

**STATEMENT OF  
COMMISSIONER JESSICA ROSENWORCEL**

Re: *Streamlining Licensing Procedures for Small Satellites*, IB Docket 18-86, Report and Order (August 1, 2019)

If you were asked to design a spaceship, I'm willing to bet that the last thing you would draw is the lunar module that brought astronauts Neil Armstrong and Buzz Aldrin to the surface of the moon. It's the most unlikely contraption ever to invade the sky. Imagine a completely non-aerodynamic, multi-sided box with gangly legs jutting out in all the wrong places. It had neither symmetry nor grace. But to this day, that aluminum box, code-named Eagle, represents one of our country's crowning achievements.

Just days ago we marked the fiftieth anniversary of Apollo 11. Five decades on, we still are awed by humanity's first steps on another world. It's an anniversary that draws our curiosity back to the wonder of the heavens. But I want to draw attention to one of the most important and least understood successes of the Apollo mission—and that involves digital technology.

The National Aeronautics and Space Administration played a big role in helping develop the digital technologies all around us. When the race to the moon began, integrated circuits, or computer chips, were not a proven technology. But NASA saw that they would be essential to real-time computing, where answers from machines had to follow just seconds after questions were asked. So it was NASA that drove this technology, buying huge volumes of early computer chips. Moreover, it was NASA's uncompromising standards that drove these early chips to 100 percent reliability, making it possible to fly lunar landers and over time power your smartphone, carry out calculations that support Global Positioning Systems, and so much more.

In fact, for fifty years space-driven technologies have been improving daily life and creating new possibilities right here on the ground. That includes everything from robotics that offer new surgical capabilities to lithium-batteries powering electric cars to wetsuits to protect deep-sea divers to cameras that make panoramic photography a snap. The first space age was an incredible source of innovation.

Now a new space age beckons. It means more satellites, more possibilities for exploration, and more opportunities for entrepreneurial activity in our skies. It is inspiring a new generation of innovators and already we are seeing rockets for space tourism and new constellations that can expand broadband to the furthest reaches of the globe.

Today's decision takes steps to reform our satellite licensing for this new era. For constellations of up to ten small satellites, we adopt a new framework for authorization. It provides greater certainty than our experimental regime under Part 5 of our rules while cutting red tape in our traditional Part 25 rules. In other words, we fill a gap in our policies in order to expand the deployment of small satellite-based services in the United States.

This is important. Count me as excited that the Chairman has brought this decision before us today. It has my full support. But this is only a small part of the reforms we need for

the new space age. A bigger challenge awaits us, still—namely, how can the Federal Communications Commission help reignite the spirit of innovation that culminated in the Apollo 11 mission to help meet our biggest challenges today?

To do so, I think there are three things we need to do now.

First, we need to protect the new space age by addressing orbital debris. In the past year, the FCC has approved over 13,000 new satellites for launch. That is nearly three times as many satellites currently in orbit right now. But we have not done anything new to address orbital debris. When you consider the size of new constellations and the extraordinary number of objects headed to space, you realize we need to address junking up our skies and we need to do it sooner rather than later. That's why more than a year ago I called for a comprehensive review of our orbital debris policies in order to mitigate collision risks and ensure space sustainability. We can't keep kicking this can down the road or insisting it is the province of other agencies that lack authority over commercial systems. We need to get it done now.

Second, we need to enable the new space age with spectrum for commercial launches. Remember, space missions used to be limited to the prowess of our superpowers. This was for good reason—going to space was out-of-this-world expensive. Missions were awe-inspiring but rare. But the new space age is different. That's because new technologies and business models are dramatically bringing down the cost of space launches. The industry is moving toward new launch vehicles, new re-entry vehicles, and commercial spaceports. But it has been six years since we began a proceeding to explore the spectrum needs of the new commercial space launch industry and I think it's time to work with our federal partners to conclude this effort.

Third, we need to coordinate in the new space age. Right now, the National Space Council is considering policy changes to promote the growth of the commercial space industry. Their work includes everything from reforming export controls to streamlining licenses. The membership of this group includes the Secretary of State, Secretary of Defense, Secretary of Transportation, Secretary of Homeland Security, and Director of National Intelligence. Representatives from the Office of Management and Budget, NASA, and the Joint Chiefs of Staff, among others, also serve on this council. It's an impressive list. But the FCC should have a seat at the leadership table. We are the agency with licensing authority over commercial systems. Cutting the FCC out of this discussion is a mistake—and it deserves a fix.

Our minds have always reached above the clouds—and with the second space age here, I believe we can do these things and help recharge the innovative spirit that resulted in Apollo 11 fifty years ago. Let's get to it.