuing safety alerts regarding the rollout of 5G in the C-band just before it was set to launch, an insinuation of the danger of 5G transmission to altimeter operations with no empirical evidence, and the subsequent political brinkmanship to litigate the issue more than a year after rules were made public, was unfortunate and avoidable. It needlessly impugns the safety of both aviation and 5G.

Since 2019, some 40 nations have achieved these goals without drama. Globally 175 5G networks have been rolled out with no reports of 5G transmission interfering with altimeters. The experience of the U.S. in the last few months is an international embarrassment, particularly as policymakers had assured the American people that global 5G leadership is critical to maintain great power competition advantage, national security, and continued pre-eminence in mobile services and application ecosystem.

Working in good faith, 5G providers presented a mitigation plan to assuage aviation concerns. Its launch was twice delayed by aviation industry trade associations. At last the 5G providers went forward. On January 19, the FAA had approved "an estimated 62 percent of the U.S. commercial fleet to perform low-visibility landings at airports where wireless companies deployed 5G C-band." As of January 25, just

under a week later, the FAA approval was up to 90 percent. This suggests that FAA hesitancy was based upon an inaccurate assessment of the situation and a preference for theoretical modeling over real-world tests and experience.

Congress is clear about the role of the FCC to establish rules to for commercial spectrum, including the authority to make rules about transmission to avoid harmful interference. Congress should support the FCC to fulfill its statutory duty.

In any event, the shortcomings of altimeters can be managed with minimal cost and disruption to air travelers and 5G users through an international standards development process. As many U.S. planes fly all over the world, altimeter makers should professionalize their product development to ensure common technical standards globally. We suggest that Congress implement the needed incentives and regulatory measures to help the aviation industry modernize.

While any one industry will act in its rational interest, it is Congress' job to ensure that innovations evolve together to maximize the benefit for the American people.

Thank you for your attention to this important issue.

Sincerely,

Thomas Hazlett
Professor of Economics, Clemson University
Visiting Scholar, Hoover Institution

Michael Marcus
Marcus Spectrum Solutions, LLC
Adjunct Professor of Electrical & Computer Engineering, Northeastern University
Former Associate Chief of Technology, Federal Communications Commissions (25 years)

Michael Calabrese
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Steffen Ring, M.Sc.E.E.
CEO, Ring Advocacy LLC
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William Webb
CEO, Webb Search Ltd.
Former Director of Technology Resources, Spectrum Strategy, Ofcom (7 years)

David Witkowski
Founder & CEO, Oku Solutions, LLC

Greg Guice
Director of Government Affairs
Public Knowledge

CC: **U.S. Senate Committee on Commerce, Science, and Transportation**
Sen. Maria Cantwell, Chair
Sen. Roger Wicker, Ranking Member

White House
Brian Deese, Director of the National Economic Council of the United States

Department of Transportation
Pete Buttigieg, Secretary

National Telecommunications and Information Administration (NTIA)
Alan Davidson, Administrator

Federal Aviation Administration (FAA)
Stephen Dickson, Administrator

Federal Communications Commission (FCC)
Jessica Rosenworcel, Chairwoman
Brendan Carr, Commissioner
Geoffrey Starks, Commissioner
Nathan Simington, Commissioner