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FCC Takes a Step to Reduce Space Junk by Reducing Time to Dispose From 25 to 5 Years

Client Alert

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The Federal Communications Commission (FCC) on September 8th released a draft decision that would address one aspect of minimizing orbital debris by accelerating satellite de-orbiting. Satellites represent a critical component of our telecommunications infrastructure, and many more of them now operate in low-Earth orbit (LEO). According to the draft decision, there are now more than 4,800 satellites currently operating, and the vast majority of those are LEO satellites, with applications pending at the FCC for new or expanded constellations that would include tens of thousands of additional LEO satellites. A collision between two LEO satellites (each travelling at some 18,000 miles per hour) could create a debris cloud, which in turn could disable additional satellites when they collide with these pieces from the original collision. This in turn could potentially lead to additional satellites colliding, because the disabled satellites would be unable to maneuver to avoid debris or other satellites. Such a “chain reaction” has the potential to render significant portions of space surrounding the earth as unusable for LEO satellites. At the very least, the additional debris would require operating satellites to use up some of their limited propellant in taking evasion maneuvers, thus shortening the useful lives of those active satellites.

The FCC’s draft decision would seek to diminish this potential problem by reducing the amount of time that satellites remain in orbit after the end of their useful lives. Currently, in issuing satellite licenses, the FCC assesses whether the proposed constellation will meet the NASA guideline that satellites be able to de-orbit within twenty-five years after the end of their mission. Under the FCC’s new rule set forth in the draft decision, once their mission was completed, satellites would need to be able to de-orbit through uncontrolled atmospheric re-entry as soon as

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practicable, and no later than five years after the end of the mission. Thus, satellites would need to retain sufficient propellant or use other technologies to lower the altitude of their satellites so that they burned up in the atmosphere (or fell to earth) much more rapidly than under the current guidelines. But hopefully we don't all need to wear hardhats when outdoors, because the FCC already has other rules addressing the design and composition of satellites to minimize the risk that the satellites will survive atmospheric re-entry.

The FCC would not apply this new de-orbiting requirement to satellites that are already in orbit, and would not begin to apply the new five-year limit until September 29, 2024, to provide a two-year window for transitioning to the stricter limits. The FCC would apply this requirement to all new LEO satellites licensed by the Commission (including amateur and experimental licenses), as well as to foreign-licensed LEO satellites that seek access to the U.S. market. The FCC did indicate, however, that it would consider waivers of this new requirement for research and scientific missions.

Under the FCC procedures, drafts of its decisions are released to the public three weeks before the FCC's monthly meetings, and lobbying of the FCC or any comments on or suggested edits to the draft decisions can occur during the first two weeks of that three-week period. Thus, the deadline for trying to alter this FCC draft decision seeking to mitigate orbital debris must occur by September 22nd. Please let us know if you need any additional information or need any help to try to modify the decision before it is adopted by the FCC at its meeting on September 29th.

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