

5G ROLLOUT IN USA IMPACTS AVIATION INDUSTRY

INTRODUCTION

Major Airlines Across the world announced that they canceled flights heading into the United States starting 19 Jan over an ongoing dispute about the rollout of 5G mobile technologies near American Airports. Emirates, Air India, Japan Airlines, and All Nippon Airways have all announced flight cancellations as a result of the C-band 5G deployment, expressing fears that it may interfere with sensitive instruments inside aircrafts.

What is 5G?

The 5th generation mobile network is referred to as 5G. When fully implemented, it will offer a significant advancement over current 4G mobile networks. Over 4G, 5G networks might give ten times quicker internet and a tenfold reduction in latency (the time between sending and receiving communications). 5G is predicted to lower latency to 1 millisecond in the long run. 5G has the potential to unleash plenty of new services and capabilities that are currently unachievable in terms of scale and precision: mass deployment of autonomous vehicles, delivery via drones, remote healthcare (including critical care and robotic surgery), precision agriculture (real-time crop and field management), virtual reality, and industrial automation. This is expected to pave the way for a new ecosystem of interconnected gadgets that communicate with one another.

Why Only US Bound Flights are Affected Due to 5G Rollout

5G is being rolled out in over 40 countries but so far only the US airlines have raised concerns. In United States both telecom companies and airlines use the C-band. The radio frequency used by the Verizon and AT&T networks is similar to that used by radio altimeters

The Federal Aviation Administration (FAA) has warned that 5G interference might disrupt height measurements on some planes, which are critical for bad-weather landings, and airlines claim the Boeing 777 is one of the models most directly affected

According to the FAA, there are various reasons why the 5G deployment has been more difficult in the United States than in other countries: Cellular towers have a stronger signal than those elsewhere; the 5G network uses a frequency that is closer to that of many altimeters, and cell tower antennas are pointed higher.




ASSESSMENT

Top US airlines wrote to the Biden administration on 16 Jan, suggesting that the deployment of 5G services near airports should be banned because it might interfere with important aviation equipment. Boeing has issued flying restrictions on all airlines that fly the Boeing 777. 5G signals for US mobile phones may interfere with the Boeing 777's radio wave altimeter. Both AT&T and Verizon have announced that 5G antenna improvements near specific airports would be delayed voluntarily. The US government, led by President Joe Biden, is working to reach an agreement between airlines, telecom firms, and the Federal Communications Commission (FCC) on settling the 5G service rollout dispute. However, the amount of time it will take to resolve the issues is uncertain. Meanwhile, airlines may be able to resume regular operations shortly given that telecom companies have agreed to voluntarily halt 5G rollout near airports as a temporary means to resolve aviation sector concerns. The FAA approved several types of planes, including the Boeing 777, to land in limited visibility near 5G signals on 19 Jan.


However, over 40% of the US airline fleet was still waiting to be cleared by nighttime. As the FAA examined more planes and altimeters, the percentage is projected to decline. The European Union Aviation Safety Agency said it wasn't aware of any problems on the continent caused by 5G interference. To mitigate airline interference, French telecom providers reduce the strength of their high-speed networks near airports. Boeing announced in a statement that it will work with airlines, the Federal Aviation Administration, and others to ensure that all planes can fly safely when 5G is implemented. *"5G deployment can securely coexist with aviation technology in the United States, just as it does in other nations across the world,"* FCC Chairwoman Jessica Rosenworcel said in a statement. She urged, however, to encourage the FAA to complete its safety inspections with *"care and speed."* *"For deciding to delay 5G deployments near major airports and to continue working with the Department of Transportation on safe 5G deployment at this restricted set of locations,"* US President Joe Biden praised the telecoms. For years, telecom companies and the aviation sector have been debating how the transition should take place in the United States, but no consensus has yet been reached.

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