

# Why your 5G phone concerns the airline industry: What we know about the impact on travel, flights and more

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Telecommunications giants AT&T and Verizon are ready to expand their 5G services, but airlines want to prevent their complete takeoff

over safety concerns at some of the nation's airports.

The two telecom companies agreed Tuesday to delay the rollout of new wireless services within two miles of those airports.

This came after the CEOs of the major airlines, along with FedEx and UPS, asked the Biden administration including the Federal Aviation Administration and the Transportation Department on Monday to address concerns about activating new 5G network connections near airports.

The airlines and shipping carriers asked that 5G deployment be delayed within two miles of certain airport runways "to avoid significant operational disruption to air passengers, shippers, supply chain and delivery of needed medical supplies," the airlines said in the letter addressed to the FAA, DOT, the Federal Communications Commission and National Economic Council director Brian Deese.

## **Why would airlines be affected by 5G?**

The [airline industry](#) is concerned because the swath of [spectrum](#) AT&T and Verizon plan to use is close to that used by altimeters, which tell aircraft their height above the Earth. This is happening as the two telecommunications giants begin to make use of spectrum they spent tens of billions for last year.

The Federal Communications Commission in 2020 set a spectrum buffer between the 5G band and altimeter spectrum to resolve safety concerns. But the FAA said last month that possible interference from new 5G transmitters could still prevent some pilots from using the instruments.

This came after AT&T and Verizon had pushed back their launch from a planned early December rollout and in November agreed to reduce C-

Band signals' power for six months.

## **Wait, how could 5G possibly delay or divert my next flight?**

Planes with older altimeters could be susceptible to interference from 5G signals, the airline industry says. That means pilots who are not able to see to land or take off—say in fog or other weather conditions—would not be able to rely on instruments because of possible interference. That could result in flights being diverted, delayed or not taking off.

So Transportation Secretary Pete Buttigieg and FAA Administrator Stephen Dickson asked AT&T and Verizon to hold off activating new 5G towers near certain "priority airports" while the FAA studies the issue further.

AT&T and Verizon have pointed out during the ongoing back-and-forth that several countries already use the 5G frequencies near airports where planes with older altimeters operate.

In its statement about postponing 5G deployment near airports, AT&T said it would "continue to work with the aviation industry and the FAA to provide further information about our 5G deployment, since they have not utilized the two years they've had to responsibly plan for this deployment."

Verizon similarly voiced its frustration at the situation in its statement to voluntarily "limit our 5G network around airports. The Federal Aviation Administration (FAA) and our nation's airlines have not been able to fully resolve navigating 5G around airports, despite it being safe and fully operational in more than 40 other countries," the company's

statement said.

As a result, travelers won't have to worry about any travel delays due to 5G currently.

However, some international airlines including Air India and Emirates had canceled some flights into the U.S.

## **Why is this happening now?**

AT&T and Verizon got the official go-ahead to use some of the C-Band radio waves they acquired during an FCC auction last year. At the time, Verizon spent a \$45 billion for access to about 160 MHz of the 280 MHz of radio frequency spectrum made available, while AT&T spent \$23 billion for 80 MHz.

These C-Band or mid-band frequencies that AT&T and Verizon want to start using are in a spectrum "sweet spot," said Cenk Gursoy, an electrical engineering and computer science professor at Syracuse University. The bandwidth covers long distances and provides wider coverage.

These so-called mid-band frequencies are important to the performance of evolving 5G networks because they cover more area and deliver more data than other frequencies. Think of it "as adding lanes to each of their wireless data superhighways," U.S. TODAY columnist and TECHanalysis Research analyst Bob O'Donnell wrote at the time of auction.

T-Mobile spent about \$10 billion for about 30 MHz of spectrum in that auction, but it already acquired spectrum in its purchase of Sprint, which became official in February 2020.

But AT&T and Verizon shouldn't have to be dealing with this now, said

Roger Entner, founder and analyst for Recon Analytics. "This should have been solved."

The FCC required a "guard band" in the spectrum, a buffer that is double the size originally requested by the airline industry, he said. Cellular providers will not be using the entirety of their spectrum until the end of 2023, so in the meantime there's an even wider gap between the altimeter spectrum and 5G spectrum, Entner said. "How that can interfere with the airplanes. It's just physically not possible," he said.

Gursoy said he is "puzzled why they had not resolved this issue earlier."

He agrees that "safety is an important consideration," but the frequencies are already in use around airports in other countries.

Verizon had said its expanded 5G Ultra Wideband rollout, which begins Wednesday, would grow its phone coverage of 87 cities and 5G Home (in parts of 65 cities) to cover 100 million additional customers by the end of the month.

AT&T didn't specify the number of cities that would immediately be impacted by its C-Band expansion, but the provider originally expected it would expand the coverage of their speedier 5G+ service by the end of 2022 to 200 million people. Overall, AT&T's 5G network already covers 255 million in the U.S., the company says.

## **What exactly is 5G?**

The 5G networks, which cellular providers began deploying in late 2018, promise faster connections that can deliver more data more quickly and provide always-on connectivity.

For instance, 5G download speeds can approach more than 300 megabits

per second—with peak speeds reaching a gigabit per second. That's can be about 10 times faster than 4G LTE cellular networks—in some places.

Internet testing firm Ookla found the fastest median mobile download speeds during the three-month period ending December 2021 of 187.12 Mbps came on T-Mobile's 5G network. That's an increase over 135.17 Mbps during Q3 2021, the firm said.

And 5G's more durable connections promise a connected ecosystem of devices such as connected smart cars and smart homes, and services such as telemedicine and mobile virtual reality and augmented reality.

The deployment of C-Band is also important for AT&T and Verizon "because they need this spectrum to effectively compete with T-Mobile," Entner said.

"It's important for the industry and for the support of these emerging applications," Gursoy said.

And as providers move more users to 5G networks, customers on older phones might get better service, too, Gursoy said.

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