Aviation and the 5G/C-band – a Case Study in Regulatory Clashes

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A client's ability to navigate federal regulations can be a difficult task, but it gets even more complicated when there are multiple federal agencies involved. Continuing controversy concerning spectrum being used for 5G wireless services illustrates this problem. The Federal Communications Commission (FCC) reallocated portions of the C-band spectrum (the 3.7 – 3.98 GHz band) from satellite usage to terrestrial usage for 5G services, and then auctioned that spectrum off for billions of dollars. But the aviation industry subsequently discovered a potential serious problem. On-board aircraft altimeters that operate in a nearby band (4.2 – 4.4 GHz) could suffer from interference from 5G cellular transmissions while landing, possibly leading to disasters. Apparently, the altimeters' receivers were not originally designed to filter out out-of-band transmissions. In order to address this potential problem, the FCC and the Federal Aviation Administration (FAA), working with the airline industry and the 5G licensees, have been addressing this problem.

The two federal regulators, the two licensees that had begun 5G deployment in the C-band (AT&T and Verizon), and the aviation industry reached an agreement in June of this year to restrict, until July of 2023, deployment of 5G cell towers near certain airports. This was intended to provide the airlines time to modify the altimeters to make them less susceptible to out-of-band emissions. The crisis was thought to have been averted by these "voluntary" concessions by AT&T and Verizon.

Unfortunately, it seems as if the aviation industry was overly optimistic regarding how quickly it could modify the altimeters. Although it was not made part of the public record in the FCC's C-band proceeding, in late-October the FAA apparently notified the FCC that the FCC would need to extend the restrictions on AT&T's and Verizon's deployment of 5G cell towers near airports, and apply similar restrictions to the other C-band 5G licensees

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that also won licenses at the C-band spectrum auction. Click here to view article. The aviation industry has likewise asked the FCC to impose restrictions on 5G C-band operations near airports for all of the licensees. Click here to view submission.

The FCC, however, as an independent agency, is not obligated to agree to the FAA's request. And to the extent there may be a disagreement between two federal agencies, where one of them is an independent agency, there is no easy way to resolve such disputes. The White House cannot resolve any such disputes, like they can if it involves two separate executive agencies. In theory Congress could resolve such disputes by enacting legislation, but given the current level of dysfunction in Congress, that is not likely to occur, and certainly not in a timely manner.

This is not the first time that such a problem has arisen. In 1999, the FCC allocated 75 MHz of spectrum (the 5.85 – 5.925 GHz band) for Intelligent Transportation Systems (ITS) to allow cars to communicate with other vehicles and with infrastructure in support of smart highways. But then in 2013 the FCC decided that the ITS spectrum was not being used very heavily and proposed to allow WiFi services to share that spectrum. The Department of Transportation (DoT) objected to the FCC's proposal, concerned that this additional sharing of the band could interfere with critical communications. The FCC and DoT agreed to a three-phase testing program to assess the risk of interference, but before completing the testing, the FCC proposed that instead of sharing the 75 MHz of ITS spectrum, the ITS spectrum would be reduced to only 30 MHz of spectrum, with the other 45 MHz reallocated to WiFi. In 2021, the FCC went ahead and adopted that reallocation, notwithstanding the concerns of the DoT.

There is no "silver bullet" to resolve disputes between federal agencies like this. But you want to make sure that your lawyers are able to use all the available tools, including lobbying the agencies directly, as well as the White House and the relevant Congressional Committees, who can influence agencies like the FCC, even short of adopting legislation.

Butzel's Telecommunications and Technology practice, along with its Aerospace and Defense Industry team can help clients navigate the legal, and operational issues inherent to the industry. If you have any questions about this client alert, please contact the authors or your Butzel Attorney for further assistance.

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