TESTIMONY OF NATHAN SIMINGTON
COMMISSIONER, FEDERAL COMMUNICATIONS COMMISSION

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Chairman Doyle, Ranking Member Latta, and distinguished Members of the Subcommittee, it is a privilege to appear before you today. This is a particular honor for me because this is my first opportunity to testify before this Subcommittee.

Serving on a divided Commission has taught me the fundamentally non-partisan nature of the work of an expert agency. Working on fair allocation of regulatory fees or construction of spectrum auction rules is simply outside of partisan considerations—politics has no natural home in these matters at all. And while at the FCC, I have based my own approach on the professionalism of our great agency staff.

Today, I will focus on three issues: efficient use of spectrum, device security, and the space economy. The opportunities they present must be captured and their challenges must be met. And the FCC has a unique mission and mandate for all three.

First, I will address access to, and efficient use of, spectrum. The FCC and NTIA must balance the interests of commercial spectrum users and federal spectrum incumbents. Generally, licensed commercial users prefer, and get the highest value, from full-power, exclusive use licenses; generally, federal incumbents prefer, and feel best able to fulfill their obligations, with spectrum sharing, and look toward dynamic spectrum allocation.

Both types of users benefit from clear rules and certainty for their operations, and the FCC can improve things for spectrum users by creating a clearer protection rights regime. The FCC should examine how and when receivers are protected from interference, while specifically defining what 'interference' is so that safe harbors can be created. An interference limit policy would provide certainty to radio systems operators and receiver manufacturers, and therefore benefit the end-users—which, today, means every American. Increased signal strength from transmitters can provide improved reception, but increasing power levels requires receivers in adjacent bands to be able to reject unwanted signals outside their frequencies. We can look for efficiencies in a band-by-band fashion, where spectrum is densest, or where protection of high value services is of greatest importance. My office has been examining this issue for over a year, and we sincerely thank Chairwoman Rosenworcel for the forthcoming introduction of a notice of inquiry.

We must boldly re-examine the status quo on interference protection. Today, we have dense co-location of wireless edge devices, and it's getting denser fast. The 5G revolution isn't just about an improved consumer experience. To get technological advances in public safety, medicine, and industry, we need to put those services on 5G. We are going to switch on a billion new wireless devices over the next decade. Those devices are operating in dense spectrum neighborhoods, so the rules of the road on interference protection have to be crystal clear. But we also should be clear about the security challenges of using wireless services at greater scale.

This leads me to the second issue: device security. The FCC is not a cybersecurity agency, but our mission includes protecting the availability of wireless spectrum, a scarce and fragile resource, for the use of the government and the public. Traditionally we have fulfilled this role by requiring that wireless transmitters pass a battery of FCC tests and operate within narrowly confined parameters. Creating scientific standards for what constitutes harmful interference will further protect users of spectrum from harmful interference. But even if every transmitter and receiver in America is designed to meet stringent performance standards, another problem still remains. These devices are increasingly not static circuits, which could be expected to behave consistently for the life of the device. As static devices are retired, they are being replaced with software-controlled devices, often running multiple operating systems from different providers. These systems are vulnerable to cyber-attacks, and those attacks can turn a device that performed perfectly well on an FCC workbench into a signal jammer. I worry especially about the ability of an attacker to hijack many wireless devices at once and carry out a denial-of-service attack via mass signal jamming. Addressing wireless security for the new wireless era will protect Americans against domestic and foreign threats.

It would be a mistake for the FCC to merely give wireless device manufacturers a checklist of security guidelines. Frankly, I don't think the agency has the resources or the subject-area expertise to define the problem in enough detail. Even if we did, we would end up hampering the development of new technology and new approaches to security. Instead, we should focus on a few broad ideas that are clearly within our current mandate. First, wireless devices running software should receive security updates for the expected life of the device. Second, wireless device manufacturers should have to share data with security researchers so that vulnerabilities are discovered and fixed before bad actors are able to find and exploit them. And third, there should be after-the-fact accountability for reckless security practices that cause harm to the public.

Lastly, I'd like to touch briefly on the space economy. The FCC can help with the robust growth of the launch and satellite service sectors by requiring thoroughgoing orbital debris mitigation standards. As you all know, the FCC has an open proceeding here, but I was pleased to see the bipartisan legislation shared by Chairman Pallone and Ranking Member McMorris Rodgers that clarifies the FCC's authority to craft and implement such rules. Because the FCC licenses and grants U.S. market access to satellite operators—which represents something like fifty percent of the present economic opportunity for the space economy—we have a unique ability to lead the world. We should capitalize on this to lead a new international consensus for safe commercial satellite operation in space.

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Chairman Doyle, Ranking Member Latta, and Members of the Subcommittee, I want to thank you again for holding this hearing and for the opportunity to testify. I look forward to answering your questions.